Tech Memo
Install 4" Chemox Injection Wells at 7-Eleven Store 43003 (Former Speedway Store #5310 TNS112) North Pole, AK
ADEC File #100.26.159
November 15, 2022

Prepared For

Stantec

AUTHORIZATION TO SUBMIT REPORT

Stantec has been authorized by the client, 7-Eleven (representative Paula Sime, PG, Manager – Environmental Services) to submit the enclosed report to the Alaska Department of Environmental Conservation. If you have any questions or need additional information concerning this groundwater monitoring report, please contact me at (907) 227-9883 or via email at bob.gilfilian@stantec.com.

Regards,

STANTEC CONSULTING SERVICES, INC.

Robert Gilfilian

Robert (Bob) Gilfilian, P.E.

Project Technical Lead

Principal Senior Civil Engineer

Stantec

Technical Memorandum

To:	Paula Sime, PG, Manager, Environmental Services for 7-Eleven P.O. Box 1026 Temecula, CA 92593	From:	Bob Gilfilian, PE Principal Senior Engineer Stantec Consulting Services, Inc. Stantec Consulting Services, Inc. 725 E Fireweed Lane, Suite 200 Anchorage, Alaska 99508
File:	ADEC Facility ID #1116; ADEC Hazard #24476 ADEC File #100.26.159	Date:	November 15, 2022

Reference: **Installation of Four Injection Wells for Chemical Oxidation Treatment at 7-Eleven Store #43003 (Former Speedway #5310-TNS 112) Located at 3392 Badger Road in North Pole, Alaska**

1 INTRODUCTION

On behalf of 7-Eleven c/o Paula Sime, Stantec Consulting Inc. (Stantec) is pleased to submit this Technical Memorandum (TM) for the October 2022 installation of four new injection wells for chemical oxidation (chemox) treatment, identified as IW 2022-A, IW 2022-B, IW 2022-C, and IW 2022-D. The injection wells were drilled at 7-Eleven Store #43003 (former Speedway #5310-TNS 112) located at 3392 Badger Road in North Pole, Alaska (**Figure 1**).

This TM describes the implementation of the work plan for the installation of four chemox injection wells that was subsequently approved by Pete Campbell, PE, with the Alaska Department of Environmental Conservation (ADEC). The purpose of the new large 4-inch diameter injection wells is to replace the following existing 2-inch diameter chemox injection wells: RW 17-1, RW 17-3, RW 17-4 and RW 17-6. TM also describes the results of the analytical sampling of the soil collected from the soil borings during the installation of the 4-inch diameter injection wells. Upon your acceptance of this TM, Stantec will submit the TM to the ADEC, attention Pete Campbell.

2 BACKGROUND

On October 5 and 6, 2022, Stantec implemented the supplemental work plan described above. The Stantec field staff consisted of Bob Gilfilian, PE (Principal Civil Engineer) and Leslie Petre, EIT (Staff Engineer). On October 5, 2022, Stantec met the field crew for Discovery Drilling and Logic Geophysics on the Speedway store property and conducted a site safety tailgate meeting. Stantec explained the scope of work that was to be completed on the Speedway property. Bob Gilfilian and Leslie Petre remained on-site to log the soil borings, collect representative soil samples, and direct the installation of the injection wells.

Prior to the site visit, Leslie Petre coordinated the locations of underground utility with Logic Geophysics and public utility companies (811 Dig Line). Logic Geophysics used ground penetrating radar to assess the subsurface conditions in the general area of the proposed injection wells. Upon receipt of the findings of the buried utility locates, Stantec directed Discovery Drilling Inc. to the desired positions for the placement of the injection wells. The four injection wells were strategically positioned to inject chemox solution within the contaminated soil that was buried as approved by the ADEC in the area beneath the former UST fueling system. The locations of the chemox injection wells are shown on the site map drawing (**Figure 2**).

The approved supplemental 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 October 2022 confirmation soil boring was completed by Discovery Drilling, Inc. with a Geoprobe® 6712 DT drill rig with a 10-inch auger bit. Sampling was conducted by Stantec staff including Bob Gilfilian, Project Engineer and Leslie Petre, Engineer-in-Training. A summary of boring notes from wells IW 2022-A, IW 2022-B, IW 2022-C, and IW 2022-D is included below. See **Attachment 1** for more detailed boring logs and field notes collected during the drilling of the soil borings.

- Injection Well IW 2022-A – As shown on **Figure 2**, this well is located 9 feet north of former injection well RW 17-1, 14 feet from IW 2022-B, and 14 feet from IW 2022-D.
    - From the first 4 feet bgs the core returned brown sandy gravel (commercial fill).
    - From 4 to 8 feet bgs, drilling proceeded through brown fine sand with gravel. The gravel became less prevalent from 5 to 8 feet bgs. A field screening sample taken from 4 to 5 feet bgs measured 0.4 ppm. Another field screening sample taken from right above the water table (7-8 feet bgs) measured 0.0 ppm.
    - The water table was encountered at 8 feet bgs. From 8 to 10.5 feet bgs the core returned wet brown fine sand with a slight petroleum odor. A field screening sample from 8 to 9 feet bgs, just below the water table, read 0.2 ppm. Sample IW 2022-A-1 was taken from 9 to 10 feet bgs with a PID reading of 15.6 ppm.
    - From 10.5 to 14.4 feet bgs, drilling proceeded through brown sandy gravel. A fuel odor was detected 13 feet bgs. A field screening sample was taken from 13-14.4 feet bgs with a measurement of 1.7 ppm.
    - Drilling ended at 14.4 feet bgs. A 4 inch-diameter PVC well was installed with 10 feet of 20-slot screened casing from 4.4 to 14.4 feet bgs. From 4.4 feet bgs to 6 inches below the ground surface the well casing is unscreened.
    - The annulus space was backfilled with filter sand from 14.4 to 3 feet bgs, bentonite clay from 3 to 1.7 feet bgs, and pea gravel from 1.7 to 0.5 feet bgs. The top of the well casing is covered with an 8-inch diameter flush-mounted steel well casing.
- Injection Well IW 2022-B – As shown on **Figure 2**, this well is located 9 feet south of former injection well RW 17-3, 14 feet from IW 2022-A, and 16.5 feet from IW 2022-C.
    - For the first 11 feet bgs drilling proceeded through brown gravelly sand. A field screening sample taken from 4 to 5 feet bgs read 0.2 ppm, and another taken from 5 to 6 feet bgs read 0.3 ppm. The water level was encountered at 8 feet bgs. A fuel odor was detected 9 feet bgs. Sample IW-2022-B-1 and a field duplicate were taken from 9 to 10 feet bgs with a PID reading of 16.5 ppm. Another field screening sample taken from 10 to 11 feet bgs read 3.5 ppm.
    - From 11 to 15 feet bgs, the core returned grey sandy gravel. Sample IW 2022-B-2 was taken from 14 to 15 feet bgs with a PID reading of 4.8 ppm.

  - Drilling ended at 15 feet bgs. A 4 inch-diameter PVC well was installed with 10 feet of 20-slot screened casing from 3.3 to 13.3 feet bgs. From 3.3 feet bgs to 6 inches below the ground surface the well casing is unscreened.

  - The annulus space was backfilled with filter sand from 13.3 to 3.3 feet bgs, bentonite clay from 3.3 feet to 1 foot bgs, and pea gravel from 1to 0.5 feet bgs. The top of the well casing is covered with an 8-inch diameter flush-mounted steel well casing.

- Injection Well IW 2022-C – As shown on **Figure 2**, this well is located 6 feet north of former injection well RW 17-6, 16.5 feet from IW 2022-B, and 15 feet from IW 2022-D.

  - From the first 7 feet bgs the core returned brown sandy gravel (commercial fill). No odor was detected. A field screening sample taken from 4 to 5 feet bgs read 0.0 ppm.

  - From 7 to 11 feet bgs, drilling proceeded through brown silt. The water table was encountered at 8 feet bgs. A field screening sample taken from 9 to 10 feet bgs measured 2.4 ppm. No odor was detected.

  - From 11 to 16 feet bgs the core returned wet grey gravelly sand with a slight petroleum odor. A field screening sample from 12 to 13 feet bgs read 3.9 ppm. Sample IW 2022-C-1 was taken from 14 to 15 feet bgs with a PID reading of 4.5 ppm. Sample IW 2022-C-2 was taken from 15 to 16 feet bgs with a PID reading of 4.5 ppm.

  - Drilling ended at 16 feet bgs. A 4 inch-diameter PVC well was installed with 10 feet of 20-slot screened casing from 4.8 to 14.8 feet bgs. From 4.8 feet bgs to 6 inches below the ground surface the well casing is unscreened.

  - The annulus space was backfilled with filter sand from 14.8 to 3 feet bgs, bentonite clay from 3 to 1.5 feet bgs, and pea gravel from 1.5 to 0.5 feet bgs. The top of the well casing is covered with an 8-inch diameter flush-mounted steel well casing.

- Injection Well IW 2022-D – As shown on **Figure 2**, this well is located 10 feet north of former injection well RW 17-4, 14 feet from IW 2022-A, and 15 feet from IW 2022-C.

  - From the first 3.5 feet bgs the core returned dry brown gravel (commercial fill). No odor was detected.

  - From 3.5 to 8 feet bgs, drilling proceeded through brown fine gravelly sand. A field screening sample taken from 4 to 5 feet bgs measured 0.0 ppm.

  - The water table was encountered at 8 feet bgs. From 8 to 10.5 feet bgs the core returned wet grey fine sand with a very slight petroleum odor. A field screening sample from 8 to 9 feet bgs, just below the water table, read 0.3 ppm. Sample IW 2022-D-1 was taken from 9 to 10 feet bgs with a PID reading of 44.0 ppm.

  - From 12 to 14 feet bgs, drilling proceeded through brown sandy gravel. No odor was detected. A field screening sample was taken from 12 to 13 feet bgs with a measurement of 8.8 ppm.

  - From 14 to 16 feet bgs the core returned wet fine sand with a slight fuel odor. A field screening sample taken from 14 to 15 feet bgs read 1.4 ppm. Sample IW 2022-D-2 was taken from 15 to 16 feet bgs with a PID reading of 38.0 ppm.

- Drilling ended at 16 feet bgs. A 4 inch-diameter PVC well was installed with 10 feet of 20-slot screened casing from 4.7 to 14.7 feet bgs. From 4.7 feet bgs to 6 inches below the ground surface the well casing is unscreened.

- The annulus space was backfilled with filter sand from 14.7 to 3 feet bgs, bentonite clay from 3 to 1.5 feet bgs, and pea gravel from 1.5 to 0.5 feet bgs. The top of the well casing is covered with an 8-inch diameter flush-mounted steel well casing.

The extracted soil material (drill cuttings) collected from the soil borings was segregated by soil boring and placed in three 55-gallon steel drums and a single sealed plastic 5 gallon bucket that are temporarily stored on-site. The drums and bucket were sealed and properly labeled by Stantec. Based on the soil sample analytical test results for each boring summarized in **Table 1**, it appears the soil cuttings stored on-site in the drums and bucket from wells IW 2022-B and IW 2022-D will require off-site treatment and disposal while the soil cuttings from IW 2022-A and IW 2022-C will be land spread on the subject Speedway property. Stantec will follow up this technical memorandum with the preparation of a request for transport and treatment of the contaminated soil that will be submitted to the ADEC for approval.

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 macrocore from a 10-inch auger, was transferred to a re-sealable polyethylene bag for screening by PID. Calibration of the PID was conducted with a 100-ppm calibration standard. Samples were warmed and allowed to volatilize for at least 10 minutes prior to screening. Field screening results along with the location of analytical sample locations are summarized on the four soil boring logs that are provided in **Attachment 1**.

3.1.1 Analytical Sampling Methodology and Results

Soil analytical samples were submitted to SGS Laboratory located in Anchorage, Alaska, 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) as well as ethylene dibromide (EDB) by EPA Method 8270D with selective ion monitoring, gasoline range organics (GRO) by Alaska State test method (AK) 101, diesel range organics (DRO) by AK102, residual range organics (RRO) by AK103, and total lead by EPA 6020D. The laboratory analytical report is provided in **Attachment 2**.

Soil analytical results were compared to 18 Alaska Administrative Code (AAC) 75 Method Two Migration-to-Groundwater Soil Cleanup Levels (SCLs). A summary of soil analytical detections and exceedances are provided in **Table 1**. Ethylbenzene was detected in exceedance of the SCL in IQ 2022-D-1. Naphthalene was detected above SCLs in samples IW 2022-B-1, IW 2022-D-1, and the duplicate sample.

Table 1 Soil Sample Analytical Results
Soil Boring samples collected October 6-7, 2022

Sample ID	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total Xylenes (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	RRO (mg/kg)	Naphthalene (mg/kg)	EDB (mg/kg)	Lead (mg/kg)
IW 2022-A-1	U (0.00625)	0.0161 J (0.0250)	U (0.0125)	0.0390 J (0.0751)	3.59	215	U (57.5)	0.0205 J (0.0229)	U (0.0000625)	5.24
IW 2022-B-1	U (0.00925)	0.0327 J (0.0370)	U (0.0185)	0.137	11.2	52.2	55.2 J (127)	**0.884**	U (0.0000925)	6.50
Dup 1 (Duplicate of IW 2022-B-1)	U (0.00890)	0.0564	U (0.0178)	0.220	23.4	93.4	89.5 J (128)	**0.470**	U (0.0000890)	6.34
IW 2022-B-2	U (0.00650)	0.00961 J (0.0261)	U (0.0131)	0.0607 J (0.0782)	1.63 J (2.61)	U (11.2)	U (56.0)	U (0.0112)	U (0.0000650)	2.77
IW 2022-C-1	U (0.00730)	0.0252 J (0.0292)	U (0.0146)	0.0679 J (0.0875)	1.69 J (2.92)	U (11.8)	U (58.5)	U (0.0117)	U (0.0000730)	2.77
IW 2022-C-2	U (0.00575)	0.0130 J (0.0229)	U (0.0114)	0.0439 J (0.0688)	2.03 J (2.29)	U (11.6)	U (58.0)	0.0198 J (0.0232)	U (0.0000575)	6.43
IW 2022-D-1	U (0.0102)	**0.169**	U (0.0204)	1.180	18.1	45.8	U (63.0)	**0.0621**	U (0.000102)	6.62
IW 2022-D-2	U (0.00472)	0.0242	U (0.00945)	0.154	2.32	U (11.2)	U (56.0)	0.0144 J (0.0225)	U (0.0000472)	4.19
SCL	**0.022**	**0.13**	**6.7**	**1.5**	**300**	**250**	**11000**	**0.038**	**0.000240**	**400**

Key:
AK - Alaska Test Method
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 method AK102
mg/kg - milligrams per kilogram; SCL - Soil Cleanup Levels from 18 AAC 75
U - Indicates the sample was not detected above the practical quantification limit (shown in parentheses)
J - The quantization is an estimate; analyte was detected below the practical quantification limit
EDB – 1,2-dibromoethane (ethylene dibromide)

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

SGS Laboratories did not meet all laboratory QA/QC criteria during the analysis of soil and groundwater samples, as described in **Table 2** (see below), which provides a summary of the laboratory QC objectives and outcomes for soil. To evaluate QA/QC criteria, duplicate soil sample sets were collected to determine the precision of the field collection and laboratory analysis, and the laboratory holding times for 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 laboratory limits of quantization as the relative percent differences (RPDs) between the sample-duplicate pairs. RPDs could not be calculated for analytes that were non-detect in one or both of the primary and duplicate samples. SGS exceeded the ADEC-suggested precision limit for soil sample field duplicates of 50% in samples taken for ethylbenzene, GRO, DRO, and naphthalene. SGS met all holding times for extraction and analysis of samples. Laboratory QC data and the ADEC Laboratory Data Review Checklist are included after the laboratory report in **Attachment 2.**

Table 2 Laboratory Quality Control Objectives

Field Duplicates – Precision		
Quality Control Designation	**Tolerance**	**Results for This Event**
Benzene/Soil	± 50%	NC
Ethylbenzene/Soil	± 50%	**53%**
Toluene/Soil	± 50%	NC
Total Xylenes/Soil	± 50%	46%
DRO/Soil	± 50%	**71%**
GRO/Soil	± 50%	**57%**
RRO/Soil	± 50%	47%
Naphthalene/Soil	± 50%	**61%**
EDB/Soil	± 50%	NC
Lead/Soil	± 50%	2.5%
Holding Times		
DRO/Soil/to analyze	40 days	16-17 days
GRO/Soil/to analyze	14 days	7-8 days
VOC/Soil/to analyze	14 days	7 days
PAH/Soil/to analyze	40 days	15-22 days
EDB/Soil/to analyze	40 days	5-6 days

Key:

%	percent
±	plus or minus
Bold	indicates value is above accepted quality control limits
DRO	diesel range organics
EDB	ethylene dibromide (1,2-dibromoethane)
GRO	gasoline range organics
NC	Not calculated, the analyte was not detected above the practical quantitation limit in one or more samples
PAH	polynuclear aromatic hydrocarbon
RRO	residual range organics
VOC	volatile organic compound

4 CONCLUSIONS AND RECOMMENDATIONS

The purpose of this report was to provide a description of the field methods used to install four 4-inch diameter chemox injection wells identified as IW 2022-A, IW 2022-B. IW 2022-C and IW 2022-D. As presented in **Table 1**, Stantec found the subsurface soils surrounding IW 2022-A and IW 2022-C to be absent of petroleum contamination; whereas the soils surrounding IW 2022-B only had naphthalene that exceeded the ADEC SCL and soil surrounding IW 2022-D had naphthalene and ethylbenzene in exceedance of the ADEC SCLs. Also, as shown on the soil boring logs presented in **Attachment 1**, it is of interest to note the aforementioned contaminants were found within the groundwater "smear

zone" at approximately 9-feet below the ground surface while the soil strata sampled beneath the "smear zone" was found to be free of contamination with respect to the ADEC soil cleanup levels.

The findings of the soil sample analyses described above are very encouraging and strongly indicates progress is being made on the remediation of this site. The use of the new large diameter (4-inch) injection wells for future chemox injection events is expected to be more efficient in the application of the chemical oxidation treatment process and should result in a more effective method for the continued remediation of the residual petroleum contamination at this site.

5 LIMITATIONS

Stantec conducted this site assessment and release investigation as reported herein in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions. All sampling activities were completed in accordance with the ADEC *Underground Storage Tanks Procedures Manual – Standard Sampling Procedures* (March 22, 2017). The conclusions in this report are Stantec's professional opinion, as of the time of the report, and concerning the scope described in the report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. This report relates solely to the specific project for which Stantec was retained and the stated purpose for which the report was prepared. The report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

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

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

Stantec Consulting Services Inc.

Robert Gilfilian

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Attachments:
Figure 1 - Location and Vicinity Map
Figure 2 - Site Map with Locations for Chemox Injection Wells

Attachment 1 - Soil Boring Logs for Injection Well Installation
Attachment 2 - SGS Laboratory Results with ADEC Laboratory Data Review Checklist

FIGURES

Figure 1 – Location and Vicinity Map

Figure 2 – Site Map with Locations for Chemox Injection Wells

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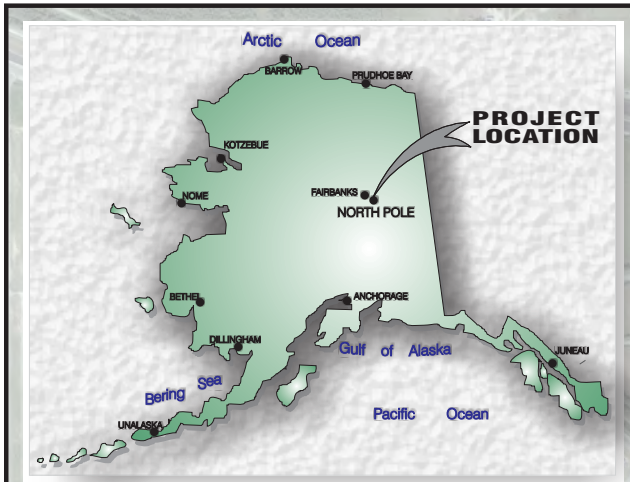


STATE HWY 2

BADGER ROAD

HURST ROAD

7-Eleven Store # 43003

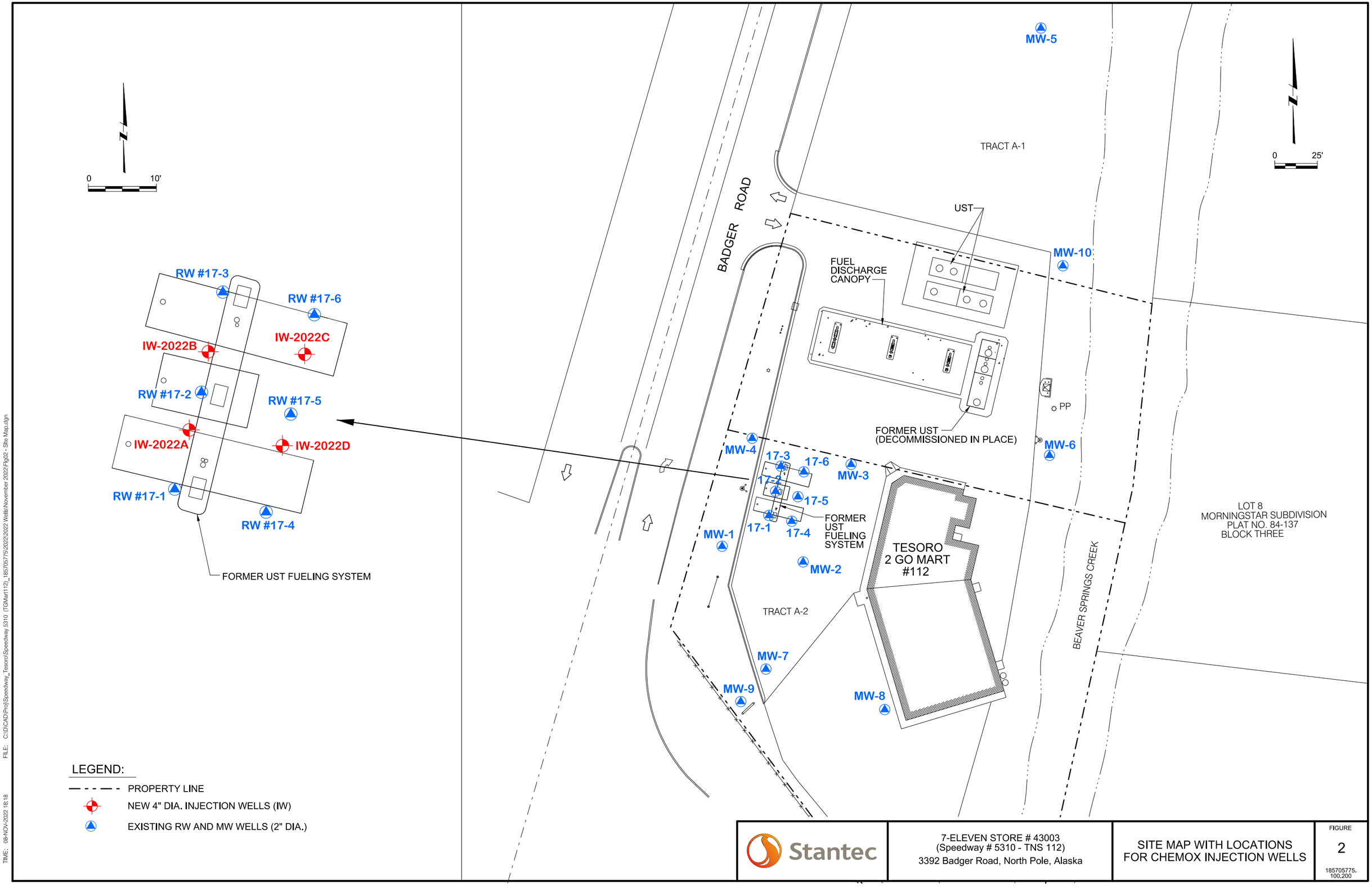
OLD RICHARDSON HWY

N SANTA CLAUS LN

N

0 500'

Stantec	7-ELEVEN STORE # 43003 (Speedway # 5310 - TNS 112) 3392 Badger Road, North Pole, Alaska	LOCATION AND VICINITY MAP	FIGURE 1 185705775. 100.200



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TIME: 08-NOV-2022 18:18

Stantec

7-ELEVEN STORE # 43003
(Speedway # 5310 - TNS 112)
3392 Badger Road, North Pole, Alaska

SITE MAP WITH LOCATIONS
FOR CHEMOX INJECTION WELLS

FIGURE
2

185705775.
100.200

Attachment 1 – Soil Borings Logs for Injection Well Installations

PROJECT: **TNS 112 Speedway 5310**
LOCATION: **North Pole, AK**
PROJECT NUMBER: **185705775**

WELL / PROBEHOLE / BOREHOLE NO:
PAGE 1 OF 1 **IW-2022 A**

Stantec

DRILLING: STARTED **10/5/22** COMPLETED: **10/5/22**
INSTALLATION: STARTED **10/5/22** COMPLETED: **10/5/22**
DRILLING COMPANY: **Discovery Drilling**
DRILLING EQUIPMENT: **GeoProbe 6712 DT**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Micro-Core**

NORTHING (ft):**NA 483334** EASTING (ft):**NA 7181661**
GROUND ELEV (ft): **N/A** TOC ELEV (ft): **N/A**
INITIAL DTW (ft): **8** BOREHOLE DEPTH (ft): **14.4**
STATIC DTW (ft): **Not Encountered** WELL DEPTH (ft): **13**
WELL CASING DIA. (in): **4** BOREHOLE DIA.(in): **10**
LOGGED BY: **BG** CHECKED BY: **PJ**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			ASPHALT						
			SANDY GRAVEL ; brown; fill material						
		SW	**SAND WITH GRAVEL** ; SW; brown; fine-grained					0.4	
5		SW	**SAND WITH SOME GRAVEL** ; SW; brown; fine-grained						5
		SP	**SAND** ; SP; brown; fine-grained; wet					0.0	
		SP	**SAND** ; SP; brown; fine-grained; wet; slight odor		IW-2022-A-1 Collected @ 1228			0.2 15.6	
10		GW	**SANDY GRAVEL** ; GW; brown						10
			Odor present @ 13'					1.7	
			Borehole terminated at 14.4 feet.						
15									

Well Construction

- Gravel Backfill
- Hydrated 3/8" Bentonite Chips
- 4" Factory Threaded Schedule 40 PVC Riser
- Pre-washed Quartz Filter Pack Sand
- 4" Factory Slotted 0.020" Schedule 40 PVC

GEO FORM 304 202201103_DWG_TNS_112_SPEEDWAY_5310_BORING_LOGS.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 11/10/22

PROJECT: **TNS 112 Speedway 5310**
LOCATION: **North Pole, AK**
PROJECT NUMBER: **185705775**

WELL / PROBEHOLE / BOREHOLE NO: **IW-2022 B**
PAGE 1 OF 1

Stantec

DRILLING: STARTED **10/5/22** COMPLETED: **10/5/22**
INSTALLATION: STARTED **10/5/22** COMPLETED: **10/5/22**
DRILLING COMPANY: **Discovery Drilling**
DRILLING EQUIPMENT: **GeoProbe 6712 DT**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Micro-Core**

NORTHING (ft):**NA** EASTING (ft):**NA**
GROUND ELEV (ft): **N/A** TOC ELEV (ft): **N/A**
INITIAL DTW (ft): **8** BOREHOLE DEPTH (ft): **14.9**
STATIC DTW (ft): **Not Encountered** WELL DEPTH (ft): **13.3**
WELL CASING DIA. (in): **4** BOREHOLE DIA.(in): **10**
LOGGED BY: **BG** CHECKED BY: **PJ**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			ASPHALT						
		SW	**GRAVELLY SAND** ; SW; brown						
								0.2	
5								0.3	5
			Wet @ 8'						
					IW-2022-B-1 Collected @ 1607			16.5	
10			Fuel odor present from 9'-10'						10
								3.5	
		GW	**SANDY GRAVEL** ; GW; gray; Odor present						
					IW-2022-B-2 Collected @ 1625			4.8	
15			Borehole terminated at 14.9 feet.						

Well Construction

- Gravel Backfill
- Hydrated 3/8" Bentonite Chips
- 4" Factory Threaded Schedule 40 PVC Riser
- Pre-washed Quartz Filter Pack Sand
- 4" Factory Slotted 0.020" Schedule 40 PVC

GEO FORM 304 202201103_DWG_TNS_112_SPEEDWAY_5310_BORING_LOGS.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 11/10/22

PROJECT: **TNS 112 Speedway 5310**
LOCATION: **North Pole, AK**
PROJECT NUMBER: **185705775**

WELL / PROBEHOLE / BOREHOLE NO: **IW-2022 C**
PAGE 1 OF 1

DRILLING: STARTED **10/6/22** COMPLETED: **10/6/22**
INSTALLATION: STARTED **10/6/22** COMPLETED: **10/6/22**
DRILLING COMPANY: **Discovery Drilling**
DRILLING EQUIPMENT: **GeoProbe 6712 DT**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Micro-Core**

NORTHING (ft):**NA** EASTING (ft):**NA**
GROUND ELEV (ft): **N/A** TOC ELEV (ft): **N/A**
INITIAL DTW (ft): **8** BOREHOLE DEPTH (ft): **16**
STATIC DTW (ft): **Not Encountered** WELL DEPTH (ft): **14.8**
WELL CASING DIA. (in): **4** BOREHOLE DIA.(in): **10**
LOGGED BY: **BG** CHECKED BY: **PJ**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
		GW	**ASPHALT** **SANDY GRAVEL** ; GW; brown; dry; no odor						
5		ML	**SILT** ; ML; brown; damp; no odor					0.0	5
			Wet @ 8'						
10		SW	**GRAVELLY SAND** ; SW; gray; wet; slight odor					2.4	10
					IW-2022-C-1 Collected @ 0910			3.9	
15					IW-2022-C-2 Collected @ 0920			4.5	15
			Borehole terminated at 16 feet.					14.5	

Well Construction:
- Gravel Backfill
- Hydrated 3/8" Bentonite Chips
- 4" Factory Threaded Schedule 40 PVC Riser
- Pre-washed Quartz Filter Pack Sand
- 4" Factory Slotted 0.020" Schedule 40 PVC

GEO FORM 304 202201103_DWG_TNS_112_SPEEDWAY_5310_BORING_LOGS.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 11/10/22

PROJECT: **TNS 112 Speedway 5310**
LOCATION: **North Pole, AK**
PROJECT NUMBER: **185705775**

WELL / PROBEHOLE / BOREHOLE NO: **IW-2022 D**
PAGE 1 OF 1

Stantec

DRILLING: STARTED **10/6/22** COMPLETED: **10/6/22**
INSTALLATION: STARTED **10/6/22** COMPLETED: **10/6/22**
DRILLING COMPANY: **Discovery Drilling**
DRILLING EQUIPMENT: **GeoProbe 6712 DT**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Micro-Core**

NORTHING (ft):**NA** EASTING (ft):**NA**
GROUND ELEV (ft): **N/A** TOC ELEV (ft): **N/A**
INITIAL DTW (ft): **8** BOREHOLE DEPTH (ft): **16**
STATIC DTW (ft): **Not Encountered** WELL DEPTH (ft): **14.7**
WELL CASING DIA. (in): **4** BOREHOLE DIA.(in): **10**
LOGGED BY: **BG** CHECKED BY: **PJ**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			ASPHALT						
			Gravel Backfill, brown, dry, no odor.						
		SW	**GRAVELLY SAND** ; SW; brown; fine-grained; dry; no odor					0.0	
5									5
		SP	**SAND** ; SP; gray; fine-grained; wet; slight odor					0.3	
					IW-2022-D-1 Collected @ 1045			44.0	
10									10
		GW	**SANDY GRAVEL** ; GW; wet; no odor					8.8	
								1.4	
		SP	**SAND** ; SP; fine-grained; wet; slight odor						
15					IW-2022-D-2 Collected @ 1125			38.0	15
			Borehole terminated at 16 feet.						

Well Construction

- Gravel Backfill
- Hydrated 3/8" Bentonite Chips
- 4" Factory Threaded Schedule 40 PVC Riser
- Pre-washed Quartz Filter Pack Sand
- 4" Factory Slotted 0.020" Schedule 40 PVC

GEO FORM 304 202201103_DWG_TNS_112_SPEEDWAY_5310_BORING_LOGS.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 11/10/22

ATTACHMENT 2

SGS Laboratory Results with ADEC Laboratory Data Review Checklist

Laboratory Report of Analysis

To: Stantec Consulting Services Inc.
725 E Fireweed Lane #200
Anchorage, AK 99503
(907)251-6153

Report Number: **1226138**

Client Project: **185705775 Speedway Store 5310**

Dear Leslie Petre,

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

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

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

Sincerely,
SGS North America Inc.

_____

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

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1226138**
Project Name/Site: **185705775 Speedway Store 5310**
Project Contact: **Leslie Petre**

Refer to sample receipt form for information on sample condition.

Dup 1 (1226138006) PS

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

1226243007(1691506MSD) (1691508) MSD

8260D - MS/MSD RPD for chloroethane does not meet QC criteria. This analyte was not detected above the LOQ in the associated PS.
8260D - MSD recovery for 1,2,3-trichlorobenzene does not meet QC criteria. See LCS for accuracy requirements.

1226138001(1691536BND) (1691540) BND

6020B - Metals BND recovery for Barium does not meet QC criteria. The sample is non - homogeneous for Barium.

1226138001(1691536MS) (1691541) MS

6020B - Metals MS recovery for Chromium does not meet QC criteria. The post digestion spike was successful.
6020B - Metals MS recovery for Barium does not meet QC criteria. The post digestion spike was unsuccessful. The sample is non - homogeneous for Barium.

1226138001(1691536MSD) (1691542) MSD

6020B - Metals MSD recovery for Barium does not meet QC criteria. The post digestion spike was unsuccessful. The sample is non - homogeneous for Barium.

1226138001(1691750MS) (1691757) MS

8260D SIM - MS recovery for 1,2,3-trichloropropane does not meet QC criteria. See LCS for accuracy requirements.

1226138001(1691750MSD) (1691758) MSD

8260D SIM - MSD recovery for 1,2,3-trichloropropane does not meet QC criteria. See LCS for accuracy requirements.

1226239001(1691913MSD) (1691915) MSD

8260D - MS/MSD RPD for chloroethane does not meet QC criteria. This analyte was not detected above the LOQ in the associated PS.
8260D - MSD recovery for 1,2,3-trichlorobenzene does not meet QC criteria. See LCS for accuracy requirements.

MB for HBN 1846555 [XXX/47185] (1692035) MB

8270D SIM - PAH MB Surrogate recovery for 2-methylnaphthalene-10 does not meet QC criteria.

1226202011MS (1692038) MS

8270D SIM - PAH MS Surrogate recovery for 2-methylnaphthalene-10 does not meet QC criteria due to matrix interference.

1226202011MSD (1692039) MSD

8270D SIM - PAH MSD RPDs for several analytes do not meet QC criteria.

1226275004MS (1692218) MS

8270D SIM - PAH Surrogate recoveries for 2-methylnaphthalene-d10 and fluoranthene-d10 do not meet QC criteria due to matrix interference.
8270D SIM - PAH MS recoveries for several analytes do not meet QC criteria. Refer to LCS for accuracy requirements.
8270D SIM - PAH The LOQs are elevated due to sample dilution. The sample was analyzed at a dilution due to a high concentration of non-target compounds.

1226275004MSD (1692219) MSD

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1226138**
Project Name/Site: **185705775 Speedway Store 5310**
Project Contact: **Leslie Petre**

8270D SIM - PAH MSD Surrogate recovery for 2-methylnaphthalene-d10 does not meet QC criteria due to matrix interference.
8270D SIM - PAH MSD RPDs for several analytes do not meet QC criteria. These analytes are not detected above the LOQ in the parent sample.
8270D SIM - PAH The LOQs are elevated due to sample dilution. The sample was analyzed at a dilution due to a high concentration of non-target compounds.

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

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Report of Manual Integrations

Laboratory ID	Client Sample ID	Analytical Batch	Analyte	Reason
8270D SIM (PAH)				
1226138001	IW-2022A-1	XMS13418	Benzo[k]fluoranthene	RP
1226138001	IW-2022A-1	XMS13418	Dibenzo[a,h]anthracene	RP
1226138002	IW-2022B-1	XMS13418	Benzo[k]fluoranthene	RP
1226138002	IW-2022B-1	XMS13418	Dibenzo[a,h]anthracene	RP
1226138005	IW--2022C-2	XMS13424	Benzo[k]fluoranthene	RP
1226138005	IW--2022C-2	XMS13424	Chrysene	SP
1226138005	IW--2022C-2	XMS13424	Dibenzo[a,h]anthracene	RP
1226138006	Dup 1	XMS13421	Dibenzo[a,h]anthracene	BLC
1226138007	IW-2022D-1	XMS13424	Dibenzo[a,h]anthracene	RP
1226202011	LABREFQC	XMS13421	Benzo[b]Fluoranthene	SP
1692038	1226202011MS	XMS13421	Benzo[k]fluoranthene	SP
1692218	1226275004MS	XMS13424	Benzo[k]fluoranthene	RP
1693921	CVC for HBN 1847325 (XMS/13421	XMS13421	Benzo[k]fluoranthene	RP
SW8260D				
1226138001	IW-2022A-1	VMS22058	4-Isopropyltoluene	SP
1226138002	IW-2022B-1	VMS22058	4-Isopropyltoluene	SP
1226138006	Dup 1	VMS22058	4-Isopropyltoluene	SP

Manual Integration Reason Code Descriptions

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

All DRO/RRO analysis are integrated per SOP.

Print Date: 10/31/2022 2:58:05PM

Laboratory Qualifiers

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

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

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

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

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

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

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
IW-2022A-1	1226138001	10/05/2022	10/07/2022	Soil/Solid (dry weight)
IW-2022B-1	1226138002	10/05/2022	10/07/2022	Soil/Solid (dry weight)
IW-2022B-2	1226138003	10/05/2022	10/07/2022	Soil/Solid (dry weight)
IW-2022C-1	1226138004	10/06/2022	10/07/2022	Soil/Solid (dry weight)
IW--2022C-2	1226138005	10/06/2022	10/07/2022	Soil/Solid (dry weight)
Dup 1	1226138006	10/05/2022	10/07/2022	Soil/Solid (dry weight)
IW-2022D-1	1226138007	10/06/2022	10/07/2022	Soil/Solid (dry weight)
IW-2022D-2	1226138008	10/06/2022	10/07/2022	Soil/Solid (dry weight)
Trip Blank	1226138009	10/05/2022	10/07/2022	Soil/Solid (dry weight)

Method	Method Description
8270D SIM (PAH)	8270 PAH SIM Semi-Volatiles GC/MS
AK102	Diesel/Residual Range Organics
AK103	Diesel/Residual Range Organics
AK101	Gasoline Range Organics (S)
SW6020B	Metals by ICP-MS (S)
SM21 2540G	Percent Solids SM2540G
SW8260D-SIM	SW8260-SIM (S)
SW8260D	VOC 8260 (S) Field Extracted

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Detectable Results Summary

Client Sample ID: **IW-2022A-1**
Lab Sample ID: 1226138001

	Parameter	Result	Units
Metals by ICP/MS	Lead	5.24	mg/kg
Polynuclear Aromatics GC/MS	1-Methylnaphthalene	113	ug/kg
	2-Methylnaphthalene	149	ug/kg
	Acenaphthene	20.5J	ug/kg
	Benzo(a)Anthracene	13.9J	ug/kg
	Benzo[a]pyrene	39.2	ug/kg
	Benzo[b]Fluoranthene	53.2	ug/kg
	Benzo[g,h,i]perylene	49.0	ug/kg
	Benzo[k]fluoranthene	19.2J	ug/kg
	Chrysene	25.7J	ug/kg
	Dibenzo[a,h]anthracene	9.43J	ug/kg
	Fluoranthene	19.8J	ug/kg
	Fluorene	16.7J	ug/kg
	Indeno[1,2,3-c,d] pyrene	38.3	ug/kg
	Naphthalene	20.5J	ug/kg
	Phenanthrene	27.1J	ug/kg
	Pyrene	56.7	ug/kg
Semivolatile Organic Fuels	Diesel Range Organics	215	mg/kg
Volatile Fuels	Gasoline Range Organics	3.59	mg/kg
Volatile GC/MS	1,2,4-Trimethylbenzene	524	ug/kg
	1,3,5-Trimethylbenzene	229	ug/kg
	Ethylbenzene	16.1J	ug/kg
	Isopropylbenzene (Cumene)	13.3J	ug/kg
	Naphthalene	17.7J	ug/kg
	n-Propylbenzene	39.8	ug/kg
	P & M -Xylene	39.0J	ug/kg
	sec-Butylbenzene	26.9	ug/kg
	Xylenes (total)	39.0J	ug/kg

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Detectable Results Summary

Client Sample ID: **IW-2022B-1**
Lab Sample ID: 1226138002

	Parameter	Result	Units
Metals by ICP/MS	Lead	6.50	mg/kg
Polynuclear Aromatics GC/MS	1-Methylnaphthalene	1330	ug/kg
	2-Methylnaphthalene	1620	ug/kg
	Acenaphthene	75.5	ug/kg
	Anthracene	39.2	ug/kg
	Benzo(a)Anthracene	65.1	ug/kg
	Benzo[a]pyrene	72.0	ug/kg
	Benzo[b]Fluoranthene	92.1	ug/kg
	Benzo[g,h,i]perylene	61.3	ug/kg
	Benzo[k]fluoranthene	27.8J	ug/kg
	Chrysene	70.2	ug/kg
	Dibenzo[a,h]anthracene	12.5J	ug/kg
	Fluoranthene	188	ug/kg
	Fluorene	202	ug/kg
	Indeno[1,2,3-c,d] pyrene	51.5	ug/kg
	Naphthalene	884	ug/kg
	Phenanthrene	314	ug/kg
	Pyrene	174	ug/kg
Semivolatile Organic Fuels	Diesel Range Organics	52.2	mg/kg
	Residual Range Organics	55.2J	mg/kg
Volatile Fuels	Gasoline Range Organics	11.2	mg/kg
Volatile GC/MS	1,2,4-Trimethylbenzene	1390	ug/kg
	1,3,5-Trimethylbenzene	555	ug/kg
	Ethylbenzene	32.7J	ug/kg
	Isopropylbenzene (Cumene)	31.8J	ug/kg
	Naphthalene	633	ug/kg
	n-Propylbenzene	86.3	ug/kg
	P & M -Xylene	137	ug/kg
	sec-Butylbenzene	61.4	ug/kg
	Xylenes (total)	137	ug/kg

Client Sample ID: **IW-2022B-2**
Lab Sample ID: 1226138003

	Parameter	Result	Units
Metals by ICP/MS	Lead	2.77	mg/kg
Volatile Fuels	Gasoline Range Organics	1.63J	mg/kg
Volatile GC/MS	1,2,4-Trimethylbenzene	114	ug/kg
	1,3,5-Trimethylbenzene	30.4	ug/kg
	Ethylbenzene	9.61J	ug/kg
	n-Propylbenzene	9.93J	ug/kg
	o-Xylene	8.24J	ug/kg
	P & M -Xylene	52.5	ug/kg
	Xylenes (total)	60.7J	ug/kg

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Detectable Results Summary

Client Sample ID: **IW-2022C-1**
Lab Sample ID: 1226138004

	Parameter	Result	Units
Metals by ICP/MS	Lead	2.77	mg/kg
Volatile Fuels	Gasoline Range Organics	1.69J	mg/kg
Volatile GC/MS	1,3,5-Trimethylbenzene	36.4	ug/kg
	Ethylbenzene	25.2J	ug/kg
	Naphthalene	11.3J	ug/kg
	n-Propylbenzene	14.8J	ug/kg
	P & M -Xylene	67.9	ug/kg
	Xylenes (total)	67.9J	ug/kg

Client Sample ID: **IW--2022C-2**
Lab Sample ID: 1226138005

	Parameter	Result	Units
Metals by ICP/MS	Lead	6.43	mg/kg
Polynuclear Aromatics GC/MS	1-Methylnaphthalene	31.1	ug/kg
	2-Methylnaphthalene	33.6	ug/kg
	Benzo[a]pyrene	51.7	ug/kg
	Benzo[b]Fluoranthene	67.9	ug/kg
	Benzo[g,h,i]perylene	86.3	ug/kg
	Benzo[k]fluoranthene	12.3J	ug/kg
	Chrysene	8.93J	ug/kg
	Dibenzo[a,h]anthracene	17.6J	ug/kg
	Fluoranthene	16.9J	ug/kg
	Fluorene	9.72J	ug/kg
	Indeno[1,2,3-c,d] pyrene	74.6	ug/kg
	Naphthalene	19.8J	ug/kg
	Phenanthrene	17.3J	ug/kg
	Pyrene	22.5J	ug/kg
Volatile Fuels	Gasoline Range Organics	2.03J	mg/kg
Volatile GC/MS	1,2,4-Trimethylbenzene	76.7J	ug/kg
	1,3,5-Trimethylbenzene	44.4	ug/kg
	Ethylbenzene	13.0J	ug/kg
	Naphthalene	19.1J	ug/kg
	P & M -Xylene	43.9J	ug/kg
	Xylenes (total)	43.9J	ug/kg

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Detectable Results Summary

Client Sample ID: **Dup 1**
Lab Sample ID: 1226138006

	Parameter	Result	Units
Metals by ICP/MS	Lead	6.34	mg/kg
Polynuclear Aromatics GC/MS	1-Methylnaphthalene	619	ug/kg
	2-Methylnaphthalene	698	ug/kg
	Acenaphthene	35.4	ug/kg
	Anthracene	24.7J	ug/kg
	Benzo(a)Anthracene	41.1	ug/kg
	Benzo[a]pyrene	44.8	ug/kg
	Benzo[b]Fluoranthene	58.2	ug/kg
	Benzo[g,h,i]perylene	36.7	ug/kg
	Benzo[k]fluoranthene	17.2J	ug/kg
	Chrysene	45.7	ug/kg
	Dibenzo[a,h]anthracene	8.06J	ug/kg
	Fluoranthene	121	ug/kg
	Fluorene	102	ug/kg
	Indeno[1,2,3-c,d] pyrene	30.7J	ug/kg
	Naphthalene	470	ug/kg
	Phenanthrene	191	ug/kg
	Pyrene	112	ug/kg
Semivolatile Organic Fuels	Diesel Range Organics	93.4	mg/kg
	Residual Range Organics	89.5J	mg/kg
Volatile Fuels	Gasoline Range Organics	23.4	mg/kg
Volatile GC/MS	1,2,4-Trimethylbenzene	1780	ug/kg
	1,3,5-Trimethylbenzene	992	ug/kg
	4-Isopropyltoluene	80.8J	ug/kg
	Ethylbenzene	56.4	ug/kg
	Isopropylbenzene (Cumene)	55.8	ug/kg
	Naphthalene	921	ug/kg
	n-Propylbenzene	154	ug/kg
	P & M -Xylene	220	ug/kg
	sec-Butylbenzene	118	ug/kg
	Xylenes (total)	220	ug/kg

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Detectable Results Summary

Client Sample ID: **IW-2022D-1**
Lab Sample ID: 1226138007

	Parameter	Result	Units
Metals by ICP/MS	Lead	6.62	mg/kg
Polynuclear Aromatics GC/MS	1-Methylnaphthalene	28.5J	ug/kg
	2-Methylnaphthalene	43.5	ug/kg
	Acenaphthene	8.40J	ug/kg
	Benzo(a)Anthracene	17.0J	ug/kg
	Benzo[a]pyrene	32.6	ug/kg
	Benzo[b]Fluoranthene	43.6	ug/kg
	Benzo[g,h,i]perylene	42.8	ug/kg
	Benzo[k]fluoranthene	13.9J	ug/kg
	Chrysene	29.2J	ug/kg
	Dibenzo[a,h]anthracene	10.2J	ug/kg
	Fluoranthene	24.5J	ug/kg
	Fluorene	31.5J	ug/kg
	Indeno[1,2,3-c,d] pyrene	33.9	ug/kg
	Naphthalene	62.1	ug/kg
	Phenanthrene	39.1	ug/kg
	Pyrene	53.8	ug/kg
Semivolatile Organic Fuels	Diesel Range Organics	45.8	mg/kg
Volatile Fuels	Gasoline Range Organics	18.1	mg/kg
Volatile GC/MS	1,2,4-Trimethylbenzene	6200	ug/kg
	1,3,5-Trimethylbenzene	1730	ug/kg
	4-Isopropyltoluene	347	ug/kg
	Ethylbenzene	169	ug/kg
	Isopropylbenzene (Cumene)	77.5	ug/kg
	Naphthalene	99.2	ug/kg
	n-Propylbenzene	259	ug/kg
	o-Xylene	72.0	ug/kg
	P & M -Xylene	1110	ug/kg
	sec-Butylbenzene	107	ug/kg
	Xylenes (total)	1180	ug/kg

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

Detectable Results Summary

Client Sample ID: **IW-2022D-2**
Lab Sample ID: 1226138008

	Parameter	Result	Units
Metals by ICP/MS	Lead	4.19	mg/kg
Polynuclear Aromatics GC/MS	1-Methylnaphthalene	12.2J	ug/kg
	2-Methylnaphthalene	18.7J	ug/kg
	Benzo[b]Fluoranthene	7.39J	ug/kg
	Benzo[g,h,i]perylene	15.0J	ug/kg
	Indeno[1,2,3-c,d] pyrene	10.1J	ug/kg
	Naphthalene	14.4J	ug/kg
Volatile Fuels	Gasoline Range Organics	2.32	mg/kg
Volatile GC/MS	1,2,4-Trimethylbenzene	411	ug/kg
	1,3,5-Trimethylbenzene	129	ug/kg
	Ethylbenzene	24.2	ug/kg
	Isopropylbenzene (Cumene)	8.19J	ug/kg
	Naphthalene	17.8J	ug/kg
	n-Propylbenzene	24.1	ug/kg
	o-Xylene	53.4	ug/kg
	P & M -Xylene	101	ug/kg
	sec-Butylbenzene	6.73J	ug/kg
	Xylenes (total)	154	ug/kg

Client Sample ID: **Trip Blank**
Lab Sample ID: 1226138009

	Parameter	Result	Units
Volatile Fuels	Gasoline Range Organics	1.32J	mg/kg
Volatile GC/MS	Methylene chloride	40.3J	ug/kg

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

Results of **IW-2022A-1**

Client Sample ID: **IW-2022A-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138001
Lab Project ID: 1226138

Collection Date: 10/05/22 12:44
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.7
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Lead	5.24		0.232	0.0720	mg/kg	10		10/18/22 14:29

Batch Information

Analytical Batch: MMS11722
Analytical Method: SW6020B
Analyst: HGS
Analytical Date/Time: 10/18/22 14:29
Container ID: 1226138001-A

Prep Batch: MXX35557
Prep Method: SW3050B
Prep Date/Time: 10/14/22 13:30
Prep Initial Wt./Vol.: 1.004 g
Prep Extract Vol: 50 mL

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

Results of **IW-2022A-1**

Client Sample ID: **IW-2022A-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138001
Lab Project ID: 1226138

Collection Date: 10/05/22 12:44
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.7
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	113		28.6	7.16	ug/kg	1		10/28/22 06:33
2-Methylnaphthalene	149		28.6	7.16	ug/kg	1		10/28/22 06:33
Acenaphthene	20.5 J		28.6	7.16	ug/kg	1		10/20/22 19:22
Acenaphthylene	14.3 U		28.6	7.16	ug/kg	1		10/20/22 19:22
Anthracene	14.3 U		28.6	7.16	ug/kg	1		10/20/22 19:22
Benzo(a)Anthracene	13.9 J		28.6	7.16	ug/kg	1		10/20/22 19:22
Benzo[a]pyrene	39.2		28.6	7.16	ug/kg	1		10/20/22 19:22
Benzo[b]Fluoranthene	53.2		28.6	7.16	ug/kg	1		10/20/22 19:22
Benzo[g,h,i]perylene	49.0		28.6	7.16	ug/kg	1		10/20/22 19:22
Benzo[k]fluoranthene	19.2 J		28.6	7.16	ug/kg	1		10/20/22 19:22
Chrysene	25.7 J		28.6	7.16	ug/kg	1		10/20/22 19:22
Dibenzo[a,h]anthracene	9.43 J		28.6	7.16	ug/kg	1		10/20/22 19:22
Fluoranthene	19.8 J		28.6	7.16	ug/kg	1		10/20/22 19:22
Fluorene	16.7 J		28.6	7.16	ug/kg	1		10/20/22 19:22
Indeno[1,2,3-c,d] pyrene	38.3		28.6	7.16	ug/kg	1		10/20/22 19:22
Naphthalene	20.5 J		22.9	5.73	ug/kg	1		10/20/22 19:22
Phenanthrene	27.1 J		28.6	7.16	ug/kg	1		10/28/22 06:33
Pyrene	56.7		28.6	7.16	ug/kg	1		10/20/22 19:22
Surrogates								
2-Methylnaphthalene-d10 (surr)	98.2		58-103		%	1		10/20/22 19:22
Fluoranthene-d10 (surr)	88.1		54-113		%	1		10/20/22 19:22

Batch Information

Analytical Batch: XMS13424
Analytical Method: 8270D SIM (PAH)
Analyst: NGG
Analytical Date/Time: 10/28/22 06:33
Container ID: 1226138001-A

Prep Batch: XXX47185
Prep Method: SW3550C
Prep Date/Time: 10/18/22 14:30
Prep Initial Wt./Vol.: 22.914 g
Prep Extract Vol: 5 mL

Analytical Batch: XMS13418
Analytical Method: 8270D SIM (PAH)
Analyst: NGG
Analytical Date/Time: 10/20/22 19:22
Container ID: 1226138001-A

Prep Batch: XXX47185
Prep Method: SW3550C
Prep Date/Time: 10/18/22 14:30
Prep Initial Wt./Vol.: 22.914 g
Prep Extract Vol: 5 mL

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW-2022A-1**

Client Sample ID: **IW-2022A-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138001
Lab Project ID: 1226138

Collection Date: 10/05/22 12:44
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.7
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	215		23.0	10.4	mg/kg	1		10/22/22 21:50
Surrogates								
5a Androstane (surr)	91.2		50-150		%	1		10/22/22 21:50

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK102
Analyst: MAP
Analytical Date/Time: 10/22/22 21:50
Container ID: 1226138001-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.409 g
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	57.5 U		115	49.5	mg/kg	1		10/22/22 21:50
Surrogates								
n-Triacontane-d62 (surr)	80.7		50-150		%	1		10/22/22 21:50

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK103
Analyst: MAP
Analytical Date/Time: 10/22/22 21:50
Container ID: 1226138001-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.409 g
Prep Extract Vol: 5 mL

Results of **IW-2022A-1**

Client Sample ID: **IW-2022A-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138001
Lab Project ID: 1226138

Collection Date: 10/05/22 12:44
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.7
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	3.59		2.50	0.751	mg/kg	1		10/13/22 06:09
Surrogates								
4-Bromofluorobenzene (surr)	126		50-150		%	1		10/13/22 06:09

Batch Information

Analytical Batch: VFC16291
Analytical Method: AK101
Analyst: PHK
Analytical Date/Time: 10/13/22 06:09
Container ID: 1226138001-B

Prep Batch: VXX39319
Prep Method: SW5035A
Prep Date/Time: 10/05/22 12:44
Prep Initial Wt./Vol.: 87.169 g
Prep Extract Vol: 37.4377 mL

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW-2022A-1**

Client Sample ID: **IW-2022A-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138001
Lab Project ID: 1226138

Collection Date: 10/05/22 12:44
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.7
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	10.0	U	20.0	6.21	ug/kg	1		10/12/22 18:07
1,1,1-Trichloroethane	12.5	U	25.0	7.82	ug/kg	1		10/12/22 18:07
1,1,2,2-Tetrachloroethane	1.00	U	2.00	0.621	ug/kg	1		10/12/22 18:07
1,1,2-Trichloroethane	0.500	U	1.00	0.501	ug/kg	1		10/12/22 18:07
1,1-Dichloroethane	12.5	U	25.0	7.82	ug/kg	1		10/12/22 18:07
1,1-Dichloroethene	12.5	U	25.0	7.82	ug/kg	1		10/12/22 18:07
1,1-Dichloropropene	12.5	U	25.0	7.82	ug/kg	1		10/12/22 18:07
1,2,3-Trichlorobenzene	50.0	U	100	30.1	ug/kg	1		10/12/22 18:07
1,2,3-Trichloropropane	1.00	U	2.00	0.621	ug/kg	1		10/12/22 18:07
1,2,4-Trichlorobenzene	12.5	U	25.0	7.82	ug/kg	1		10/12/22 18:07
1,2,4-Trimethylbenzene	524		100	30.1	ug/kg	1		10/12/22 18:07
1,2-Dibromo-3-chloropropane	50.0	U	100	31.1	ug/kg	1		10/12/22 18:07
1,2-Dibromoethane	0.750	U	1.50	0.751	ug/kg	1		10/12/22 18:07
1,2-Dichlorobenzene	12.5	U	25.0	7.82	ug/kg	1		10/12/22 18:07
1,2-Dichloroethane	1.00	U	2.00	0.701	ug/kg	1		10/12/22 18:07
1,2-Dichloropropane	5.00	U	10.0	5.01	ug/kg	1		10/12/22 18:07
1,3,5-Trimethylbenzene	229		25.0	7.82	ug/kg	1		10/12/22 18:07
1,3-Dichlorobenzene	12.5	U	25.0	7.82	ug/kg	1		10/12/22 18:07
1,3-Dichloropropane	5.00	U	10.0	3.11	ug/kg	1		10/12/22 18:07
1,4-Dichlorobenzene	12.5	U	25.0	7.82	ug/kg	1		10/12/22 18:07
2,2-Dichloropropane	12.5	U	25.0	7.82	ug/kg	1		10/12/22 18:07
2-Butanone (MEK)	125	U	250	78.2	ug/kg	1		10/12/22 18:07
2-Chlorotoluene	12.5	U	25.0	7.82	ug/kg	1		10/12/22 18:07
2-Hexanone	60.0	U	120	60.1	ug/kg	1		10/12/22 18:07
4-Chlorotoluene	10.0	U	20.0	10.0	ug/kg	1		10/12/22 18:07
4-Isopropyltoluene	40.1	U	80.2	40.1	ug/kg	1		10/12/22 18:07
4-Methyl-2-pentanone (MIBK)	125	U	250	78.2	ug/kg	1		10/12/22 18:07
Acetone	125	U	250	110	ug/kg	1		10/12/22 18:07
Benzene	6.25	U	12.5	3.91	ug/kg	1		10/12/22 18:07
Bromobenzene	12.5	U	25.0	7.82	ug/kg	1		10/12/22 18:07
Bromochloromethane	12.5	U	25.0	7.82	ug/kg	1		10/12/22 18:07
Bromodichloromethane	1.00	U	2.00	0.621	ug/kg	1		10/12/22 18:07
Bromoform	12.5	U	25.0	7.82	ug/kg	1		10/12/22 18:07
Bromomethane	10.0	U	20.0	8.02	ug/kg	1		10/12/22 18:07
Carbon disulfide	50.0	U	100	31.1	ug/kg	1		10/12/22 18:07
Carbon tetrachloride	6.25	U	12.5	3.91	ug/kg	1		10/12/22 18:07
Chlorobenzene	12.5	U	25.0	7.82	ug/kg	1		10/12/22 18:07

Results of **IW-2022A-1**

Client Sample ID: **IW-2022A-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138001
Lab Project ID: 1226138

Collection Date: 10/05/22 12:44
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.7
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	100 U		200	62.1	ug/kg	1		10/12/22 18:07
Chloroform	3.00 U		6.01	3.01	ug/kg	1		10/12/22 18:07
Chloromethane	12.5 U		25.0	7.82	ug/kg	1		10/12/22 18:07
cis-1,2-Dichloroethene	12.5 U		25.0	7.82	ug/kg	1		10/12/22 18:07
cis-1,3-Dichloropropene	6.25 U		12.5	3.91	ug/kg	1		10/12/22 18:07
Dibromochloromethane	2.50 U		5.01	1.50	ug/kg	1		10/12/22 18:07
Dibromomethane	12.5 U		25.0	7.82	ug/kg	1		10/12/22 18:07
Dichlorodifluoromethane	50.0 U		100	30.1	ug/kg	1		10/12/22 18:07
Ethylbenzene	16.1 J		25.0	7.82	ug/kg	1		10/12/22 18:07
Freon-113	50.0 U		100	31.1	ug/kg	1		10/12/22 18:07
Hexachlorobutadiene	10.0 U		20.0	6.21	ug/kg	1		10/12/22 18:07
Isopropylbenzene (Cumene)	13.3 J		25.0	7.82	ug/kg	1		10/12/22 18:07
Methylene chloride	50.0 U		100	31.1	ug/kg	1		10/12/22 18:07
Methyl-t-butyl ether	50.0 U		100	31.1	ug/kg	1		10/12/22 18:07
Naphthalene	17.7 J		25.0	7.82	ug/kg	1		10/12/22 18:07
n-Butylbenzene	12.5 U		25.0	7.82	ug/kg	1		10/12/22 18:07
n-Propylbenzene	39.8		25.0	7.82	ug/kg	1		10/12/22 18:07
o-Xylene	12.5 U		25.0	7.82	ug/kg	1		10/12/22 18:07
P & M -Xylene	39.0 J		50.1	15.0	ug/kg	1		10/12/22 18:07
sec-Butylbenzene	26.9		25.0	7.82	ug/kg	1		10/12/22 18:07
Styrene	12.5 U		25.0	7.82	ug/kg	1		10/12/22 18:07
tert-Butylbenzene	12.5 U		25.0	7.82	ug/kg	1		10/12/22 18:07
Tetrachloroethene	6.25 U		12.5	3.91	ug/kg	1		10/12/22 18:07
Toluene	12.5 U		25.0	7.82	ug/kg	1		10/12/22 18:07
trans-1,2-Dichloroethene	12.5 U		25.0	7.82	ug/kg	1		10/12/22 18:07
trans-1,3-Dichloropropene	6.25 U		12.5	3.91	ug/kg	1		10/12/22 18:07
Trichloroethene	5.00 U		10.0	3.21	ug/kg	1		10/12/22 18:07
Trichlorofluoromethane	25.1 U		50.1	15.0	ug/kg	1		10/12/22 18:07
Vinyl acetate	50.0 U		100	31.1	ug/kg	1		10/12/22 18:07
Vinyl chloride	0.401 U		0.802	0.250	ug/kg	1		10/12/22 18:07
Xylenes (total)	39.0 J		75.1	22.8	ug/kg	1		10/12/22 18:07
Surrogates								
1,2-Dichloroethane-D4 (surr)	100		71-136		%	1		10/12/22 18:07
4-Bromofluorobenzene (surr)	117		55-151		%	1		10/12/22 18:07
Toluene-d8 (surr)	98.1		85-116		%	1		10/12/22 18:07

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW-2022A-1**

Client Sample ID: **IW-2022A-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138001
Lab Project ID: 1226138

Collection Date: 10/05/22 12:44
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.7
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS22058
Analytical Method: SW8260D
Analyst: S.S
Analytical Date/Time: 10/12/22 18:07
Container ID: 1226138001-B

Prep Batch: VXX39315
Prep Method: SW5035A
Prep Date/Time: 10/05/22 12:44
Prep Initial Wt./Vol.: 87.169 g
Prep Extract Vol: 37.4377 mL

Results of **IW-2022A-1**

Client Sample ID: **IW-2022A-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138001
Lab Project ID: 1226138

Collection Date: 10/05/22 12:44
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.7
Location:

Results by **Volatile-SIM**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dibromoethane	0.0625	U	0.125	0.0311	ug/kg	1		10/11/22 11:55
Surrogates								
4-Bromofluorobenzene (surr)	117		55-151		%	1		10/11/22 11:55
Toluene-d8 (surr)	101		85-116		%	1		10/11/22 11:55

Batch Information

Analytical Batch: VMS22067
Analytical Method: SW8260D-SIM
Analyst: NRB
Analytical Date/Time: 10/11/22 11:55
Container ID: 1226138001-B

Prep Batch: VXX39340
Prep Method: SW5035A
Prep Date/Time: 10/05/22 12:44
Prep Initial Wt./Vol.: 87.169 g
Prep Extract Vol: 37.4377 mL

Results of **IW-2022B-1**

Client Sample ID: **IW-2022B-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138002
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.9
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Lead	6.50		0.240	0.0744	mg/kg	10		10/18/22 15:21

Batch Information

Analytical Batch: MMS11722
Analytical Method: SW6020B
Analyst: HGS
Analytical Date/Time: 10/18/22 15:21
Container ID: 1226138002-A

Prep Batch: MXX35557
Prep Method: SW3050B
Prep Date/Time: 10/14/22 13:30
Prep Initial Wt./Vol.: 1.07 g
Prep Extract Vol: 50 mL

Results of **IW-2022B-1**

Client Sample ID: **IW-2022B-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138002
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.9
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	1330		318	79.5	ug/kg	10		10/26/22 02:19
2-Methylnaphthalene	1620		318	79.5	ug/kg	10		10/26/22 02:19
Acenaphthene	75.5		31.8	7.95	ug/kg	1		10/20/22 19:39
Acenaphthylene	15.9	U	31.8	7.95	ug/kg	1		10/20/22 19:39
Anthracene	39.2		31.8	7.95	ug/kg	1		10/28/22 06:49
Benzo(a)Anthracene	65.1		31.8	7.95	ug/kg	1		10/20/22 19:39
Benzo[a]pyrene	72.0		31.8	7.95	ug/kg	1		10/20/22 19:39
Benzo[b]Fluoranthene	92.1		31.8	7.95	ug/kg	1		10/20/22 19:39
Benzo[g,h,i]perylene	61.3		31.8	7.95	ug/kg	1		10/20/22 19:39
Benzo[k]fluoranthene	27.8	J	31.8	7.95	ug/kg	1		10/20/22 19:39
Chrysene	70.2		31.8	7.95	ug/kg	1		10/20/22 19:39
Dibenzo[a,h]anthracene	12.5	J	31.8	7.95	ug/kg	1		10/20/22 19:39
Fluoranthene	188		31.8	7.95	ug/kg	1		10/20/22 19:39
Fluorene	202		31.8	7.95	ug/kg	1		10/20/22 19:39
Indeno[1,2,3-c,d] pyrene	51.5		31.8	7.95	ug/kg	1		10/20/22 19:39
Naphthalene	884		254	63.6	ug/kg	10		10/26/22 02:19
Phenanthrene	314		31.8	7.95	ug/kg	1		10/28/22 06:49
Pyrene	174		31.8	7.95	ug/kg	1		10/20/22 19:39
Surrogates								
2-Methylnaphthalene-d10 (surr)	90.3		58-103		%	1		10/20/22 19:39
Fluoranthene-d10 (surr)	86.8		54-113		%	1		10/20/22 19:39

Results of **IW-2022B-1**

Client Sample ID: **IW-2022B-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138002
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.9
Location:

Results by **Polynuclear Aromatics GC/MS**

Batch Information

Analytical Batch: XMS13421
Analytical Method: 8270D SIM (PAH)
Analyst: NGG
Analytical Date/Time: 10/26/22 02:19
Container ID: 1226138002-A

Prep Batch: XXX47185
Prep Method: SW3550C
Prep Date/Time: 10/18/22 14:30
Prep Initial Wt./Vol.: 22.715 g
Prep Extract Vol: 5 mL

Analytical Batch: XMS13424
Analytical Method: 8270D SIM (PAH)
Analyst: NGG
Analytical Date/Time: 10/28/22 06:49
Container ID: 1226138002-A

Prep Batch: XXX47185
Prep Method: SW3550C
Prep Date/Time: 10/18/22 14:30
Prep Initial Wt./Vol.: 22.715 g
Prep Extract Vol: 5 mL

Analytical Batch: XMS13418
Analytical Method: 8270D SIM (PAH)
Analyst: NGG
Analytical Date/Time: 10/20/22 19:39
Container ID: 1226138002-A

Prep Batch: XXX47185
Prep Method: SW3550C
Prep Date/Time: 10/18/22 14:30
Prep Initial Wt./Vol.: 22.715 g
Prep Extract Vol: 5 mL

Results of **IW-2022B-1**

Client Sample ID: **IW-2022B-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138002
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.9
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	52.2		25.3	11.4	mg/kg	1		10/22/22 22:00
Surrogates								
5a Androstane (surr)	91.7		50-150		%	1		10/22/22 22:00

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK102
Analyst: MAP
Analytical Date/Time: 10/22/22 22:00
Container ID: 1226138002-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.445 g
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	55.2	J	127	54.4	mg/kg	1		10/22/22 22:00
Surrogates								
n-Triacontane-d62 (surr)	83.7		50-150		%	1		10/22/22 22:00

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK103
Analyst: MAP
Analytical Date/Time: 10/22/22 22:00
Container ID: 1226138002-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.445 g
Prep Extract Vol: 5 mL

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW-2022B-1**

Client Sample ID: **IW-2022B-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138002
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.9
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	11.2		3.70	1.11	mg/kg	1		10/12/22 23:44
Surrogates								
4-Bromofluorobenzene (surr)	146		50-150		%	1		10/12/22 23:44

Batch Information

Analytical Batch: VFC16291
Analytical Method: AK101
Analyst: PHK
Analytical Date/Time: 10/12/22 23:44
Container ID: 1226138002-B

Prep Batch: VXX39318
Prep Method: SW5035A
Prep Date/Time: 10/05/22 16:27
Prep Initial Wt./Vol.: 70.403 g
Prep Extract Vol: 40.5773 mL

Results of **IW-2022B-1**

Client Sample ID: **IW-2022B-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138002
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.9
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	14.8	U	29.6	9.18	ug/kg	1		10/12/22 14:04
1,1,1-Trichloroethane	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
1,1,2,2-Tetrachloroethane	1.48	U	2.96	0.918	ug/kg	1		10/12/22 14:04
1,1,2-Trichloroethane	0.740	U	1.48	0.740	ug/kg	1		10/12/22 14:04
1,1-Dichloroethane	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
1,1-Dichloroethene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
1,1-Dichloropropene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
1,2,3-Trichlorobenzene	74.0	U	148	44.4	ug/kg	1		10/12/22 14:04
1,2,3-Trichloropropane	1.48	U	2.96	0.918	ug/kg	1		10/12/22 14:04
1,2,4-Trichlorobenzene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
1,2,4-Trimethylbenzene	1390		148	44.4	ug/kg	1		10/12/22 14:04
1,2-Dibromo-3-chloropropane	74.0	U	148	45.9	ug/kg	1		10/12/22 14:04
1,2-Dibromoethane	1.11	U	2.22	1.11	ug/kg	1		10/12/22 14:04
1,2-Dichlorobenzene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
1,2-Dichloroethane	1.48	U	2.96	1.04	ug/kg	1		10/12/22 14:04
1,2-Dichloropropane	7.40	U	14.8	7.40	ug/kg	1		10/12/22 14:04
1,3,5-Trimethylbenzene	555		37.0	11.5	ug/kg	1		10/12/22 14:04
1,3-Dichlorobenzene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
1,3-Dichloropropane	7.40	U	14.8	4.59	ug/kg	1		10/12/22 14:04
1,4-Dichlorobenzene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
2,2-Dichloropropane	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
2-Butanone (MEK)	185	U	370	115	ug/kg	1		10/12/22 14:04
2-Chlorotoluene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
2-Hexanone	89.0	U	178	88.8	ug/kg	1		10/12/22 14:04
4-Chlorotoluene	14.8	U	29.6	14.8	ug/kg	1		10/12/22 14:04
4-Isopropyltoluene	59.0	U	118	59.2	ug/kg	1		10/12/22 14:04
4-Methyl-2-pentanone (MIBK)	185	U	370	115	ug/kg	1		10/12/22 14:04
Acetone	185	U	370	163	ug/kg	1		10/12/22 14:04
Benzene	9.25	U	18.5	5.77	ug/kg	1		10/12/22 14:04
Bromobenzene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
Bromochloromethane	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
Bromodichloromethane	1.48	U	2.96	0.918	ug/kg	1		10/12/22 14:04
Bromoform	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
Bromomethane	14.8	U	29.6	11.8	ug/kg	1		10/12/22 14:04
Carbon disulfide	74.0	U	148	45.9	ug/kg	1		10/12/22 14:04
Carbon tetrachloride	9.25	U	18.5	5.77	ug/kg	1		10/12/22 14:04
Chlorobenzene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04

Results of **IW-2022B-1**

Client Sample ID: **IW-2022B-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138002
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.9
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	148	U	296	91.8	ug/kg	1		10/12/22 14:04
Chloroform	4.44	U	8.88	4.44	ug/kg	1		10/12/22 14:04
Chloromethane	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
cis-1,2-Dichloroethene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
cis-1,3-Dichloropropene	9.25	U	18.5	5.77	ug/kg	1		10/12/22 14:04
Dibromochloromethane	3.70	U	7.40	2.22	ug/kg	1		10/12/22 14:04
Dibromomethane	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
Dichlorodifluoromethane	74.0	U	148	44.4	ug/kg	1		10/12/22 14:04
Ethylbenzene	32.7	J	37.0	11.5	ug/kg	1		10/12/22 14:04
Freon-113	74.0	U	148	45.9	ug/kg	1		10/12/22 14:04
Hexachlorobutadiene	14.8	U	29.6	9.18	ug/kg	1		10/12/22 14:04
Isopropylbenzene (Cumene)	31.8	J	37.0	11.5	ug/kg	1		10/12/22 14:04
Methylene chloride	74.0	U	148	45.9	ug/kg	1		10/12/22 14:04
Methyl-t-butyl ether	74.0	U	148	45.9	ug/kg	1		10/12/22 14:04
Naphthalene	633		37.0	11.5	ug/kg	1		10/12/22 14:04
n-Butylbenzene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
n-Propylbenzene	86.3		37.0	11.5	ug/kg	1		10/12/22 14:04
o-Xylene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
P & M -Xylene	137		74.0	22.2	ug/kg	1		10/12/22 14:04
sec-Butylbenzene	61.4		37.0	11.5	ug/kg	1		10/12/22 14:04
Styrene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
tert-Butylbenzene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
Tetrachloroethene	9.25	U	18.5	5.77	ug/kg	1		10/12/22 14:04
Toluene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
trans-1,2-Dichloroethene	18.5	U	37.0	11.5	ug/kg	1		10/12/22 14:04
trans-1,3-Dichloropropene	9.25	U	18.5	5.77	ug/kg	1		10/12/22 14:04
Trichloroethene	7.40	U	14.8	4.74	ug/kg	1		10/12/22 14:04
Trichlorofluoromethane	37.0	U	74.0	22.2	ug/kg	1		10/12/22 14:04
Vinyl acetate	74.0	U	148	45.9	ug/kg	1		10/12/22 14:04
Vinyl chloride	0.590	U	1.18	0.370	ug/kg	1		10/12/22 14:04
Xylenes (total)	137		111	33.7	ug/kg	1		10/12/22 14:04
Surrogates								
1,2-Dichloroethane-D4 (surr)	102		71-136		%	1		10/12/22 14:04
4-Bromofluorobenzene (surr)	124		55-151		%	1		10/12/22 14:04
Toluene-d8 (surr)	95.9		85-116		%	1		10/12/22 14:04

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW-2022B-1**

Client Sample ID: **IW-2022B-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138002
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.9
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS22058
Analytical Method: SW8260D
Analyst: S.S
Analytical Date/Time: 10/12/22 14:04
Container ID: 1226138002-B

Prep Batch: VXX39315
Prep Method: SW5035A
Prep Date/Time: 10/05/22 16:27
Prep Initial Wt./Vol.: 70.403 g
Prep Extract Vol: 40.5773 mL

Results of **IW-2022B-1**

Client Sample ID: **IW-2022B-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138002
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.9
Location:

Results by **Volatile-SIM**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dibromoethane	0.0925	U	0.185	0.0459	ug/kg	1		10/11/22 15:48
Surrogates								
4-Bromofluorobenzene (surr)	133		55-151		%	1		10/11/22 15:48
Toluene-d8 (surr)	100		85-116		%	1		10/11/22 15:48

Batch Information

Analytical Batch: VMS22067
Analytical Method: SW8260D-SIM
Analyst: NRB
Analytical Date/Time: 10/11/22 15:48
Container ID: 1226138002-B

Prep Batch: VXX39340
Prep Method: SW5035A
Prep Date/Time: 10/05/22 16:27
Prep Initial Wt./Vol.: 70.403 g
Prep Extract Vol: 40.5773 mL

Results of **IW-2022B-2**

Client Sample ID: **IW-2022B-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138003
Lab Project ID: 1226138

Collection Date: 10/05/22 16:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.1
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Lead	2.77		0.226	0.0699	mg/kg	10		10/18/22 15:23

Batch Information

Analytical Batch: MMS11722
Analytical Method: SW6020B
Analyst: HGS
Analytical Date/Time: 10/18/22 15:23
Container ID: 1226138003-A

Prep Batch: MXX35557
Prep Method: SW3050B
Prep Date/Time: 10/14/22 13:30
Prep Initial Wt./Vol.: 1.007 g
Prep Extract Vol: 50 mL

Results of **IW-2022B-2**

Client Sample ID: **IW-2022B-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138003
Lab Project ID: 1226138

Collection Date: 10/05/22 16:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.1
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
2-Methylnaphthalene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Acenaphthene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Acenaphthylene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Anthracene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Benzo(a)Anthracene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Benzo[a]pyrene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Benzo[b]Fluoranthene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Benzo[g,h,i]perylene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Benzo[k]fluoranthene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Chrysene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Dibenzo[a,h]anthracene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Fluoranthene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Fluorene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Indeno[1,2,3-c,d] pyrene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Naphthalene	11.2	U	22.4	5.61	ug/kg	1		10/20/22 19:55
Phenanthrene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Pyrene	14.1	U	28.1	7.02	ug/kg	1		10/20/22 19:55
Surrogates								
2-Methylnaphthalene-d10 (surr)	87.6		58-103		%	1		10/20/22 19:55
Fluoranthene-d10 (surr)	88.2		54-113		%	1		10/20/22 19:55

Batch Information

Analytical Batch: XMS13418
Analytical Method: 8270D SIM (PAH)
Analyst: NGG
Analytical Date/Time: 10/20/22 19:55
Container ID: 1226138003-A

Prep Batch: XXX47185
Prep Method: SW3550C
Prep Date/Time: 10/18/22 14:30
Prep Initial Wt./Vol.: 22.763 g
Prep Extract Vol: 5 mL

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW-2022B-2**

Client Sample ID: **IW-2022B-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138003
Lab Project ID: 1226138

Collection Date: 10/05/22 16:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.1
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	11.2	U	22.4	10.1	mg/kg	1		10/22/22 22:10
Surrogates								
5a Androstane (surr)	107		50-150		%	1		10/22/22 22:10

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK102
Analyst: MAP
Analytical Date/Time: 10/22/22 22:10
Container ID: 1226138003-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.47 g
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	56.0	U	112	48.1	mg/kg	1		10/22/22 22:10
Surrogates								
n-Triacontane-d62 (surr)	98.1		50-150		%	1		10/22/22 22:10

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK103
Analyst: MAP
Analytical Date/Time: 10/22/22 22:10
Container ID: 1226138003-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.47 g
Prep Extract Vol: 5 mL

Results of **IW-2022B-2**

Client Sample ID: **IW-2022B-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138003
Lab Project ID: 1226138

Collection Date: 10/05/22 16:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.1
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	1.63	J	2.61	0.782	mg/kg	1		10/13/22 06:27
Surrogates								
4-Bromofluorobenzene (surr)	110		50-150		%	1		10/13/22 06:27

Batch Information

Analytical Batch: VFC16291
Analytical Method: AK101
Analyst: PHK
Analytical Date/Time: 10/13/22 06:27
Container ID: 1226138003-B

Prep Batch: VXX39319
Prep Method: SW5035A
Prep Date/Time: 10/05/22 16:34
Prep Initial Wt./Vol.: 73.606 g
Prep Extract Vol: 33.7873 mL

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW-2022B-2**

Client Sample ID: **IW-2022B-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138003
Lab Project ID: 1226138

Collection Date: 10/05/22 16:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.1
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	10.4	U	20.9	6.46	ug/kg	1		10/12/22 18:25
1,1,1-Trichloroethane	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
1,1,2,2-Tetrachloroethane	1.04	U	2.09	0.646	ug/kg	1		10/12/22 18:25
1,1,2-Trichloroethane	0.520	U	1.04	0.521	ug/kg	1		10/12/22 18:25
1,1-Dichloroethane	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
1,1-Dichloroethene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
1,1-Dichloropropene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
1,2,3-Trichlorobenzene	52.0	U	104	31.3	ug/kg	1		10/12/22 18:25
1,2,3-Trichloropropane	1.04	U	2.09	0.646	ug/kg	1		10/12/22 18:25
1,2,4-Trichlorobenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
1,2,4-Trimethylbenzene	114		104	31.3	ug/kg	1		10/12/22 18:25
1,2-Dibromo-3-chloropropane	52.0	U	104	32.3	ug/kg	1		10/12/22 18:25
1,2-Dibromoethane	0.780	U	1.56	0.782	ug/kg	1		10/12/22 18:25
1,2-Dichlorobenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
1,2-Dichloroethane	1.04	U	2.09	0.730	ug/kg	1		10/12/22 18:25
1,2-Dichloropropane	5.20	U	10.4	5.21	ug/kg	1		10/12/22 18:25
1,3,5-Trimethylbenzene	30.4		26.1	8.13	ug/kg	1		10/12/22 18:25
1,3-Dichlorobenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
1,3-Dichloropropane	5.20	U	10.4	3.23	ug/kg	1		10/12/22 18:25
1,4-Dichlorobenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
2,2-Dichloropropane	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
2-Butanone (MEK)	131	U	261	81.3	ug/kg	1		10/12/22 18:25
2-Chlorotoluene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
2-Hexanone	62.5	U	125	62.6	ug/kg	1		10/12/22 18:25
4-Chlorotoluene	10.4	U	20.9	10.4	ug/kg	1		10/12/22 18:25
4-Isopropyltoluene	41.7	U	83.4	41.7	ug/kg	1		10/12/22 18:25
4-Methyl-2-pentanone (MIBK)	131	U	261	81.3	ug/kg	1		10/12/22 18:25
Acetone	131	U	261	115	ug/kg	1		10/12/22 18:25
Benzene	6.50	U	13.0	4.07	ug/kg	1		10/12/22 18:25
Bromobenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
Bromochloromethane	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
Bromodichloromethane	1.04	U	2.09	0.646	ug/kg	1		10/12/22 18:25
Bromoform	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
Bromomethane	10.4	U	20.9	8.34	ug/kg	1		10/12/22 18:25
Carbon disulfide	52.0	U	104	32.3	ug/kg	1		10/12/22 18:25
Carbon tetrachloride	6.50	U	13.0	4.07	ug/kg	1		10/12/22 18:25
Chlorobenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25

Results of **IW-2022B-2**

Client Sample ID: **IW-2022B-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138003
Lab Project ID: 1226138

Collection Date: 10/05/22 16:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.1
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	105	U	209	64.6	ug/kg	1		10/12/22 18:25
Chloroform	3.13	U	6.26	3.13	ug/kg	1		10/12/22 18:25
Chloromethane	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
cis-1,2-Dichloroethene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
cis-1,3-Dichloropropene	6.50	U	13.0	4.07	ug/kg	1		10/12/22 18:25
Dibromochloromethane	2.61	U	5.21	1.56	ug/kg	1		10/12/22 18:25
Dibromomethane	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
Dichlorodifluoromethane	52.0	U	104	31.3	ug/kg	1		10/12/22 18:25
Ethylbenzene	9.61	J	26.1	8.13	ug/kg	1		10/12/22 18:25
Freon-113	52.0	U	104	32.3	ug/kg	1		10/12/22 18:25
Hexachlorobutadiene	10.4	U	20.9	6.46	ug/kg	1		10/12/22 18:25
Isopropylbenzene (Cumene)	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
Methylene chloride	52.0	U	104	32.3	ug/kg	1		10/12/22 18:25
Methyl-t-butyl ether	52.0	U	104	32.3	ug/kg	1		10/12/22 18:25
Naphthalene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
n-Butylbenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
n-Propylbenzene	9.93	J	26.1	8.13	ug/kg	1		10/12/22 18:25
o-Xylene	8.24	J	26.1	8.13	ug/kg	1		10/12/22 18:25
P & M -Xylene	52.5		52.1	15.6	ug/kg	1		10/12/22 18:25
sec-Butylbenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
Styrene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
tert-Butylbenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
Tetrachloroethene	6.50	U	13.0	4.07	ug/kg	1		10/12/22 18:25
Toluene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
trans-1,2-Dichloroethene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 18:25
trans-1,3-Dichloropropene	6.50	U	13.0	4.07	ug/kg	1		10/12/22 18:25
Trichloroethene	5.20	U	10.4	3.34	ug/kg	1		10/12/22 18:25
Trichlorofluoromethane	26.1	U	52.1	15.6	ug/kg	1		10/12/22 18:25
Vinyl acetate	52.0	U	104	32.3	ug/kg	1		10/12/22 18:25
Vinyl chloride	0.417	U	0.834	0.261	ug/kg	1		10/12/22 18:25
Xylenes (total)	60.7	J	78.2	23.8	ug/kg	1		10/12/22 18:25
Surrogates								
1,2-Dichloroethane-D4 (surr)	104		71-136		%	1		10/12/22 18:25
4-Bromofluorobenzene (surr)	108		55-151		%	1		10/12/22 18:25
Toluene-d8 (surr)	96.1		85-116		%	1		10/12/22 18:25

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW-2022B-2**

Client Sample ID: **IW-2022B-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138003
Lab Project ID: 1226138

Collection Date: 10/05/22 16:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.1
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS22058
Analytical Method: SW8260D
Analyst: S.S
Analytical Date/Time: 10/12/22 18:25
Container ID: 1226138003-B

Prep Batch: VXX39315
Prep Method: SW5035A
Prep Date/Time: 10/05/22 16:34
Prep Initial Wt./Vol.: 73.606 g
Prep Extract Vol: 33.7873 mL

Results of **IW-2022B-2**

Client Sample ID: **IW-2022B-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138003
Lab Project ID: 1226138

Collection Date: 10/05/22 16:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.1
Location:

Results by **Volatile-SIM**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dibromoethane	0.0650	U	0.130	0.0323	ug/kg	1		10/11/22 16:04
Surrogates								
4-Bromofluorobenzene (surr)	112		55-151		%	1		10/11/22 16:04
Toluene-d8 (surr)	101		85-116		%	1		10/11/22 16:04

Batch Information

Analytical Batch: VMS22067
Analytical Method: SW8260D-SIM
Analyst: NRB
Analytical Date/Time: 10/11/22 16:04
Container ID: 1226138003-B

Prep Batch: VXX39340
Prep Method: SW5035A
Prep Date/Time: 10/05/22 16:34
Prep Initial Wt./Vol.: 73.606 g
Prep Extract Vol: 33.7873 mL

Results of **IW-2022C-1**

Client Sample ID: **IW-2022C-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138004
Lab Project ID: 1226138

Collection Date: 10/06/22 09:10
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.2
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Lead	2.77		0.209	0.0648	mg/kg	10		10/18/22 15:32

Batch Information

Analytical Batch: MMS11722
Analytical Method: SW6020B
Analyst: HGS
Analytical Date/Time: 10/18/22 15:32
Container ID: 1226138004-A

Prep Batch: MXX35557
Prep Method: SW3050B
Prep Date/Time: 10/14/22 13:30
Prep Initial Wt./Vol.: 1.123 g
Prep Extract Vol: 50 mL

Results of **IW-2022C-1**

Client Sample ID: **IW-2022C-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138004
Lab Project ID: 1226138

Collection Date: 10/06/22 09:10
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.2
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
2-Methylnaphthalene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Acenaphthene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Acenaphthylene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Anthracene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Benzo(a)Anthracene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Benzo[a]pyrene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Benzo[b]Fluoranthene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Benzo[g,h,i]perylene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Benzo[k]fluoranthene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Chrysene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Dibenzo[a,h]anthracene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Fluoranthene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Fluorene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Indeno[1,2,3-c,d] pyrene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Naphthalene	11.7	U	23.3	5.84	ug/kg	1		10/27/22 22:47
Phenanthrene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Pyrene	14.6	U	29.2	7.29	ug/kg	1		10/27/22 22:47
Surrogates								
2-Methylnaphthalene-d10 (surr)	86.7		58-103		%	1		10/27/22 22:47
Fluoranthene-d10 (surr)	86.9		54-113		%	1		10/27/22 22:47

Batch Information

Analytical Batch: XMS13424
Analytical Method: 8270D SIM (PAH)
Analyst: NGG
Analytical Date/Time: 10/27/22 22:47
Container ID: 1226138004-A

Prep Batch: XXX47198
Prep Method: SW3550C
Prep Date/Time: 10/19/22 13:00
Prep Initial Wt./Vol.: 22.621 g
Prep Extract Vol: 5 mL

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW-2022C-1**

Client Sample ID: **IW-2022C-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138004
Lab Project ID: 1226138

Collection Date: 10/06/22 09:10
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.2
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	11.8	U	23.5	10.6	mg/kg	1		10/22/22 22:20
Surrogates								
5a Androstane (surr)	89.5		50-150		%	1		10/22/22 22:20

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK102
Analyst: MAP
Analytical Date/Time: 10/22/22 22:20
Container ID: 1226138004-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.014 g
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	58.5	U	117	50.4	mg/kg	1		10/22/22 22:20
Surrogates								
n-Triacontane-d62 (surr)	82.2		50-150		%	1		10/22/22 22:20

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK103
Analyst: MAP
Analytical Date/Time: 10/22/22 22:20
Container ID: 1226138004-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.014 g
Prep Extract Vol: 5 mL

Results of **IW-2022C-1**

Client Sample ID: **IW-2022C-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138004
Lab Project ID: 1226138

Collection Date: 10/06/22 09:10
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.2
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	1.69	J	2.92	0.875	mg/kg	1		10/13/22 06:45
Surrogates								
4-Bromofluorobenzene (surr)	101		50-150		%	1		10/13/22 06:45

Batch Information

Analytical Batch: VFC16291
Analytical Method: AK101
Analyst: PHK
Analytical Date/Time: 10/13/22 06:45
Container ID: 1226138004-B

Prep Batch: VXX39319
Prep Method: SW5035A
Prep Date/Time: 10/06/22 09:10
Prep Initial Wt./Vol.: 71.616 g
Prep Extract Vol: 35.5836 mL

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW-2022C-1**

Client Sample ID: **IW-2022C-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138004
Lab Project ID: 1226138

Collection Date: 10/06/22 09:10
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.2
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	11.7	U	23.3	7.23	ug/kg	1		10/13/22 16:04
1,1,1-Trichloroethane	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
1,1,2,2-Tetrachloroethane	1.17	U	2.33	0.723	ug/kg	1		10/13/22 16:04
1,1,2-Trichloroethane	0.585	U	1.17	0.583	ug/kg	1		10/13/22 16:04
1,1-Dichloroethane	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
1,1-Dichloroethene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
1,1-Dichloropropene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
1,2,3-Trichlorobenzene	58.5	U	117	35.0	ug/kg	1		10/13/22 16:04
1,2,3-Trichloropropane	1.17	U	2.33	0.723	ug/kg	1		10/13/22 16:04
1,2,4-Trichlorobenzene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
1,2,4-Trimethylbenzene	58.5	U	117	35.0	ug/kg	1		10/13/22 16:04
1,2-Dibromo-3-chloropropane	58.5	U	117	36.1	ug/kg	1		10/13/22 16:04
1,2-Dibromoethane	0.875	U	1.75	0.875	ug/kg	1		10/13/22 16:04
1,2-Dichlorobenzene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
1,2-Dichloroethane	1.17	U	2.33	0.816	ug/kg	1		10/13/22 16:04
1,2-Dichloropropane	5.85	U	11.7	5.83	ug/kg	1		10/13/22 16:04
1,3,5-Trimethylbenzene	36.4		29.2	9.10	ug/kg	1		10/13/22 16:04
1,3-Dichlorobenzene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
1,3-Dichloropropane	5.85	U	11.7	3.61	ug/kg	1		10/13/22 16:04
1,4-Dichlorobenzene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
2,2-Dichloropropane	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
2-Butanone (MEK)	146	U	292	91.0	ug/kg	1		10/13/22 16:04
2-Chlorotoluene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
2-Hexanone	70.0	U	140	70.0	ug/kg	1		10/13/22 16:04
4-Chlorotoluene	11.7	U	23.3	11.7	ug/kg	1		10/13/22 16:04
4-Isopropyltoluene	46.6	U	93.3	46.6	ug/kg	1		10/13/22 16:04
4-Methyl-2-pentanone (MIBK)	146	U	292	91.0	ug/kg	1		10/13/22 16:04
Acetone	146	U	292	128	ug/kg	1		10/13/22 16:04
Benzene	7.30	U	14.6	4.55	ug/kg	1		10/13/22 16:04
Bromobenzene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
Bromochloromethane	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
Bromodichloromethane	1.17	U	2.33	0.723	ug/kg	1		10/13/22 16:04
Bromoform	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
Bromomethane	11.7	U	23.3	9.33	ug/kg	1		10/13/22 16:04
Carbon disulfide	58.5	U	117	36.1	ug/kg	1		10/13/22 16:04
Carbon tetrachloride	7.30	U	14.6	4.55	ug/kg	1		10/13/22 16:04
Chlorobenzene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04

Results of **IW-2022C-1**

Client Sample ID: **IW-2022C-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138004
Lab Project ID: 1226138

Collection Date: 10/06/22 09:10
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.2
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	117	U	233	72.3	ug/kg	1		10/13/22 16:04
Chloroform	3.50	U	7.00	3.50	ug/kg	1		10/13/22 16:04
Chloromethane	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
cis-1,2-Dichloroethene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
cis-1,3-Dichloropropene	7.30	U	14.6	4.55	ug/kg	1		10/13/22 16:04
Dibromochloromethane	2.92	U	5.83	1.75	ug/kg	1		10/13/22 16:04
Dibromomethane	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
Dichlorodifluoromethane	58.5	U	117	35.0	ug/kg	1		10/13/22 16:04
Ethylbenzene	25.2	J	29.2	9.10	ug/kg	1		10/13/22 16:04
Freon-113	58.5	U	117	36.1	ug/kg	1		10/13/22 16:04
Hexachlorobutadiene	11.7	U	23.3	7.23	ug/kg	1		10/13/22 16:04
Isopropylbenzene (Cumene)	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
Methylene chloride	58.5	U	117	36.1	ug/kg	1		10/13/22 16:04
Methyl-t-butyl ether	58.5	U	117	36.1	ug/kg	1		10/13/22 16:04
Naphthalene	11.3	J	29.2	9.10	ug/kg	1		10/13/22 16:04
n-Butylbenzene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
n-Propylbenzene	14.8	J	29.2	9.10	ug/kg	1		10/13/22 16:04
o-Xylene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
P & M -Xylene	67.9		58.3	17.5	ug/kg	1		10/13/22 16:04
sec-Butylbenzene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
Styrene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
tert-Butylbenzene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
Tetrachloroethene	7.30	U	14.6	4.55	ug/kg	1		10/13/22 16:04
Toluene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
trans-1,2-Dichloroethene	14.6	U	29.2	9.10	ug/kg	1		10/13/22 16:04
trans-1,3-Dichloropropene	7.30	U	14.6	4.55	ug/kg	1		10/13/22 16:04
Trichloroethene	5.85	U	11.7	3.73	ug/kg	1		10/13/22 16:04
Trichlorofluoromethane	29.1	U	58.3	17.5	ug/kg	1		10/13/22 16:04
Vinyl acetate	58.5	U	117	36.1	ug/kg	1		10/13/22 16:04
Vinyl chloride	0.467	U	0.933	0.292	ug/kg	1		10/13/22 16:04
Xylenes (total)	67.9	J	87.5	26.6	ug/kg	1		10/13/22 16:04
Surrogates								
1,2-Dichloroethane-D4 (surr)	101		71-136		%	1		10/13/22 16:04
4-Bromofluorobenzene (surr)	108		55-151		%	1		10/13/22 16:04
Toluene-d8 (surr)	101		85-116		%	1		10/13/22 16:04

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J flagging is activated

Results of **IW-2022C-1**

Client Sample ID: **IW-2022C-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138004
Lab Project ID: 1226138

Collection Date: 10/06/22 09:10
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.2
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS22063
Analytical Method: SW8260D
Analyst: S.S
Analytical Date/Time: 10/13/22 16:04
Container ID: 1226138004-B

Prep Batch: VXX39328
Prep Method: SW5035A
Prep Date/Time: 10/06/22 09:10
Prep Initial Wt./Vol.: 71.616 g
Prep Extract Vol: 35.5836 mL

Results of **IW-2022C-1**

Client Sample ID: **IW-2022C-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138004
Lab Project ID: 1226138

Collection Date: 10/06/22 09:10
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.2
Location:

Results by **Volatile-SIM**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dibromoethane	0.0730	U	0.146	0.0361	ug/kg	1		10/11/22 19:09
Surrogates								
4-Bromofluorobenzene (surr)	101		55-151		%	1		10/11/22 19:09
Toluene-d8 (surr)	101		85-116		%	1		10/11/22 19:09

Batch Information

Analytical Batch: VMS22068
Analytical Method: SW8260D-SIM
Analyst: NRB
Analytical Date/Time: 10/11/22 19:09
Container ID: 1226138004-B

Prep Batch: VXX39341
Prep Method: SW5035A
Prep Date/Time: 10/06/22 09:10
Prep Initial Wt./Vol.: 71.616 g
Prep Extract Vol: 35.5836 mL

Results of **IW--2022C-2**

Client Sample ID: **IW--2022C-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138005
Lab Project ID: 1226138

Collection Date: 10/06/22 09:29
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.8
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Lead	6.43		0.220	0.0682	mg/kg	10		10/18/22 15:35

Batch Information

Analytical Batch: MMS11722
Analytical Method: SW6020B
Analyst: HGS
Analytical Date/Time: 10/18/22 15:35
Container ID: 1226138005-A

Prep Batch: MXX35557
Prep Method: SW3050B
Prep Date/Time: 10/14/22 13:30
Prep Initial Wt./Vol.: 1.06 g
Prep Extract Vol: 50 mL

Results of **IW--2022C-2**

Client Sample ID: **IW--2022C-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138005
Lab Project ID: 1226138

Collection Date: 10/06/22 09:29
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.8
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	31.1		29.0	7.25	ug/kg	1		10/27/22 23:03
2-Methylnaphthalene	33.6		29.0	7.25	ug/kg	1		10/27/22 23:03
Acenaphthene	14.5	U	29.0	7.25	ug/kg	1		10/27/22 23:03
Acenaphthylene	14.5	U	29.0	7.25	ug/kg	1		10/27/22 23:03
Anthracene	14.5	U	29.0	7.25	ug/kg	1		10/27/22 23:03
Benzo(a)Anthracene	14.5	U	29.0	7.25	ug/kg	1		10/27/22 23:03
Benzo[a]pyrene	51.7		29.0	7.25	ug/kg	1		10/27/22 23:03
Benzo[b]Fluoranthene	67.9		29.0	7.25	ug/kg	1		10/27/22 23:03
Benzo[g,h,i]perylene	86.3		29.0	7.25	ug/kg	1		10/27/22 23:03
Benzo[k]fluoranthene	12.3	J	29.0	7.25	ug/kg	1		10/27/22 23:03
Chrysene	8.93	J	29.0	7.25	ug/kg	1		10/27/22 23:03
Dibenzo[a,h]anthracene	17.6	J	29.0	7.25	ug/kg	1		10/27/22 23:03
Fluoranthene	16.9	J	29.0	7.25	ug/kg	1		10/27/22 23:03
Fluorene	9.72	J	29.0	7.25	ug/kg	1		10/27/22 23:03
Indeno[1,2,3-c,d] pyrene	74.6		29.0	7.25	ug/kg	1		10/27/22 23:03
Naphthalene	19.8	J	23.2	5.80	ug/kg	1		10/27/22 23:03
Phenanthrene	17.3	J	29.0	7.25	ug/kg	1		10/27/22 23:03
Pyrene	22.5	J	29.0	7.25	ug/kg	1		10/27/22 23:03
Surrogates								
2-Methylnaphthalene-d10 (surr)	83.9		58-103		%	1		10/27/22 23:03
Fluoranthene-d10 (surr)	92.3		54-113		%	1		10/27/22 23:03

Batch Information

Analytical Batch: XMS13424
Analytical Method: 8270D SIM (PAH)
Analyst: NGG
Analytical Date/Time: 10/27/22 23:03
Container ID: 1226138005-A

Prep Batch: XXX47198
Prep Method: SW3550C
Prep Date/Time: 10/19/22 13:00
Prep Initial Wt./Vol.: 22.629 g
Prep Extract Vol: 5 mL

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW--2022C-2**

Client Sample ID: **IW--2022C-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138005
Lab Project ID: 1226138

Collection Date: 10/06/22 09:29
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.8
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	11.6	U	23.2	10.4	mg/kg	1		10/22/22 22:30
Surrogates								
5a Androstane (surr)	91.6		50-150		%	1		10/22/22 22:30

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK102
Analyst: MAP
Analytical Date/Time: 10/22/22 22:30
Container ID: 1226138005-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.203 g
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	58.0	U	116	49.8	mg/kg	1		10/22/22 22:30
Surrogates								
n-Triacontane-d62 (surr)	83.8		50-150		%	1		10/22/22 22:30

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK103
Analyst: MAP
Analytical Date/Time: 10/22/22 22:30
Container ID: 1226138005-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.203 g
Prep Extract Vol: 5 mL

Results of **IW--2022C-2**

Client Sample ID: **IW--2022C-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138005
Lab Project ID: 1226138

Collection Date: 10/06/22 09:29
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.8
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	2.03	J	2.29	0.688	mg/kg	1		10/13/22 07:03
Surrogates								
4-Bromofluorobenzene (surr)	129		50-150		%	1		10/13/22 07:03

Batch Information

Analytical Batch: VFC16291
Analytical Method: AK101
Analyst: PHK
Analytical Date/Time: 10/13/22 07:03
Container ID: 1226138005-B

Prep Batch: VXX39319
Prep Method: SW5035A
Prep Date/Time: 10/06/22 09:29
Prep Initial Wt./Vol.: 99.685 g
Prep Extract Vol: 39.1869 mL

Results of **IW--2022C-2**

Client Sample ID: **IW--2022C-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138005
Lab Project ID: 1226138

Collection Date: 10/06/22 09:29
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.8
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	9.15	U	18.3	5.68	ug/kg	1		10/13/22 16:20
1,1,1-Trichloroethane	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
1,1,2,2-Tetrachloroethane	0.915	U	1.83	0.568	ug/kg	1		10/13/22 16:20
1,1,2-Trichloroethane	0.459	U	0.917	0.458	ug/kg	1		10/13/22 16:20
1,1-Dichloroethane	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
1,1-Dichloroethene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
1,1-Dichloropropene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
1,2,3-Trichlorobenzene	45.9	U	91.7	27.5	ug/kg	1		10/13/22 16:20
1,2,3-Trichloropropane	0.915	U	1.83	0.568	ug/kg	1		10/13/22 16:20
1,2,4-Trichlorobenzene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
1,2,4-Trimethylbenzene	76.7	J	91.7	27.5	ug/kg	1		10/13/22 16:20
1,2-Dibromo-3-chloropropane	45.9	U	91.7	28.4	ug/kg	1		10/13/22 16:20
1,2-Dibromoethane	0.690	U	1.38	0.688	ug/kg	1		10/13/22 16:20
1,2-Dichlorobenzene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
1,2-Dichloroethane	0.915	U	1.83	0.642	ug/kg	1		10/13/22 16:20
1,2-Dichloropropane	4.59	U	9.17	4.58	ug/kg	1		10/13/22 16:20
1,3,5-Trimethylbenzene	44.4		22.9	7.15	ug/kg	1		10/13/22 16:20
1,3-Dichlorobenzene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
1,3-Dichloropropane	4.59	U	9.17	2.84	ug/kg	1		10/13/22 16:20
1,4-Dichlorobenzene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
2,2-Dichloropropane	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
2-Butanone (MEK)	115	U	229	71.5	ug/kg	1		10/13/22 16:20
2-Chlorotoluene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
2-Hexanone	55.0	U	110	55.0	ug/kg	1		10/13/22 16:20
4-Chlorotoluene	9.15	U	18.3	9.17	ug/kg	1		10/13/22 16:20
4-Isopropyltoluene	36.6	U	73.3	36.7	ug/kg	1		10/13/22 16:20
4-Methyl-2-pentanone (MIBK)	115	U	229	71.5	ug/kg	1		10/13/22 16:20
Acetone	115	U	229	101	ug/kg	1		10/13/22 16:20
Benzene	5.75	U	11.5	3.58	ug/kg	1		10/13/22 16:20
Bromobenzene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
Bromochloromethane	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
Bromodichloromethane	0.915	U	1.83	0.568	ug/kg	1		10/13/22 16:20
Bromoform	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
Bromomethane	9.15	U	18.3	7.33	ug/kg	1		10/13/22 16:20
Carbon disulfide	45.9	U	91.7	28.4	ug/kg	1		10/13/22 16:20
Carbon tetrachloride	5.75	U	11.5	3.58	ug/kg	1		10/13/22 16:20
Chlorobenzene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20

Results of **IW--2022C-2**

Client Sample ID: **IW--2022C-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138005
Lab Project ID: 1226138

Collection Date: 10/06/22 09:29
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.8
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	91.5	U	183	56.8	ug/kg	1		10/13/22 16:20
Chloroform	2.75	U	5.50	2.75	ug/kg	1		10/13/22 16:20
Chloromethane	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
cis-1,2-Dichloroethene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
cis-1,3-Dichloropropene	5.75	U	11.5	3.58	ug/kg	1		10/13/22 16:20
Dibromochloromethane	2.29	U	4.58	1.38	ug/kg	1		10/13/22 16:20
Dibromomethane	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
Dichlorodifluoromethane	45.9	U	91.7	27.5	ug/kg	1		10/13/22 16:20
Ethylbenzene	13.0	J	22.9	7.15	ug/kg	1		10/13/22 16:20
Freon-113	45.9	U	91.7	28.4	ug/kg	1		10/13/22 16:20
Hexachlorobutadiene	9.15	U	18.3	5.68	ug/kg	1		10/13/22 16:20
Isopropylbenzene (Cumene)	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
Methylene chloride	45.9	U	91.7	28.4	ug/kg	1		10/13/22 16:20
Methyl-t-butyl ether	45.9	U	91.7	28.4	ug/kg	1		10/13/22 16:20
Naphthalene	19.1	J	22.9	7.15	ug/kg	1		10/13/22 16:20
n-Butylbenzene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
n-Propylbenzene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
o-Xylene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
P & M -Xylene	43.9	J	45.8	13.8	ug/kg	1		10/13/22 16:20
sec-Butylbenzene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
Styrene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
tert-Butylbenzene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
Tetrachloroethene	5.75	U	11.5	3.58	ug/kg	1		10/13/22 16:20
Toluene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
trans-1,2-Dichloroethene	11.4	U	22.9	7.15	ug/kg	1		10/13/22 16:20
trans-1,3-Dichloropropene	5.75	U	11.5	3.58	ug/kg	1		10/13/22 16:20
Trichloroethene	4.59	U	9.17	2.93	ug/kg	1		10/13/22 16:20
Trichlorofluoromethane	22.9	U	45.8	13.8	ug/kg	1		10/13/22 16:20
Vinyl acetate	45.9	U	91.7	28.4	ug/kg	1		10/13/22 16:20
Vinyl chloride	0.366	U	0.733	0.229	ug/kg	1		10/13/22 16:20
Xylenes (total)	43.9	J	68.8	20.9	ug/kg	1		10/13/22 16:20
Surrogates								
1,2-Dichloroethane-D4 (surr)	100		71-136		%	1		10/13/22 16:20
4-Bromofluorobenzene (surr)	140		55-151		%	1		10/13/22 16:20
Toluene-d8 (surr)	99.9		85-116		%	1		10/13/22 16:20

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW--2022C-2**

Client Sample ID: **IW--2022C-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138005
Lab Project ID: 1226138

Collection Date: 10/06/22 09:29
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.8
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS22063
Analytical Method: SW8260D
Analyst: S.S
Analytical Date/Time: 10/13/22 16:20
Container ID: 1226138005-B

Prep Batch: VXX39328
Prep Method: SW5035A
Prep Date/Time: 10/06/22 09:29
Prep Initial Wt./Vol.: 99.685 g
Prep Extract Vol: 39.1869 mL

Results of **IW--2022C-2**

Client Sample ID: **IW--2022C-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138005
Lab Project ID: 1226138

Collection Date: 10/06/22 09:29
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):85.8
Location:

Results by **Volatile-SIM**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dibromoethane	0.0575	U	0.115	0.0284	ug/kg	1		10/11/22 16:19
Surrogates								
4-Bromofluorobenzene (surr)	129		55-151		%	1		10/11/22 16:19
Toluene-d8 (surr)	99.8		85-116		%	1		10/11/22 16:19

Batch Information

Analytical Batch: VMS22067
Analytical Method: SW8260D-SIM
Analyst: NRB
Analytical Date/Time: 10/11/22 16:19
Container ID: 1226138005-B

Prep Batch: VXX39340
Prep Method: SW5035A
Prep Date/Time: 10/06/22 09:29
Prep Initial Wt./Vol.: 99.685 g
Prep Extract Vol: 39.1869 mL

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138006
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.1
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Lead	6.34		0.250	0.0777	mg/kg	10		10/18/22 15:38

Batch Information

Analytical Batch: MMS11722
Analytical Method: SW6020B
Analyst: HGS
Analytical Date/Time: 10/18/22 15:38
Container ID: 1226138006-A

Prep Batch: MXX35557
Prep Method: SW3050B
Prep Date/Time: 10/14/22 13:30
Prep Initial Wt./Vol.: 1.035 g
Prep Extract Vol: 50 mL

Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138006
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.1
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	619		31.9	7.97	ug/kg	1		10/26/22 07:08
2-Methylnaphthalene	698		31.9	7.97	ug/kg	1		10/26/22 07:08
Acenaphthene	35.4		31.9	7.97	ug/kg	1		10/26/22 07:08
Acenaphthylene	15.9	U	31.9	7.97	ug/kg	1		10/26/22 07:08
Anthracene	24.7	J	31.9	7.97	ug/kg	1		10/26/22 07:08
Benzo(a)Anthracene	41.1		31.9	7.97	ug/kg	1		10/26/22 07:08
Benzo[a]pyrene	44.8		31.9	7.97	ug/kg	1		10/26/22 07:08
Benzo[b]Fluoranthene	58.2		31.9	7.97	ug/kg	1		10/26/22 07:08
Benzo[g,h,i]perylene	36.7		31.9	7.97	ug/kg	1		10/26/22 07:08
Benzo[k]fluoranthene	17.2	J	31.9	7.97	ug/kg	1		10/26/22 07:08
Chrysene	45.7		31.9	7.97	ug/kg	1		10/26/22 07:08
Dibenzo[a,h]anthracene	8.06	J	31.9	7.97	ug/kg	1		10/26/22 07:08
Fluoranthene	121		31.9	7.97	ug/kg	1		10/26/22 07:08
Fluorene	102		31.9	7.97	ug/kg	1		10/26/22 07:08
Indeno[1,2,3-c,d] pyrene	30.7	J	31.9	7.97	ug/kg	1		10/26/22 07:08
Naphthalene	470		25.5	6.38	ug/kg	1		10/26/22 07:08
Phenanthrene	191		31.9	7.97	ug/kg	1		10/26/22 07:08
Pyrene	112		31.9	7.97	ug/kg	1		10/26/22 07:08
Surrogates								
2-Methylnaphthalene-d10 (surr)	92.7		58-103		%	1		10/26/22 07:08
Fluoranthene-d10 (surr)	89.6		54-113		%	1		10/26/22 07:08

Batch Information

Analytical Batch: XMS13421
Analytical Method: 8270D SIM (PAH)
Analyst: NGG
Analytical Date/Time: 10/26/22 07:08
Container ID: 1226138006-A

Prep Batch: XXX47185
Prep Method: SW3550C
Prep Date/Time: 10/18/22 14:30
Prep Initial Wt./Vol.: 22.875 g
Prep Extract Vol: 5 mL

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138006
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.1
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	93.4		25.6	11.5	mg/kg	1		10/22/22 22:40
Surrogates								
5a Androstane (surr)	101		50-150		%	1		10/22/22 22:40

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK102
Analyst: MAP
Analytical Date/Time: 10/22/22 22:40
Container ID: 1226138006-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.408 g
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	89.5	J	128	55.0	mg/kg	1		10/22/22 22:40
Surrogates								
n-Triacontane-d62 (surr)	91.6		50-150		%	1		10/22/22 22:40

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK103
Analyst: MAP
Analytical Date/Time: 10/22/22 22:40
Container ID: 1226138006-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.408 g
Prep Extract Vol: 5 mL

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138006
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.1
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	23.4		3.56	1.07	mg/kg	1		10/13/22 07:21
Surrogates								
4-Bromofluorobenzene (surr)	180	*	50-150		%	1		10/13/22 07:21

Batch Information

Analytical Batch: VFC16291
Analytical Method: AK101
Analyst: PHK
Analytical Date/Time: 10/13/22 07:21
Container ID: 1226138006-B

Prep Batch: VXX39319
Prep Method: SW5035A
Prep Date/Time: 10/05/22 16:27
Prep Initial Wt./Vol.: 78.06 g
Prep Extract Vol: 42.8433 mL

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138006
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.1
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	14.3	U	28.5	8.82	ug/kg	1		10/12/22 18:42
1,1,1-Trichloroethane	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
1,1,2,2-Tetrachloroethane	1.43	U	2.85	0.882	ug/kg	1		10/12/22 18:42
1,1,2-Trichloroethane	0.710	U	1.42	0.711	ug/kg	1		10/12/22 18:42
1,1-Dichloroethane	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
1,1-Dichloroethene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
1,1-Dichloropropene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
1,2,3-Trichlorobenzene	71.0	U	142	42.7	ug/kg	1		10/12/22 18:42
1,2,3-Trichloropropane	1.43	U	2.85	0.882	ug/kg	1		10/12/22 18:42
1,2,4-Trichlorobenzene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
1,2,4-Trimethylbenzene	1780		142	42.7	ug/kg	1		10/12/22 18:42
1,2-Dibromo-3-chloropropane	71.0	U	142	44.1	ug/kg	1		10/12/22 18:42
1,2-Dibromoethane	1.06	U	2.13	1.07	ug/kg	1		10/12/22 18:42
1,2-Dichlorobenzene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
1,2-Dichloroethane	1.43	U	2.85	0.996	ug/kg	1		10/12/22 18:42
1,2-Dichloropropane	7.10	U	14.2	7.11	ug/kg	1		10/12/22 18:42
1,3,5-Trimethylbenzene	992		35.6	11.1	ug/kg	1		10/12/22 18:42
1,3-Dichlorobenzene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
1,3-Dichloropropane	7.10	U	14.2	4.41	ug/kg	1		10/12/22 18:42
1,4-Dichlorobenzene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
2,2-Dichloropropane	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
2-Butanone (MEK)	178	U	356	111	ug/kg	1		10/12/22 18:42
2-Chlorotoluene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
2-Hexanone	85.5	U	171	85.4	ug/kg	1		10/12/22 18:42
4-Chlorotoluene	14.3	U	28.5	14.2	ug/kg	1		10/12/22 18:42
4-Isopropyltoluene	80.8	J	114	56.9	ug/kg	1		10/12/22 18:42
4-Methyl-2-pentanone (MIBK)	178	U	356	111	ug/kg	1		10/12/22 18:42
Acetone	178	U	356	157	ug/kg	1		10/12/22 18:42
Benzene	8.90	U	17.8	5.55	ug/kg	1		10/12/22 18:42
Bromobenzene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
Bromochloromethane	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
Bromodichloromethane	1.43	U	2.85	0.882	ug/kg	1		10/12/22 18:42
Bromoform	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
Bromomethane	14.3	U	28.5	11.4	ug/kg	1		10/12/22 18:42
Carbon disulfide	71.0	U	142	44.1	ug/kg	1		10/12/22 18:42
Carbon tetrachloride	8.90	U	17.8	5.55	ug/kg	1		10/12/22 18:42
Chlorobenzene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42

Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138006
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.1
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	143	U	285	88.2	ug/kg	1		10/12/22 18:42
Chloroform	4.27	U	8.54	4.27	ug/kg	1		10/12/22 18:42
Chloromethane	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
cis-1,2-Dichloroethene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
cis-1,3-Dichloropropene	8.90	U	17.8	5.55	ug/kg	1		10/12/22 18:42
Dibromochloromethane	3.56	U	7.11	2.13	ug/kg	1		10/12/22 18:42
Dibromomethane	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
Dichlorodifluoromethane	71.0	U	142	42.7	ug/kg	1		10/12/22 18:42
Ethylbenzene	56.4		35.6	11.1	ug/kg	1		10/12/22 18:42
Freon-113	71.0	U	142	44.1	ug/kg	1		10/12/22 18:42
Hexachlorobutadiene	14.3	U	28.5	8.82	ug/kg	1		10/12/22 18:42
Isopropylbenzene (Cumene)	55.8		35.6	11.1	ug/kg	1		10/12/22 18:42
Methylene chloride	71.0	U	142	44.1	ug/kg	1		10/12/22 18:42
Methyl-t-butyl ether	71.0	U	142	44.1	ug/kg	1		10/12/22 18:42
Naphthalene	921		35.6	11.1	ug/kg	1		10/12/22 18:42
n-Butylbenzene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
n-Propylbenzene	154		35.6	11.1	ug/kg	1		10/12/22 18:42
o-Xylene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
P & M -Xylene	220		71.1	21.3	ug/kg	1		10/12/22 18:42
sec-Butylbenzene	118		35.6	11.1	ug/kg	1		10/12/22 18:42
Styrene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
tert-Butylbenzene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
Tetrachloroethene	8.90	U	17.8	5.55	ug/kg	1		10/12/22 18:42
Toluene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
trans-1,2-Dichloroethene	17.8	U	35.6	11.1	ug/kg	1		10/12/22 18:42
trans-1,3-Dichloropropene	8.90	U	17.8	5.55	ug/kg	1		10/12/22 18:42
Trichloroethene	7.10	U	14.2	4.55	ug/kg	1		10/12/22 18:42
Trichlorofluoromethane	35.5	U	71.1	21.3	ug/kg	1		10/12/22 18:42
Vinyl acetate	71.0	U	142	44.1	ug/kg	1		10/12/22 18:42
Vinyl chloride	0.570	U	1.14	0.356	ug/kg	1		10/12/22 18:42
Xylenes (total)	220		107	32.4	ug/kg	1		10/12/22 18:42
Surrogates								
1,2-Dichloroethane-D4 (surr)	99.2		71-136		%	1		10/12/22 18:42
4-Bromofluorobenzene (surr)	132		55-151		%	1		10/12/22 18:42
Toluene-d8 (surr)	100		85-116		%	1		10/12/22 18:42

Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138006
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.1
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS22058
Analytical Method: SW8260D
Analyst: S.S
Analytical Date/Time: 10/12/22 18:42
Container ID: 1226138006-B

Prep Batch: VXX39315
Prep Method: SW5035A
Prep Date/Time: 10/05/22 16:27
Prep Initial Wt./Vol.: 78.06 g
Prep Extract Vol: 42.8433 mL

Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138006
Lab Project ID: 1226138

Collection Date: 10/05/22 16:27
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):77.1
Location:

Results by **Volatile-SIM**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dibromoethane	0.0890	U	0.178	0.0441	ug/kg	1		10/11/22 16:35
Surrogates								
4-Bromofluorobenzene (surr)	140		55-151		%	1		10/11/22 16:35
Toluene-d8 (surr)	101		85-116		%	1		10/11/22 16:35

Batch Information

Analytical Batch: VMS22067
Analytical Method: SW8260D-SIM
Analyst: NRB
Analytical Date/Time: 10/11/22 16:35
Container ID: 1226138006-B

Prep Batch: VXX39340
Prep Method: SW5035A
Prep Date/Time: 10/05/22 16:27
Prep Initial Wt./Vol.: 78.06 g
Prep Extract Vol: 42.8433 mL

Results of **IW-2022D-1**

Client Sample ID: **IW-2022D-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138007
Lab Project ID: 1226138

Collection Date: 10/06/22 11:02
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):78.6
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Lead	6.62		0.250	0.0776	mg/kg	10		10/18/22 15:41

Batch Information

Analytical Batch: MMS11722
Analytical Method: SW6020B
Analyst: HGS
Analytical Date/Time: 10/18/22 15:41
Container ID: 1226138007-A

Prep Batch: MXX35557
Prep Method: SW3050B
Prep Date/Time: 10/14/22 13:30
Prep Initial Wt./Vol.: 1.017 g
Prep Extract Vol: 50 mL

Results of **IW-2022D-1**

Client Sample ID: **IW-2022D-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138007
Lab Project ID: 1226138

Collection Date: 10/06/22 11:02
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):78.6
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	28.5	J	31.6	7.89	ug/kg	1		10/27/22 23:20
2-Methylnaphthalene	43.5		31.6	7.89	ug/kg	1		10/27/22 23:20
Acenaphthene	8.40	J	31.6	7.89	ug/kg	1		10/27/22 23:20
Acenaphthylene	15.8	U	31.6	7.89	ug/kg	1		10/27/22 23:20
Anthracene	15.8	U	31.6	7.89	ug/kg	1		10/27/22 23:20
Benzo(a)Anthracene	17.0	J	31.6	7.89	ug/kg	1		10/27/22 23:20
Benzo[a]pyrene	32.6		31.6	7.89	ug/kg	1		10/27/22 23:20
Benzo[b]Fluoranthene	43.6		31.6	7.89	ug/kg	1		10/27/22 23:20
Benzo[g,h,i]perylene	42.8		31.6	7.89	ug/kg	1		10/27/22 23:20
Benzo[k]fluoranthene	13.9	J	31.6	7.89	ug/kg	1		10/27/22 23:20
Chrysene	29.2	J	31.6	7.89	ug/kg	1		10/27/22 23:20
Dibenzo[a,h]anthracene	10.2	J	31.6	7.89	ug/kg	1		10/27/22 23:20
Fluoranthene	24.5	J	31.6	7.89	ug/kg	1		10/27/22 23:20
Fluorene	31.5	J	31.6	7.89	ug/kg	1		10/27/22 23:20
Indeno[1,2,3-c,d] pyrene	33.9		31.6	7.89	ug/kg	1		10/27/22 23:20
Naphthalene	62.1		25.3	6.32	ug/kg	1		10/27/22 23:20
Phenanthrene	39.1		31.6	7.89	ug/kg	1		10/27/22 23:20
Pyrene	53.8		31.6	7.89	ug/kg	1		10/27/22 23:20
Surrogates								
2-Methylnaphthalene-d10 (surr)	93.8		58-103		%	1		10/27/22 23:20
Fluoranthene-d10 (surr)	90.6		54-113		%	1		10/27/22 23:20

Batch Information

Analytical Batch: XMS13424
Analytical Method: 8270D SIM (PAH)
Analyst: NGG
Analytical Date/Time: 10/27/22 23:20
Container ID: 1226138007-A

Prep Batch: XXX47198
Prep Method: SW3550C
Prep Date/Time: 10/19/22 13:00
Prep Initial Wt./Vol.: 22.668 g
Prep Extract Vol: 5 mL

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW-2022D-1**

Client Sample ID: **IW-2022D-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138007
Lab Project ID: 1226138

Collection Date: 10/06/22 11:02
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):78.6
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	45.8		25.3	11.4	mg/kg	1		10/22/22 22:50
Surrogates								
5a Androstane (surr)	91.5		50-150		%	1		10/22/22 22:50

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK102
Analyst: MAP
Analytical Date/Time: 10/22/22 22:50
Container ID: 1226138007-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.236 g
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	63.0 U		126	54.3	mg/kg	1		10/22/22 22:50
Surrogates								
n-Triacontane-d62 (surr)	83.7		50-150		%	1		10/22/22 22:50

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK103
Analyst: MAP
Analytical Date/Time: 10/22/22 22:50
Container ID: 1226138007-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.236 g
Prep Extract Vol: 5 mL

Results of **IW-2022D-1**

Client Sample ID: **IW-2022D-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138007
Lab Project ID: 1226138

Collection Date: 10/06/22 11:02
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):78.6
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	18.1		4.07	1.22	mg/kg	1		10/13/22 07:39
Surrogates								
4-Bromofluorobenzene (surr)	142		50-150		%	1		10/13/22 07:39

Batch Information

Analytical Batch: VFC16291
Analytical Method: AK101
Analyst: PHK
Analytical Date/Time: 10/13/22 07:39
Container ID: 1226138007-B

Prep Batch: VXX39319
Prep Method: SW5035A
Prep Date/Time: 10/06/22 11:02
Prep Initial Wt./Vol.: 58.818 g
Prep Extract Vol: 37.6001 mL

Results of **IW-2022D-1**

Client Sample ID: **IW-2022D-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138007
Lab Project ID: 1226138

Collection Date: 10/06/22 11:02
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):78.6
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	16.3	U	32.5	10.1	ug/kg	1		10/13/22 16:37
1,1,1-Trichloroethane	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
1,1,2,2-Tetrachloroethane	1.63	U	3.25	1.01	ug/kg	1		10/13/22 16:37
1,1,2-Trichloroethane	0.815	U	1.63	0.814	ug/kg	1		10/13/22 16:37
1,1-Dichloroethane	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
1,1-Dichloroethene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
1,1-Dichloropropene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
1,2,3-Trichlorobenzene	81.5	U	163	48.8	ug/kg	1		10/13/22 16:37
1,2,3-Trichloropropane	1.63	U	3.25	1.01	ug/kg	1		10/13/22 16:37
1,2,4-Trichlorobenzene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
1,2,4-Trimethylbenzene	6200		814	244	ug/kg	5		10/14/22 19:50
1,2-Dibromo-3-chloropropane	81.5	U	163	50.4	ug/kg	1		10/13/22 16:37
1,2-Dibromoethane	1.22	U	2.44	1.22	ug/kg	1		10/13/22 16:37
1,2-Dichlorobenzene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
1,2-Dichloroethane	1.63	U	3.25	1.14	ug/kg	1		10/13/22 16:37
1,2-Dichloropropane	8.15	U	16.3	8.14	ug/kg	1		10/13/22 16:37
1,3,5-Trimethylbenzene	1730		40.7	12.7	ug/kg	1		10/13/22 16:37
1,3-Dichlorobenzene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
1,3-Dichloropropane	8.15	U	16.3	5.04	ug/kg	1		10/13/22 16:37
1,4-Dichlorobenzene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
2,2-Dichloropropane	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
2-Butanone (MEK)	204	U	407	127	ug/kg	1		10/13/22 16:37
2-Chlorotoluene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
2-Hexanone	97.5	U	195	97.6	ug/kg	1		10/13/22 16:37
4-Chlorotoluene	16.3	U	32.5	16.3	ug/kg	1		10/13/22 16:37
4-Isopropyltoluene	347		130	65.1	ug/kg	1		10/13/22 16:37
4-Methyl-2-pentanone (MIBK)	204	U	407	127	ug/kg	1		10/13/22 16:37
Acetone	204	U	407	179	ug/kg	1		10/13/22 16:37
Benzene	10.2	U	20.3	6.35	ug/kg	1		10/13/22 16:37
Bromobenzene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
Bromochloromethane	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
Bromodichloromethane	1.63	U	3.25	1.01	ug/kg	1		10/13/22 16:37
Bromoform	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
Bromomethane	16.3	U	32.5	13.0	ug/kg	1		10/13/22 16:37
Carbon disulfide	81.5	U	163	50.4	ug/kg	1		10/13/22 16:37
Carbon tetrachloride	10.2	U	20.3	6.35	ug/kg	1		10/13/22 16:37
Chlorobenzene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37

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Results of **IW-2022D-1**

Client Sample ID: **IW-2022D-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138007
Lab Project ID: 1226138

Collection Date: 10/06/22 11:02
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):78.6
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	163	U	325	101	ug/kg	1		10/13/22 16:37
Chloroform	4.88	U	9.76	4.88	ug/kg	1		10/13/22 16:37
Chloromethane	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
cis-1,2-Dichloroethene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
cis-1,3-Dichloropropene	10.2	U	20.3	6.35	ug/kg	1		10/13/22 16:37
Dibromochloromethane	4.07	U	8.14	2.44	ug/kg	1		10/13/22 16:37
Dibromomethane	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
Dichlorodifluoromethane	81.5	U	163	48.8	ug/kg	1		10/13/22 16:37
Ethylbenzene	169		40.7	12.7	ug/kg	1		10/13/22 16:37
Freon-113	81.5	U	163	50.4	ug/kg	1		10/13/22 16:37
Hexachlorobutadiene	16.3	U	32.5	10.1	ug/kg	1		10/13/22 16:37
Isopropylbenzene (Cumene)	77.5		40.7	12.7	ug/kg	1		10/13/22 16:37
Methylene chloride	81.5	U	163	50.4	ug/kg	1		10/13/22 16:37
Methyl-t-butyl ether	81.5	U	163	50.4	ug/kg	1		10/13/22 16:37
Naphthalene	99.2		40.7	12.7	ug/kg	1		10/13/22 16:37
n-Butylbenzene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
n-Propylbenzene	259		40.7	12.7	ug/kg	1		10/13/22 16:37
o-Xylene	72.0		40.7	12.7	ug/kg	1		10/13/22 16:37
P & M -Xylene	1110		81.4	24.4	ug/kg	1		10/13/22 16:37
sec-Butylbenzene	107		40.7	12.7	ug/kg	1		10/13/22 16:37
Styrene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
tert-Butylbenzene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
Tetrachloroethene	10.2	U	20.3	6.35	ug/kg	1		10/13/22 16:37
Toluene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
trans-1,2-Dichloroethene	20.4	U	40.7	12.7	ug/kg	1		10/13/22 16:37
trans-1,3-Dichloropropene	10.2	U	20.3	6.35	ug/kg	1		10/13/22 16:37
Trichloroethene	8.15	U	16.3	5.21	ug/kg	1		10/13/22 16:37
Trichlorofluoromethane	40.7	U	81.4	24.4	ug/kg	1		10/13/22 16:37
Vinyl acetate	81.5	U	163	50.4	ug/kg	1		10/13/22 16:37
Vinyl chloride	0.650	U	1.30	0.407	ug/kg	1		10/13/22 16:37
Xylenes (total)	1180		122	37.1	ug/kg	1		10/13/22 16:37
Surrogates								
1,2-Dichloroethane-D4 (surr)	99.5		71-136		%	1		10/13/22 16:37
4-Bromofluorobenzene (surr)	148		55-151		%	1		10/13/22 16:37
Toluene-d8 (surr)	98.8		85-116		%	1		10/13/22 16:37

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Results of **IW-2022D-1**

Client Sample ID: **IW-2022D-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138007
Lab Project ID: 1226138

Collection Date: 10/06/22 11:02
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):78.6
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS22063
Analytical Method: SW8260D
Analyst: S.S
Analytical Date/Time: 10/13/22 16:37
Container ID: 1226138007-B

Prep Batch: VXX39328
Prep Method: SW5035A
Prep Date/Time: 10/06/22 11:02
Prep Initial Wt./Vol.: 58.818 g
Prep Extract Vol: 37.6001 mL

Analytical Batch: VMS22072
Analytical Method: SW8260D
Analyst: S.S
Analytical Date/Time: 10/14/22 19:50
Container ID: 1226138007-B

Prep Batch: VXX39345
Prep Method: SW5035A
Prep Date/Time: 10/06/22 11:02
Prep Initial Wt./Vol.: 58.818 g
Prep Extract Vol: 37.6001 mL

Results of **IW-2022D-1**

Client Sample ID: **IW-2022D-1**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138007
Lab Project ID: 1226138

Collection Date: 10/06/22 11:02
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):78.6
Location:

Results by **Volatile-SIM**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dibromoethane	0.102	U	0.203	0.0504	ug/kg	1		10/11/22 22:12
Surrogates								
4-Bromofluorobenzene (surr)	128		55-151		%	1		10/11/22 22:12
Toluene-d8 (surr)	99.6		85-116		%	1		10/11/22 22:12

Batch Information

Analytical Batch: VMS22068
Analytical Method: SW8260D-SIM
Analyst: NRB
Analytical Date/Time: 10/11/22 22:12
Container ID: 1226138007-B

Prep Batch: VXX39341
Prep Method: SW5035A
Prep Date/Time: 10/06/22 11:02
Prep Initial Wt./Vol.: 58.818 g
Prep Extract Vol: 37.6001 mL

Results of **IW-2022D-2**

Client Sample ID: **IW-2022D-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138008
Lab Project ID: 1226138

Collection Date: 10/06/22 11:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.6
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Lead	4.19		0.214	0.0662	mg/kg	10		10/18/22 15:43

Batch Information

Analytical Batch: MMS11722
Analytical Method: SW6020B
Analyst: HGS
Analytical Date/Time: 10/18/22 15:43
Container ID: 1226138008-A

Prep Batch: MXX35557
Prep Method: SW3050B
Prep Date/Time: 10/14/22 13:30
Prep Initial Wt./Vol.: 1.056 g
Prep Extract Vol: 50 mL

Results of **IW-2022D-2**

Client Sample ID: **IW-2022D-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138008
Lab Project ID: 1226138

Collection Date: 10/06/22 11:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.6
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	12.2	J	28.1	7.02	ug/kg	1		10/27/22 23:36
2-Methylnaphthalene	18.7	J	28.1	7.02	ug/kg	1		10/27/22 23:36
Acenaphthene	14.1	U	28.1	7.02	ug/kg	1		10/27/22 23:36
Acenaphthylene	14.1	U	28.1	7.02	ug/kg	1		10/27/22 23:36
Anthracene	14.1	U	28.1	7.02	ug/kg	1		10/27/22 23:36
Benzo(a)Anthracene	14.1	U	28.1	7.02	ug/kg	1		10/27/22 23:36
Benzo[a]pyrene	14.1	U	28.1	7.02	ug/kg	1		10/27/22 23:36
Benzo[b]Fluoranthene	7.39	J	28.1	7.02	ug/kg	1		10/27/22 23:36
Benzo[g,h,i]perylene	15.0	J	28.1	7.02	ug/kg	1		10/27/22 23:36
Benzo[k]fluoranthene	14.1	U	28.1	7.02	ug/kg	1		10/27/22 23:36
Chrysene	14.1	U	28.1	7.02	ug/kg	1		10/27/22 23:36
Dibenzo[a,h]anthracene	14.1	U	28.1	7.02	ug/kg	1		10/27/22 23:36
Fluoranthene	14.1	U	28.1	7.02	ug/kg	1		10/27/22 23:36
Fluorene	14.1	U	28.1	7.02	ug/kg	1		10/27/22 23:36
Indeno[1,2,3-c,d] pyrene	10.1	J	28.1	7.02	ug/kg	1		10/27/22 23:36
Naphthalene	14.4	J	22.5	5.62	ug/kg	1		10/27/22 23:36
Phenanthrene	14.1	U	28.1	7.02	ug/kg	1		10/27/22 23:36
Pyrene	14.1	U	28.1	7.02	ug/kg	1		10/27/22 23:36
Surrogates								
2-Methylnaphthalene-d10 (surr)	99.6		58-103		%	1		10/27/22 23:36
Fluoranthene-d10 (surr)	76.1		54-113		%	1		10/27/22 23:36

Batch Information

Analytical Batch: XMS13424
Analytical Method: 8270D SIM (PAH)
Analyst: NGG
Analytical Date/Time: 10/27/22 23:36
Container ID: 1226138008-A

Prep Batch: XXX47198
Prep Method: SW3550C
Prep Date/Time: 10/19/22 13:00
Prep Initial Wt./Vol.: 22.586 g
Prep Extract Vol: 5 mL

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW-2022D-2**

Client Sample ID: **IW-2022D-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138008
Lab Project ID: 1226138

Collection Date: 10/06/22 11:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.6
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	11.2	U	22.4	10.1	mg/kg	1		10/22/22 23:00
Surrogates								
5a Androstane (surr)	89.4		50-150		%	1		10/22/22 23:00

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK102
Analyst: MAP
Analytical Date/Time: 10/22/22 23:00
Container ID: 1226138008-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.263 g
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	56.0	U	112	48.1	mg/kg	1		10/22/22 23:00
Surrogates								
n-Triacontane-d62 (surr)	80.8		50-150		%	1		10/22/22 23:00

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK103
Analyst: MAP
Analytical Date/Time: 10/22/22 23:00
Container ID: 1226138008-A

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/22 16:20
Prep Initial Wt./Vol.: 30.263 g
Prep Extract Vol: 5 mL

Results of **IW-2022D-2**

Client Sample ID: **IW-2022D-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138008
Lab Project ID: 1226138

Collection Date: 10/06/22 11:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.6
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	2.32		1.89	0.567	mg/kg	1		10/13/22 07:58
Surrogates								
4-Bromofluorobenzene (surr)	127		50-150		%	1		10/13/22 07:58

Batch Information

Analytical Batch: VFC16291
Analytical Method: AK101
Analyst: PHK
Analytical Date/Time: 10/13/22 07:58
Container ID: 1226138008-B

Prep Batch: VXX39319
Prep Method: SW5035A
Prep Date/Time: 10/06/22 11:34
Prep Initial Wt./Vol.: 113.096 g
Prep Extract Vol: 37.8597 mL

Print Date: 10/31/2022 2:58:11PM

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Results of **IW-2022D-2**

Client Sample ID: **IW-2022D-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138008
Lab Project ID: 1226138

Collection Date: 10/06/22 11:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.6
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	7.55	U	15.1	4.68	ug/kg	1		10/13/22 16:53
1,1,1-Trichloroethane	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
1,1,2,2-Tetrachloroethane	0.755	U	1.51	0.468	ug/kg	1		10/13/22 16:53
1,1,2-Trichloroethane	0.378	U	0.755	0.378	ug/kg	1		10/13/22 16:53
1,1-Dichloroethane	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
1,1-Dichloroethene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
1,1-Dichloropropene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
1,2,3-Trichlorobenzene	37.8	U	75.5	22.7	ug/kg	1		10/13/22 16:53
1,2,3-Trichloropropane	0.755	U	1.51	0.468	ug/kg	1		10/13/22 16:53
1,2,4-Trichlorobenzene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
1,2,4-Trimethylbenzene	411		75.5	22.7	ug/kg	1		10/13/22 16:53
1,2-Dibromo-3-chloropropane	37.8	U	75.5	23.4	ug/kg	1		10/13/22 16:53
1,2-Dibromoethane	0.565	U	1.13	0.567	ug/kg	1		10/13/22 16:53
1,2-Dichlorobenzene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
1,2-Dichloroethane	0.755	U	1.51	0.529	ug/kg	1		10/13/22 16:53
1,2-Dichloropropane	3.77	U	7.55	3.78	ug/kg	1		10/13/22 16:53
1,3,5-Trimethylbenzene	129		18.9	5.89	ug/kg	1		10/13/22 16:53
1,3-Dichlorobenzene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
1,3-Dichloropropane	3.77	U	7.55	2.34	ug/kg	1		10/13/22 16:53
1,4-Dichlorobenzene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
2,2-Dichloropropane	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
2-Butanone (MEK)	94.5	U	189	58.9	ug/kg	1		10/13/22 16:53
2-Chlorotoluene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
2-Hexanone	45.3	U	90.6	45.3	ug/kg	1		10/13/22 16:53
4-Chlorotoluene	7.55	U	15.1	7.55	ug/kg	1		10/13/22 16:53
4-Isopropyltoluene	30.2	U	60.4	30.2	ug/kg	1		10/13/22 16:53
4-Methyl-2-pentanone (MIBK)	94.5	U	189	58.9	ug/kg	1		10/13/22 16:53
Acetone	94.5	U	189	83.1	ug/kg	1		10/13/22 16:53
Benzene	4.72	U	9.44	2.95	ug/kg	1		10/13/22 16:53
Bromobenzene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
Bromochloromethane	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
Bromodichloromethane	0.755	U	1.51	0.468	ug/kg	1		10/13/22 16:53
Bromoform	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
Bromomethane	7.55	U	15.1	6.04	ug/kg	1		10/13/22 16:53
Carbon disulfide	37.8	U	75.5	23.4	ug/kg	1		10/13/22 16:53
Carbon tetrachloride	4.72	U	9.44	2.95	ug/kg	1		10/13/22 16:53
Chlorobenzene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53

Results of **IW-2022D-2**

Client Sample ID: **IW-2022D-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138008
Lab Project ID: 1226138

Collection Date: 10/06/22 11:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.6
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	75.5	U	151	46.8	ug/kg	1		10/13/22 16:53
Chloroform	2.27	U	4.53	2.27	ug/kg	1		10/13/22 16:53
Chloromethane	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
cis-1,2-Dichloroethene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
cis-1,3-Dichloropropene	4.72	U	9.44	2.95	ug/kg	1		10/13/22 16:53
Dibromochloromethane	1.89	U	3.78	1.13	ug/kg	1		10/13/22 16:53
Dibromomethane	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
Dichlorodifluoromethane	37.8	U	75.5	22.7	ug/kg	1		10/13/22 16:53
Ethylbenzene	24.2		18.9	5.89	ug/kg	1		10/13/22 16:53
Freon-113	37.8	U	75.5	23.4	ug/kg	1		10/13/22 16:53
Hexachlorobutadiene	7.55	U	15.1	4.68	ug/kg	1		10/13/22 16:53
Isopropylbenzene (Cumene)	8.19	J	18.9	5.89	ug/kg	1		10/13/22 16:53
Methylene chloride	37.8	U	75.5	23.4	ug/kg	1		10/13/22 16:53
Methyl-t-butyl ether	37.8	U	75.5	23.4	ug/kg	1		10/13/22 16:53
Naphthalene	17.8	J	18.9	5.89	ug/kg	1		10/13/22 16:53
n-Butylbenzene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
n-Propylbenzene	24.1		18.9	5.89	ug/kg	1		10/13/22 16:53
o-Xylene	53.4		18.9	5.89	ug/kg	1		10/13/22 16:53
P & M -Xylene	101		37.8	11.3	ug/kg	1		10/13/22 16:53
sec-Butylbenzene	6.73	J	18.9	5.89	ug/kg	1		10/13/22 16:53
Styrene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
tert-Butylbenzene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
Tetrachloroethene	4.72	U	9.44	2.95	ug/kg	1		10/13/22 16:53
Toluene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
trans-1,2-Dichloroethene	9.45	U	18.9	5.89	ug/kg	1		10/13/22 16:53
trans-1,3-Dichloropropene	4.72	U	9.44	2.95	ug/kg	1		10/13/22 16:53
Trichloroethene	3.77	U	7.55	2.42	ug/kg	1		10/13/22 16:53
Trichlorofluoromethane	18.9	U	37.8	11.3	ug/kg	1		10/13/22 16:53
Vinyl acetate	37.8	U	75.5	23.4	ug/kg	1		10/13/22 16:53
Vinyl chloride	0.302	U	0.604	0.189	ug/kg	1		10/13/22 16:53
Xylenes (total)	154		56.7	17.2	ug/kg	1		10/13/22 16:53
Surrogates								
1,2-Dichloroethane-D4 (surr)	101		71-136		%	1		10/13/22 16:53
4-Bromofluorobenzene (surr)	139		55-151		%	1		10/13/22 16:53
Toluene-d8 (surr)	99.5		85-116		%	1		10/13/22 16:53

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **IW-2022D-2**

Client Sample ID: **IW-2022D-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138008
Lab Project ID: 1226138

Collection Date: 10/06/22 11:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.6
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS22063
Analytical Method: SW8260D
Analyst: S.S
Analytical Date/Time: 10/13/22 16:53
Container ID: 1226138008-B

Prep Batch: VXX39328
Prep Method: SW5035A
Prep Date/Time: 10/06/22 11:34
Prep Initial Wt./Vol.: 113.096 g
Prep Extract Vol: 37.8597 mL

Results of **IW-2022D-2**

Client Sample ID: **IW-2022D-2**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138008
Lab Project ID: 1226138

Collection Date: 10/06/22 11:34
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):88.6
Location:

Results by **Volatile-SIM**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dibromoethane	0.0472	U	0.0944	0.0234	ug/kg	1		10/11/22 22:27
Surrogates								
4-Bromofluorobenzene (surr)	125		55-151		%	1		10/11/22 22:27
Toluene-d8 (surr)	99.1		85-116		%	1		10/11/22 22:27

Batch Information

Analytical Batch: VMS22068
Analytical Method: SW8260D-SIM
Analyst: NRB
Analytical Date/Time: 10/11/22 22:27
Container ID: 1226138008-B

Prep Batch: VXX39341
Prep Method: SW5035A
Prep Date/Time: 10/06/22 11:34
Prep Initial Wt./Vol.: 113.096 g
Prep Extract Vol: 37.8597 mL

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138009
Lab Project ID: 1226138

Collection Date: 10/05/22 12:44
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	1.32	J	2.61	0.782	mg/kg	1		10/12/22 22:12
Surrogates								
4-Bromofluorobenzene (surr)	96.2		50-150		%	1		10/12/22 22:12

Batch Information

Analytical Batch: VFC16291
Analytical Method: AK101
Analyst: PHK
Analytical Date/Time: 10/12/22 22:12
Container ID: 1226138009-A

Prep Batch: VXX39318
Prep Method: SW5035A
Prep Date/Time: 10/05/22 12:44
Prep Initial Wt./Vol.: 47.975 g
Prep Extract Vol: 25 mL

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138009
Lab Project ID: 1226138

Collection Date: 10/05/22 12:44
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	10.4	U	20.8	6.46	ug/kg	1		10/12/22 15:31
1,1,1-Trichloroethane	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
1,1,2,2-Tetrachloroethane	1.04	U	2.08	0.646	ug/kg	1		10/12/22 15:31
1,1,2-Trichloroethane	0.520	U	1.04	0.521	ug/kg	1		10/12/22 15:31
1,1-Dichloroethane	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
1,1-Dichloroethene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
1,1-Dichloropropene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
1,2,3-Trichlorobenzene	52.0	U	104	31.3	ug/kg	1		10/12/22 15:31
1,2,3-Trichloropropane	1.04	U	2.08	0.646	ug/kg	1		10/12/22 15:31
1,2,4-Trichlorobenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
1,2,4-Trimethylbenzene	52.0	U	104	31.3	ug/kg	1		10/12/22 15:31
1,2-Dibromo-3-chloropropane	52.0	U	104	32.3	ug/kg	1		10/12/22 15:31
1,2-Dibromoethane	0.780	U	1.56	0.782	ug/kg	1		10/12/22 15:31
1,2-Dichlorobenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
1,2-Dichloroethane	1.04	U	2.08	0.730	ug/kg	1		10/12/22 15:31
1,2-Dichloropropane	5.20	U	10.4	5.21	ug/kg	1		10/12/22 15:31
1,3,5-Trimethylbenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
1,3-Dichlorobenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
1,3-Dichloropropane	5.20	U	10.4	3.23	ug/kg	1		10/12/22 15:31
1,4-Dichlorobenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
2,2-Dichloropropane	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
2-Butanone (MEK)	131	U	261	81.3	ug/kg	1		10/12/22 15:31
2-Chlorotoluene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
2-Hexanone	62.5	U	125	62.5	ug/kg	1		10/12/22 15:31
4-Chlorotoluene	10.4	U	20.8	10.4	ug/kg	1		10/12/22 15:31
4-Isopropyltoluene	41.7	U	83.4	41.7	ug/kg	1		10/12/22 15:31
4-Methyl-2-pentanone (MIBK)	131	U	261	81.3	ug/kg	1		10/12/22 15:31
Acetone	131	U	261	115	ug/kg	1		10/12/22 15:31
Benzene	6.50	U	13.0	4.06	ug/kg	1		10/12/22 15:31
Bromobenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
Bromochloromethane	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
Bromodichloromethane	1.04	U	2.08	0.646	ug/kg	1		10/12/22 15:31
Bromoform	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
Bromomethane	10.4	U	20.8	8.34	ug/kg	1		10/12/22 15:31
Carbon disulfide	52.0	U	104	32.3	ug/kg	1		10/12/22 15:31
Carbon tetrachloride	6.50	U	13.0	4.06	ug/kg	1		10/12/22 15:31
Chlorobenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138009
Lab Project ID: 1226138

Collection Date: 10/05/22 12:44
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	104	U	208	64.6	ug/kg	1		10/12/22 15:31
Chloroform	3.13	U	6.25	3.13	ug/kg	1		10/12/22 15:31
Chloromethane	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
cis-1,2-Dichloroethene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
cis-1,3-Dichloropropene	6.50	U	13.0	4.06	ug/kg	1		10/12/22 15:31
Dibromochloromethane	2.61	U	5.21	1.56	ug/kg	1		10/12/22 15:31
Dibromomethane	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
Dichlorodifluoromethane	52.0	U	104	31.3	ug/kg	1		10/12/22 15:31
Ethylbenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
Freon-113	52.0	U	104	32.3	ug/kg	1		10/12/22 15:31
Hexachlorobutadiene	10.4	U	20.8	6.46	ug/kg	1		10/12/22 15:31
Isopropylbenzene (Cumene)	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
Methylene chloride	40.3	J	104	32.3	ug/kg	1		10/12/22 15:31
Methyl-t-butyl ether	52.0	U	104	32.3	ug/kg	1		10/12/22 15:31
Naphthalene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
n-Butylbenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
n-Propylbenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
o-Xylene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
P & M -Xylene	26.1	U	52.1	15.6	ug/kg	1		10/12/22 15:31
sec-Butylbenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
Styrene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
tert-Butylbenzene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
Tetrachloroethene	6.50	U	13.0	4.06	ug/kg	1		10/12/22 15:31
Toluene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
trans-1,2-Dichloroethene	13.1	U	26.1	8.13	ug/kg	1		10/12/22 15:31
trans-1,3-Dichloropropene	6.50	U	13.0	4.06	ug/kg	1		10/12/22 15:31
Trichloroethene	5.20	U	10.4	3.34	ug/kg	1		10/12/22 15:31
Trichlorofluoromethane	26.1	U	52.1	15.6	ug/kg	1		10/12/22 15:31
Vinyl acetate	52.0	U	104	32.3	ug/kg	1		10/12/22 15:31
Vinyl chloride	0.417	U	0.834	0.261	ug/kg	1		10/12/22 15:31
Xylenes (total)	39.1	U	78.2	23.8	ug/kg	1		10/12/22 15:31
Surrogates								
1,2-Dichloroethane-D4 (surr)	111		71-136		%	1		10/12/22 15:31
4-Bromofluorobenzene (surr)	96.8		55-151		%	1		10/12/22 15:31
Toluene-d8 (surr)	96		85-116		%	1		10/12/22 15:31

Print Date: 10/31/2022 2:58:11PM

J flagging is activated

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138009
Lab Project ID: 1226138

Collection Date: 10/05/22 12:44
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS22058
Analytical Method: SW8260D
Analyst: S.S
Analytical Date/Time: 10/12/22 15:31
Container ID: 1226138009-A

Prep Batch: VXX39315
Prep Method: SW5035A
Prep Date/Time: 10/05/22 12:44
Prep Initial Wt./Vol.: 47.975 g
Prep Extract Vol: 25 mL

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **185705775 Speedway Store 5310**
Lab Sample ID: 1226138009
Lab Project ID: 1226138

Collection Date: 10/05/22 12:44
Received Date: 10/07/22 09:30
Matrix: Soil/Solid (dry weight)
Solids (%):
Location:

Results by **Volatile-SIM**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2-Dibromoethane	0.0650	U	0.130	0.0323	ug/kg	1		10/11/22 18:53
Surrogates								
4-Bromofluorobenzene (surr)	98.9		55-151		%	1		10/11/22 18:53
Toluene-d8 (surr)	101		85-116		%	1		10/11/22 18:53

Batch Information

Analytical Batch: VMS22068
Analytical Method: SW8260D-SIM
Analyst: NRB
Analytical Date/Time: 10/11/22 18:53
Container ID: 1226138009-A

Prep Batch: VXX39341
Prep Method: SW5035A
Prep Date/Time: 10/05/22 12:44
Prep Initial Wt./Vol.: 47.975 g
Prep Extract Vol: 25 mL

Method Blank

Blank ID: MB for HBN 1846040 [MXX/35557]
Blank Lab ID: 1691538

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138001, 1226138002, 1226138003, 1226138004, 1226138005, 1226138006, 1226138007, 1226138008

Results by **SW6020B**

Parameter	Results	LOQ/CL	DL	Units
Lead	0.100U	0.200	0.0620	mg/kg

Batch Information

Analytical Batch: MMS11722
Analytical Method: SW6020B
Instrument: P7 Agilent 7800
Analyst: HGS
Analytical Date/Time: 10/18/2022 2:23:53PM

Prep Batch: MXX35557
Prep Method: SW3050B
Prep Date/Time: 10/14/2022 1:30:54PM
Prep Initial Wt./Vol.: 1 g
Prep Extract Vol: 50 mL

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

Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [MXX35557]
Blank Spike Lab ID: 1691539
Date Analyzed: 10/18/2022 14:26

Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138001, 1226138002, 1226138003, 1226138004, 1226138005, 1226138006, 1226138007, 1226138008

Results by **SW6020B**

Blank Spike (mg/kg)

Parameter	Spike	Result	Rec (%)	CL
Lead	50	51.3	103	(84-118)

Batch Information

Analytical Batch: **MMS11722**
Analytical Method: **SW6020B**
Instrument: **P7 Agilent 7800**
Analyst: **HGS**

Prep Batch: **MXX35557**
Prep Method: **SW3050B**
Prep Date/Time: **10/14/2022 13:30**
Spike Init Wt./Vol.: 50 mg/kg Extract Vol: 50 mL
Dupe Init Wt./Vol.: Extract Vol:

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

Matrix Spike Summary

Original Sample ID: 1691536
MS Sample ID: 1691541 MS
MSD Sample ID: 1691542 MSD

Analysis Date: 10/18/2022 14:29
Analysis Date: 10/18/2022 14:32
Analysis Date: 10/18/2022 14:35
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1226138001, 1226138002, 1226138003, 1226138004, 1226138005, 1226138006, 1226138007, 1226138008

Results by **SW6020B**

		Matrix Spike (mg/kg)			Spike Duplicate (mg/kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Lead	4.49	49.7	55.6	103	48.4	52.9	100	84-118	4.91	(< 20)

Batch Information

Analytical Batch: MMS11722
Analytical Method: SW6020B
Instrument: P7 Agilent 7800
Analyst: HGS
Analytical Date/Time: 10/18/2022 2:32:00PM

Prep Batch: MXX35557
Prep Method: Soils/Solids Digest for Metals by ICP-MS
Prep Date/Time: 10/14/2022 1:30:54PM
Prep Initial Wt./Vol.: 1.01g
Prep Extract Vol: 50.00mL

Print Date: 10/31/2022 2:58:18PM

Method Blank

Blank ID: MB for HBN 1845973 [SPT/11656]
Blank Lab ID: 1691309

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138001, 1226138002, 1226138003, 1226138004, 1226138005, 1226138006, 1226138007, 1226138008

Results by **SM21 2540G**

Parameter	Results	LOQ/CL	DL	Units
Total Solids	100			%

Batch Information

Analytical Batch: SPT11656
Analytical Method: SM21 2540G
Instrument:
Analyst: APS
Analytical Date/Time: 10/12/2022 5:07:00PM

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

Duplicate Sample Summary

Original Sample ID: 1226213008
Duplicate Sample ID: 1691310

Analysis Date: 10/12/2022 17:07
Matrix: Soil/Solid (dry weight)

QC for Samples:

1226138001, 1226138002, 1226138003, 1226138004, 1226138005, 1226138006, 1226138007, 1226138008

Results by **SM21 2540G**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Solids	91.5	90.9	%	0.65	(< 15)

Batch Information

Analytical Batch: SPT11656
Analytical Method: SM21 2540G
Instrument:
Analyst: APS

Print Date: 10/31/2022 2:58:21PM

Duplicate Sample Summary

Original Sample ID: 1226213014
Duplicate Sample ID: 1691311
QC for Samples:

Analysis Date: 10/12/2022 17:07
Matrix: Soil/Solid (dry weight)

Results by **SM21 2540G**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Solids	81.9	92.9	%	12.60	(< 15)

Batch Information

Analytical Batch: SPT11656
Analytical Method: SM21 2540G
Instrument:
Analyst: APS

Print Date: 10/31/2022 2:58:21PM

Method Blank

Blank ID: MB for HBN 1845933 [VXX/39315]
Blank Lab ID: 1691147

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138001, 1226138002, 1226138003, 1226138006, 1226138009

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	10.0U	20.0	6.20	ug/kg
1,1,1-Trichloroethane	12.5U	25.0	7.80	ug/kg
1,1,2,2-Tetrachloroethane	1.00U	2.00	0.620	ug/kg
1,1,2-Trichloroethane	0.500U	1.00	0.500	ug/kg
1,1-Dichloroethane	12.5U	25.0	7.80	ug/kg
1,1-Dichloroethene	12.5U	25.0	7.80	ug/kg
1,1-Dichloropropene	12.5U	25.0	7.80	ug/kg
1,2,3-Trichlorobenzene	50.0U	100	30.0	ug/kg
1,2,3-Trichloropropane	1.00U	2.00	0.620	ug/kg
1,2,4-Trichlorobenzene	12.5U	25.0	7.80	ug/kg
1,2,4-Trimethylbenzene	50.0U	100	30.0	ug/kg
1,2-Dibromo-3-chloropropane	50.0U	100	31.0	ug/kg
1,2-Dibromoethane	0.750U	1.50	0.750	ug/kg
1,2-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
1,2-Dichloroethane	1.00U	2.00	0.700	ug/kg
1,2-Dichloropropane	5.00U	10.0	5.00	ug/kg
1,3,5-Trimethylbenzene	12.5U	25.0	7.80	ug/kg
1,3-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
1,3-Dichloropropane	5.00U	10.0	3.10	ug/kg
1,4-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
2,2-Dichloropropane	12.5U	25.0	7.80	ug/kg
2-Butanone (MEK)	125U	250	78.0	ug/kg
2-Chlorotoluene	12.5U	25.0	7.80	ug/kg
2-Hexanone	60.0U	120	60.0	ug/kg
4-Chlorotoluene	10.0U	20.0	10.0	ug/kg
4-Isopropyltoluene	40.0U	80.0	40.0	ug/kg
4-Methyl-2-pentanone (MIBK)	125U	250	78.0	ug/kg
Acetone	125U	250	110	ug/kg
Benzene	6.25U	12.5	3.90	ug/kg
Bromobenzene	12.5U	25.0	7.80	ug/kg
Bromochloromethane	12.5U	25.0	7.80	ug/kg
Bromodichloromethane	1.00U	2.00	0.620	ug/kg
Bromoform	12.5U	25.0	7.80	ug/kg
Bromomethane	10.0U	20.0	8.00	ug/kg
Carbon disulfide	50.0U	100	31.0	ug/kg
Carbon tetrachloride	6.25U	12.5	3.90	ug/kg
Chlorobenzene	12.5U	25.0	7.80	ug/kg
Chloroethane	100U	200	62.0	ug/kg

Method Blank

Blank ID: MB for HBN 1845933 [VXX/39315]
Blank Lab ID: 1691147

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138001, 1226138002, 1226138003, 1226138006, 1226138009

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units
Chloroform	3.00U	6.00	3.00	ug/kg
Chloromethane	12.5U	25.0	7.80	ug/kg
cis-1,2-Dichloroethene	12.5U	25.0	7.80	ug/kg
cis-1,3-Dichloropropene	6.25U	12.5	3.90	ug/kg
Dibromochloromethane	2.50U	5.00	1.50	ug/kg
Dibromomethane	12.5U	25.0	7.80	ug/kg
Dichlorodifluoromethane	50.0U	100	30.0	ug/kg
Ethylbenzene	12.5U	25.0	7.80	ug/kg
Freon-113	50.0U	100	31.0	ug/kg
Hexachlorobutadiene	10.0U	20.0	6.20	ug/kg
Isopropylbenzene (Cumene)	12.5U	25.0	7.80	ug/kg
Methylene chloride	50.0U	100	31.0	ug/kg
Methyl-t-butyl ether	50.0U	100	31.0	ug/kg
Naphthalene	12.5U	25.0	7.80	ug/kg
n-Butylbenzene	12.5U	25.0	7.80	ug/kg
n-Propylbenzene	12.5U	25.0	7.80	ug/kg
o-Xylene	12.5U	25.0	7.80	ug/kg
P & M -Xylene	25.0U	50.0	15.0	ug/kg
sec-Butylbenzene	12.5U	25.0	7.80	ug/kg
Styrene	12.5U	25.0	7.80	ug/kg
tert-Butylbenzene	12.5U	25.0	7.80	ug/kg
Tetrachloroethene	6.25U	12.5	3.90	ug/kg
Toluene	12.5U	25.0	7.80	ug/kg
trans-1,2-Dichloroethene	12.5U	25.0	7.80	ug/kg
trans-1,3-Dichloropropene	6.25U	12.5	3.90	ug/kg
Trichloroethene	5.00U	10.0	3.20	ug/kg
Trichlorofluoromethane	25.0U	50.0	15.0	ug/kg
Vinyl acetate	50.0U	100	31.0	ug/kg
Vinyl chloride	0.400U	0.800	0.250	ug/kg
Xylenes (total)	37.5U	75.0	22.8	ug/kg
Surrogates				
1,2-Dichloroethane-D4 (surr)	108	71-136		%
4-Bromofluorobenzene (surr)	103	55-151		%
Toluene-d8 (surr)	95.1	85-116		%

Method Blank

Blank ID: MB for HBN 1845933 [VXX/39315]
Blank Lab ID: 1691147

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138001, 1226138002, 1226138003, 1226138006, 1226138009

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS22058
Analytical Method: SW8260D
Instrument: VQA 7890/5975 GC/MS
Analyst: S.S
Analytical Date/Time: 10/12/2022 10:52:00AM

Prep Batch: VXX39315
Prep Method: SW5035A
Prep Date/Time: 10/12/2022 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [VXX39315]
Blank Spike Lab ID: 1691148
Date Analyzed: 10/12/2022 11:09

Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138001, 1226138002, 1226138003, 1226138006, 1226138009

Results by **SW8260D**

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
1,1,1,2-Tetrachloroethane	750	819	109	(78-125)
1,1,1-Trichloroethane	750	776	103	(73-130)
1,1,2,2-Tetrachloroethane	750	795	106	(70-124)
1,1,2-Trichloroethane	750	815	109	(78-121)
1,1-Dichloroethane	750	752	100	(76-125)
1,1-Dichloroethene	750	779	104	(70-131)
1,1-Dichloropropene	750	761	102	(76-125)
1,2,3-Trichlorobenzene	750	801	107	(66-130)
1,2,3-Trichloropropane	750	768	102	(73-125)
1,2,4-Trichlorobenzene	750	789	105	(67-129)
1,2,4-Trimethylbenzene	750	802	107	(75-123)
1,2-Dibromo-3-chloropropane	750	824	110	(61-132)
1,2-Dibromoethane	750	808	108	(78-122)
1,2-Dichlorobenzene	750	783	104	(78-121)
1,2-Dichloroethane	750	749	100	(73-128)
1,2-Dichloropropane	750	773	103	(76-123)
1,3,5-Trimethylbenzene	750	791	106	(73-124)
1,3-Dichlorobenzene	750	782	104	(77-121)
1,3-Dichloropropane	750	783	104	(77-121)
1,4-Dichlorobenzene	750	781	104	(75-120)
2,2-Dichloropropane	750	735	98	(67-133)
2-Butanone (MEK)	2250	2300	102	(51-148)
2-Chlorotoluene	750	783	104	(75-122)
2-Hexanone	2250	2400	107	(53-145)
4-Chlorotoluene	750	799	107	(72-124)
4-Isopropyltoluene	750	800	107	(73-127)
4-Methyl-2-pentanone (MIBK)	2250	2370	105	(65-135)
Acetone	2250	2470	110	(36-164)
Benzene	750	756	101	(77-121)
Bromobenzene	750	776	104	(78-121)
Bromochloromethane	750	760	101	(78-125)
Bromodichloromethane	750	827	110	(75-127)
Bromoform	750	771	103	(67-132)
Bromomethane	750	658	88	(53-143)

Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [VXX39315]
Blank Spike Lab ID: 1691148
Date Analyzed: 10/12/2022 11:09

Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138001, 1226138002, 1226138003, 1226138006, 1226138009

Results by **SW8260D**

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
Carbon disulfide	1130	1240	110	(63-132)
Carbon tetrachloride	750	801	107	(70-135)
Chlorobenzene	750	765	102	(79-120)
Chloroethane	750	739	99	(59-139)
Chloroform	750	755	101	(78-123)
Chloromethane	750	699	93	(50-136)
cis-1,2-Dichloroethene	750	749	100	(77-123)
cis-1,3-Dichloropropene	750	815	109	(74-126)
Dibromochloromethane	750	770	103	(74-126)
Dibromomethane	750	777	104	(78-125)
Dichlorodifluoromethane	750	757	101	(29-149)
Ethylbenzene	750	755	101	(76-122)
Freon-113	1130	1170	104	(66-136)
Hexachlorobutadiene	750	726	97	(61-135)
Isopropylbenzene (Cumene)	750	773	103	(68-134)
Methylene chloride	750	778	104	(70-128)
Methyl-t-butyl ether	1130	1100	98	(73-125)
Naphthalene	750	818	109	(62-129)
n-Butylbenzene	750	790	105	(70-128)
n-Propylbenzene	750	795	106	(73-125)
o-Xylene	750	771	103	(77-123)
P & M -Xylene	1500	1520	102	(77-124)
sec-Butylbenzene	750	793	106	(73-126)
Styrene	750	791	105	(76-124)
tert-Butylbenzene	750	795	106	(73-125)
Tetrachloroethene	750	764	102	(73-128)
Toluene	750	687	92	(77-121)
trans-1,2-Dichloroethene	750	781	104	(74-125)
trans-1,3-Dichloropropene	750	744	99	(71-130)
Trichloroethene	750	758	101	(77-123)
Trichlorofluoromethane	750	819	109	(62-140)
Vinyl acetate	750	796	106	(50-151)
Vinyl chloride	750	747	100	(56-135)
Xylenes (total)	2250	2290	102	(78-124)

Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [VXX39315]
Blank Spike Lab ID: 1691148
Date Analyzed: 10/12/2022 11:09

Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138001, 1226138002, 1226138003, 1226138006, 1226138009

Results by **SW8260D**

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
Surrogates				
1,2-Dichloroethane-D4 (surr)	750		98	(71-136)
4-Bromofluorobenzene (surr)	750		102	(55-151)
Toluene-d8 (surr)	750		100	(85-116)

Batch Information

Analytical Batch: **VMS22058**
Analytical Method: **SW8260D**
Instrument: **VQA 7890/5975 GC/MS**
Analyst: **S.S**

Prep Batch: **VXX39315**
Prep Method: **SW5035A**
Prep Date/Time: **10/12/2022 06:00**
Spike Init Wt./Vol.: 750 ug/kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: Extract Vol:

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Matrix Spike Summary

Original Sample ID: 1691149
MS Sample ID: 1691150 MS
MSD Sample ID: 1691151 MSD

Analysis Date: 10/12/2022 13:46
Analysis Date: 10/12/2022 12:20
Analysis Date: 10/12/2022 12:37
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1226138001, 1226138002, 1226138003, 1226138006, 1226138009

Results by **SW8260D**

		Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	7.25U	544	602	111	544	594	109	78-125	1.30	(< 20)
1,1,1-Trichloroethane	9.05U	544	560	103	544	556	102	73-130	0.81	(< 20)
1,1,2,2-Tetrachloroethane	0.725U	544	578	106	544	576	106	70-124	0.37	(< 20)
1,1,2-Trichloroethane	0.363U	544	593	109	544	589	108	78-121	0.62	(< 20)
1,1-Dichloroethane	9.05U	544	541	100	544	539	99	76-125	0.51	(< 20)
1,1-Dichloroethene	9.05U	544	542	100	544	539	99	70-131	0.64	(< 20)
1,1-Dichloropropene	9.05U	544	554	102	544	550	101	76-125	0.81	(< 20)
1,2,3-Trichlorobenzene	36.3U	544	596	110	544	612	112	66-130	2.60	(< 20)
1,2,3-Trichloropropane	0.725U	544	580	107	544	588	108	73-125	1.40	(< 20)
1,2,4-Trichlorobenzene	9.05U	544	574	105	544	592	109	67-129	3.20	(< 20)
1,2,4-Trimethylbenzene	36.3U	544	580	106	544	582	107	75-123	0.49	(< 20)
1,2-Dibromo-3-chloropropane	36.3U	544	603	111	544	602	111	61-132	0.19	(< 20)
1,2-Dibromoethane	0.545U	544	590	108	544	589	108	78-122	0.15	(< 20)
1,2-Dichlorobenzene	9.05U	544	563	103	544	569	104	78-121	1.10	(< 20)
1,2-Dichloroethane	0.725U	544	539	99	544	531	98	73-128	1.70	(< 20)
1,2-Dichloropropane	3.63U	544	559	103	544	554	102	76-123	0.80	(< 20)
1,3,5-Trimethylbenzene	9.05U	544	591	109	544	596	109	73-124	0.87	(< 20)
1,3-Dichlorobenzene	9.05U	544	567	104	544	571	105	77-121	0.82	(< 20)
1,3-Dichloropropane	3.63U	544	567	104	544	570	105	77-121	0.56	(< 20)
1,4-Dichlorobenzene	9.05U	544	575	106	544	581	107	75-120	0.91	(< 20)
2,2-Dichloropropane	9.05U	544	561	103	544	554	102	67-133	1.30	(< 20)
2-Butanone (MEK)	90.5U	1630	1680	103	1630	1680	103	51-148	0.31	(< 20)
2-Chlorotoluene	9.05U	544	581	107	544	582	107	75-122	0.24	(< 20)
2-Hexanone	43.5U	1630	1740	107	1630	1740	106	53-145	0.26	(< 20)
4-Chlorotoluene	7.25U	544	584	107	544	585	108	72-124	0.12	(< 20)
4-Isopropyltoluene	29.1U	544	583	107	544	596	110	73-127	2.30	(< 20)
4-Methyl-2-pentanone (MIBK)	90.5U	1630	1700	104	1630	1670	103	65-135	1.50	(< 20)
Acetone	90.5U	1630	1690	104	1630	1670	103	36-164	1.10	(< 20)
Benzene	4.54U	544	553	102	544	546	100	77-121	1.20	(< 20)
Bromobenzene	9.05U	544	569	105	544	565	104	78-121	0.62	(< 20)
Bromochloromethane	9.05U	544	545	100	544	538	99	78-125	1.30	(< 20)
Bromodichloromethane	0.725U	544	600	110	544	591	109	75-127	1.50	(< 20)
Bromoform	9.05U	544	571	105	544	566	104	67-132	0.80	(< 20)
Bromomethane	7.25U	544	492	90	544	496	91	53-143	0.94	(< 20)
Carbon disulfide	36.3U	816	897	110	816	889	109	63-132	0.81	(< 20)
Carbon tetrachloride	4.54U	544	580	107	544	575	106	70-135	0.84	(< 20)
Chlorobenzene	9.05U	544	557	102	544	552	101	79-120	0.88	(< 20)

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Matrix Spike Summary

Original Sample ID: 1691149
MS Sample ID: 1691150 MS
MSD Sample ID: 1691151 MSD

Analysis Date: 10/12/2022 13:46
Analysis Date: 10/12/2022 12:20
Analysis Date: 10/12/2022 12:37
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1226138001, 1226138002, 1226138003, 1226138006, 1226138009

Results by **SW8260D**

		Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloroethane	72.5U	544	535	98	544	519	95	59-139	2.90	(< 20)
Chloroform	2.17U	544	546	100	544	542	100	78-123	0.76	(< 20)
Chloromethane	9.05U	544	487	90	544	484	89	50-136	0.61	(< 20)
cis-1,2-Dichloroethene	9.05U	544	549	101	544	528	97	77-123	4.10	(< 20)
cis-1,3-Dichloropropene	4.54U	544	589	108	544	582	107	74-126	1.20	(< 20)
Dibromochloromethane	1.81U	544	558	102	544	551	101	74-126	1.20	(< 20)
Dibromomethane	9.05U	544	563	103	544	554	102	78-125	1.50	(< 20)
Dichlorodifluoromethane	36.3U	544	511	94	544	506	93	29-149	0.88	(< 20)
Ethylbenzene	9.05U	544	557	102	544	557	102	76-122	0.00	(< 20)
Freon-113	36.3U	816	867	106	816	860	105	66-136	0.82	(< 20)
Hexachlorobutadiene	7.25U	544	561	103	544	629	115	61-135	11.40	(< 20)
Isopropylbenzene (Cumene)	9.05U	544	569	105	544	566	104	68-134	0.42	(< 20)
Methylene chloride	36.3U	544	545	100	544	539	99	70-128	1.10	(< 20)
Methyl-t-butyl ether	36.3U	816	876	107	816	833	102	73-125	5.10	(< 20)
Naphthalene	9.05U	544	598	110	544	614	113	62-129	2.60	(< 20)
n-Butylbenzene	9.05U	544	597	110	544	608	112	70-128	1.70	(< 20)
n-Propylbenzene	9.05U	544	583	107	544	580	107	73-125	0.56	(< 20)
o-Xylene	9.05U	544	551	101	544	551	101	77-123	0.09	(< 20)
P & M -Xylene	18.1U	1090	1120	103	1090	1110	102	77-124	0.90	(< 20)
sec-Butylbenzene	9.05U	544	583	107	544	588	108	73-126	0.97	(< 20)
Styrene	9.05U	544	575	106	544	575	106	76-124	0.12	(< 20)
tert-Butylbenzene	9.05U	544	584	107	544	583	107	73-125	0.17	(< 20)
Tetrachloroethene	4.54U	544	571	105	544	558	102	73-128	2.30	(< 20)
Toluene	9.05U	544	500	92	544	500	92	77-121	0.06	(< 20)
trans-1,2-Dichloroethene	9.05U	544	553	102	544	558	102	74-125	0.80	(< 20)
trans-1,3-Dichloropropene	4.54U	544	539	99	544	538	99	71-130	0.12	(< 20)
Trichloroethene	3.63U	544	550	101	544	544	100	77-123	1.10	(< 20)
Trichlorofluoromethane	18.1U	544	616	113	544	569	105	62-140	7.80	(< 20)
Vinyl acetate	36.3U	544	568	104	544	562	103	50-151	1.00	(< 20)
Vinyl chloride	0.290U	544	538	99	544	531	98	56-135	1.30	(< 20)
Xylenes (total)	27.2U	1630	1670	102	1630	1660	102	78-124	0.57	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		544	535	98	544	525	96	71-136	1.90	
4-Bromofluorobenzene (surr)		907	631	70	907	627	69	55-151	0.70	
Toluene-d8 (surr)		544	543	100	544	544	100	85-116	0.20	

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Matrix Spike Summary

Original Sample ID: 1691149
MS Sample ID: 1691150 MS
MSD Sample ID: 1691151 MSD

Analysis Date:
Analysis Date: 10/12/2022 12:20
Analysis Date: 10/12/2022 12:37
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1226138001, 1226138002, 1226138003, 1226138006, 1226138009

Results by **SW8260D**

		Matrix Spike (%)			Spike Duplicate (%)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL

Batch Information

Analytical Batch: VMS22058
Analytical Method: SW8260D
Instrument: VQA 7890/5975 GC/MS
Analyst: S.S
Analytical Date/Time: 10/12/2022 12:20:00PM

Prep Batch: VXX39315
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 10/12/2022 6:00:00AM
Prep Initial Wt./Vol.: 68.89g
Prep Extract Vol: 25.00mL

Print Date: 10/31/2022 2:58:28PM

Method Blank

Blank ID: MB for HBN 1845958 [VXX/39318]
Blank Lab ID: 1691254

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138002, 1226138009

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	1.29J	2.50	0.750	mg/kg
Surrogates				
4-Bromofluorobenzene (surr)	99.3	50-150		%

Batch Information

Analytical Batch: VFC16291
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: PHK
Analytical Date/Time: 10/12/2022 3:43:00PM

Prep Batch: VXX39318
Prep Method: SW5035A
Prep Date/Time: 10/12/2022 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [VXX39318]
Blank Spike Lab ID: 1691257
Date Analyzed: 10/12/2022 15:06

Spike Duplicate ID: LCSD for HBN 1226138 [VXX39318]
Spike Duplicate Lab ID: 1691258
Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138002, 1226138009

Results by **AK101**

	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	12.5	12.3	99	12.5	12.9	103	(60-120)	4.60	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25		99	1.25		102	(50-150)	3.00	

Batch Information

Analytical Batch: **VFC16291**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **PHK**

Prep Batch: **VXX39318**
Prep Method: **SW5035A**
Prep Date/Time: **10/12/2022 06:00**
Spike Init Wt./Vol.: 1.25 mg/kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: 1.25 mg/kg Extract Vol: 25 mL

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Method Blank

Blank ID: MB for HBN 1845959 [VXX/39319]
Blank Lab ID: 1691262

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138001, 1226138003, 1226138004, 1226138005, 1226138006, 1226138007, 1226138008

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	1.44J	2.50	0.750	mg/kg
Surrogates				
4-Bromofluorobenzene (surr)	96.7	50-150		%

Batch Information

Analytical Batch: VFC16291
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: PHK
Analytical Date/Time: 10/13/2022 2:29:00AM

Prep Batch: VXX39319
Prep Method: SW5035A
Prep Date/Time: 10/12/2022 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [VXX39319]
Blank Spike Lab ID: 1691263
Date Analyzed: 10/13/2022 01:52

Spike Duplicate ID: LCSD for HBN 1226138 [VXX39319]
Spike Duplicate Lab ID: 1691264
Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138001, 1226138003, 1226138004, 1226138005, 1226138006, 1226138007, 1226138008

Results by **AK101**

	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	12.5	13.2	106	12.5	13.0	104	(60-120)	1.80	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25		102	1.25		101	(50-150)	1.20	

Batch Information

Analytical Batch: **VFC16291**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **PHK**

Prep Batch: **VXX39319**
Prep Method: **SW5035A**
Prep Date/Time: **10/12/2022 06:00**
Spike Init Wt./Vol.: 1.25 mg/kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: 1.25 mg/kg Extract Vol: 25 mL

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Method Blank

Blank ID: MB for HBN 1846031 [VXX/39328]
Blank Lab ID: 1691501

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138004, 1226138005, 1226138007, 1226138008

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	10.0U	20.0	6.20	ug/kg
1,1,1-Trichloroethane	12.5U	25.0	7.80	ug/kg
1,1,2,2-Tetrachloroethane	1.00U	2.00	0.620	ug/kg
1,1,2-Trichloroethane	0.500U	1.00	0.500	ug/kg
1,1-Dichloroethane	12.5U	25.0	7.80	ug/kg
1,1-Dichloroethene	12.5U	25.0	7.80	ug/kg
1,1-Dichloropropene	12.5U	25.0	7.80	ug/kg
1,2,3-Trichlorobenzene	50.0U	100	30.0	ug/kg
1,2,3-Trichloropropane	1.00U	2.00	0.620	ug/kg
1,2,4-Trichlorobenzene	12.5U	25.0	7.80	ug/kg
1,2,4-Trimethylbenzene	50.0U	100	30.0	ug/kg
1,2-Dibromo-3-chloropropane	50.0U	100	31.0	ug/kg
1,2-Dibromoethane	0.750U	1.50	0.750	ug/kg
1,2-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
1,2-Dichloroethane	1.00U	2.00	0.700	ug/kg
1,2-Dichloropropane	5.00U	10.0	5.00	ug/kg
1,3,5-Trimethylbenzene	12.5U	25.0	7.80	ug/kg
1,3-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
1,3-Dichloropropane	5.00U	10.0	3.10	ug/kg
1,4-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
2,2-Dichloropropane	12.5U	25.0	7.80	ug/kg
2-Butanone (MEK)	125U	250	78.0	ug/kg
2-Chlorotoluene	12.5U	25.0	7.80	ug/kg
2-Hexanone	60.0U	120	60.0	ug/kg
4-Chlorotoluene	10.0U	20.0	10.0	ug/kg
4-Isopropyltoluene	40.0U	80.0	40.0	ug/kg
4-Methyl-2-pentanone (MIBK)	125U	250	78.0	ug/kg
Acetone	125U	250	110	ug/kg
Benzene	6.25U	12.5	3.90	ug/kg
Bromobenzene	12.5U	25.0	7.80	ug/kg
Bromochloromethane	12.5U	25.0	7.80	ug/kg
Bromodichloromethane	1.00U	2.00	0.620	ug/kg
Bromoform	12.5U	25.0	7.80	ug/kg
Bromomethane	10.0U	20.0	8.00	ug/kg
Carbon disulfide	50.0U	100	31.0	ug/kg
Carbon tetrachloride	6.25U	12.5	3.90	ug/kg
Chlorobenzene	12.5U	25.0	7.80	ug/kg
Chloroethane	100U	200	62.0	ug/kg

Method Blank

Blank ID: MB for HBN 1846031 [VXX/39328]
Blank Lab ID: 1691501

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138004, 1226138005, 1226138007, 1226138008

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units
Chloroform	3.00U	6.00	3.00	ug/kg
Chloromethane	12.5U	25.0	7.80	ug/kg
cis-1,2-Dichloroethene	12.5U	25.0	7.80	ug/kg
cis-1,3-Dichloropropene	6.25U	12.5	3.90	ug/kg
Dibromochloromethane	2.50U	5.00	1.50	ug/kg
Dibromomethane	12.5U	25.0	7.80	ug/kg
Dichlorodifluoromethane	50.0U	100	30.0	ug/kg
Ethylbenzene	12.5U	25.0	7.80	ug/kg
Freon-113	50.0U	100	31.0	ug/kg
Hexachlorobutadiene	10.0U	20.0	6.20	ug/kg
Isopropylbenzene (Cumene)	12.5U	25.0	7.80	ug/kg
Methylene chloride	50.0U	100	31.0	ug/kg
Methyl-t-butyl ether	50.0U	100	31.0	ug/kg
Naphthalene	12.5U	25.0	7.80	ug/kg
n-Butylbenzene	12.5U	25.0	7.80	ug/kg
n-Propylbenzene	12.5U	25.0	7.80	ug/kg
o-Xylene	12.5U	25.0	7.80	ug/kg
P & M -Xylene	25.0U	50.0	15.0	ug/kg
sec-Butylbenzene	12.5U	25.0	7.80	ug/kg
Styrene	12.5U	25.0	7.80	ug/kg
tert-Butylbenzene	12.5U	25.0	7.80	ug/kg
Tetrachloroethene	6.25U	12.5	3.90	ug/kg
Toluene	12.5U	25.0	7.80	ug/kg
trans-1,2-Dichloroethene	12.5U	25.0	7.80	ug/kg
trans-1,3-Dichloropropene	6.25U	12.5	3.90	ug/kg
Trichloroethene	5.00U	10.0	3.20	ug/kg
Trichlorofluoromethane	25.0U	50.0	15.0	ug/kg
Vinyl acetate	50.0U	100	31.0	ug/kg
Vinyl chloride	0.400U	0.800	0.250	ug/kg
Xylenes (total)	37.5U	75.0	22.8	ug/kg
Surrogates				
1,2-Dichloroethane-D4 (surr)	102	71-136		%
4-Bromofluorobenzene (surr)	107	55-151		%
Toluene-d8 (surr)	100	85-116		%

Method Blank

Blank ID: MB for HBN 1846031 [VXX/39328]
Blank Lab ID: 1691501

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138004, 1226138005, 1226138007, 1226138008

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS22063
Analytical Method: SW8260D
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: S.S
Analytical Date/Time: 10/13/2022 11:42:00AM

Prep Batch: VXX39328
Prep Method: SW5035A
Prep Date/Time: 10/13/2022 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [VXX39328]
Blank Spike Lab ID: 1691502
Date Analyzed: 10/13/2022 11:58

Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138004, 1226138005, 1226138007, 1226138008

Results by **SW8260D**

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
1,1,1,2-Tetrachloroethane	750	809	108	(78-125)
1,1,1-Trichloroethane	750	757	101	(73-130)
1,1,2,2-Tetrachloroethane	750	818	109	(70-124)
1,1,2-Trichloroethane	750	778	104	(78-121)
1,1-Dichloroethane	750	719	96	(76-125)
1,1-Dichloroethene	750	758	101	(70-131)
1,1-Dichloropropene	750	742	99	(76-125)
1,2,3-Trichlorobenzene	750	961	128	(66-130)
1,2,3-Trichloropropane	750	829	111	(73-125)
1,2,4-Trichlorobenzene	750	924	123	(67-129)
1,2,4-Trimethylbenzene	750	755	101	(75-123)
1,2-Dibromo-3-chloropropane	750	934	124	(61-132)
1,2-Dibromoethane	750	823	110	(78-122)
1,2-Dichlorobenzene	750	840	112	(78-121)
1,2-Dichloroethane	750	733	98	(73-128)
1,2-Dichloropropane	750	765	102	(76-123)
1,3,5-Trimethylbenzene	750	781	104	(73-124)
1,3-Dichlorobenzene	750	764	102	(77-121)
1,3-Dichloropropane	750	785	105	(77-121)
1,4-Dichlorobenzene	750	748	100	(75-120)
2,2-Dichloropropane	750	753	100	(67-133)
2-Butanone (MEK)	2250	2270	101	(51-148)
2-Chlorotoluene	750	758	101	(75-122)
2-Hexanone	2250	2450	109	(53-145)
4-Chlorotoluene	750	795	106	(72-124)
4-Isopropyltoluene	750	742	99	(73-127)
4-Methyl-2-pentanone (MIBK)	2250	2450	109	(65-135)
Acetone	2250	2340	104	(36-164)
Benzene	750	750	100	(77-121)
Bromobenzene	750	817	109	(78-121)
Bromochloromethane	750	766	102	(78-125)
Bromodichloromethane	750	814	108	(75-127)
Bromoform	750	834	111	(67-132)
Bromomethane	750	698	93	(53-143)

Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [VXX39328]
Blank Spike Lab ID: 1691502
Date Analyzed: 10/13/2022 11:58

Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138004, 1226138005, 1226138007, 1226138008

Results by **SW8260D**

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
Carbon disulfide	1130	1230	109	(63-132)
Carbon tetrachloride	750	782	104	(70-135)
Chlorobenzene	750	768	102	(79-120)
Chloroethane	750	681	91	(59-139)
Chloroform	750	739	99	(78-123)
Chloromethane	750	645	86	(50-136)
cis-1,2-Dichloroethene	750	755	101	(77-123)
cis-1,3-Dichloropropene	750	848	113	(74-126)
Dibromochloromethane	750	898	120	(74-126)
Dibromomethane	750	806	108	(78-125)
Dichlorodifluoromethane	750	742	99	(29-149)
Ethylbenzene	750	752	100	(76-122)
Freon-113	1130	1110	99	(66-136)
Hexachlorobutadiene	750	695	93	(61-135)
Isopropylbenzene (Cumene)	750	750	100	(68-134)
Methylene chloride	750	746	100	(70-128)
Methyl-t-butyl ether	1130	1150	103	(73-125)
Naphthalene	750	897	120	(62-129)
n-Butylbenzene	750	756	101	(70-128)
n-Propylbenzene	750	768	102	(73-125)
o-Xylene	750	761	102	(77-123)
P & M -Xylene	1500	1490	99	(77-124)
sec-Butylbenzene	750	743	99	(73-126)
Styrene	750	795	106	(76-124)
tert-Butylbenzene	750	777	104	(73-125)
Tetrachloroethene	750	757	101	(73-128)
Toluene	750	740	99	(77-121)
trans-1,2-Dichloroethene	750	738	98	(74-125)
trans-1,3-Dichloropropene	750	858	114	(71-130)
Trichloroethene	750	766	102	(77-123)
Trichlorofluoromethane	750	742	99	(62-140)
Vinyl acetate	750	786	105	(50-151)
Vinyl chloride	750	696	93	(56-135)
Xylenes (total)	2250	2250	100	(78-124)

Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [VXX39328]
Blank Spike Lab ID: 1691502
Date Analyzed: 10/13/2022 11:58

Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138004, 1226138005, 1226138007, 1226138008

Results by **SW8260D**

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
Surrogates				
1,2-Dichloroethane-D4 (surr)	750		98	(71-136)
4-Bromofluorobenzene (surr)	750		109	(55-151)
Toluene-d8 (surr)	750		102	(85-116)

Batch Information

Analytical Batch: **VMS22063**
Analytical Method: **SW8260D**
Instrument: **VRA Agilent GC/MS 7890B/5977A**
Analyst: **S.S**

Prep Batch: **VXX39328**
Prep Method: **SW5035A**
Prep Date/Time: **10/13/2022 06:00**
Spike Init Wt./Vol.: 750 ug/kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 10/31/2022 2:58:43PM

Matrix Spike Summary

Original Sample ID: 1691506
MS Sample ID: 1691507 MS
MSD Sample ID: 1691508 MSD

Analysis Date: 10/13/2022 15:32
Analysis Date: 10/13/2022 12:53
Analysis Date: 10/13/2022 13:09
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1226138004, 1226138005, 1226138007, 1226138008

Results by **SW8260D**

		Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	24.1U	1800	1960	109	1800	1980	110	78-125	0.66	(< 20)
1,1,1-Trichloroethane	30.1U	1800	1850	103	1800	1860	103	73-130	0.05	(< 20)
1,1,2,2-Tetrachloroethane	2.40U	1800	1910	106	1800	1950	108	70-124	1.90	(< 20)
1,1,2-Trichloroethane	1.21U	1800	1850	103	1800	1890	105	78-121	2.20	(< 20)
1,1-Dichloroethane	30.1U	1800	1760	98	1800	1760	98	76-125	0.09	(< 20)
1,1-Dichloroethene	30.1U	1800	1850	103	1800	1830	102	70-131	0.79	(< 20)
1,1-Dichloropropene	30.1U	1800	1830	101	1800	1840	102	76-125	0.56	(< 20)
1,2,3-Trichlorobenzene	121U	1800	2100	116	1800	2520	140 *	66-130	18.10	(< 20)
1,2,3-Trichloropropane	2.40U	1800	1960	109	1800	1950	108	73-125	0.19	(< 20)
1,2,4-Trichlorobenzene	30.1U	1800	2080	115	1800	2260	125	67-129	8.50	(< 20)
1,2,4-Trimethylbenzene	121U	1800	1840	102	1800	1820	101	75-123	1.00	(< 20)
1,2-Dibromo-3-chloropropane	121U	1800	2160	120	1800	2210	123	61-132	2.50	(< 20)
1,2-Dibromoethane	1.80U	1800	1950	108	1800	2000	111	78-122	2.70	(< 20)
1,2-Dichlorobenzene	30.1U	1800	2020	112	1800	2030	112	78-121	0.41	(< 20)
1,2-Dichloroethane	2.40U	1800	1760	98	1800	1780	99	73-128	0.98	(< 20)
1,2-Dichloropropane	12.1U	1800	1860	103	1800	1870	104	76-123	0.58	(< 20)
1,3,5-Trimethylbenzene	30.1U	1800	1910	106	1800	1890	105	73-124	1.10	(< 20)
1,3-Dichlorobenzene	30.1U	1800	1850	103	1800	1850	103	77-121	0.25	(< 20)
1,3-Dichloropropane	12.1U	1800	1870	104	1800	1920	106	77-121	2.50	(< 20)
1,4-Dichlorobenzene	30.1U	1800	1820	101	1800	1840	102	75-120	0.87	(< 20)
2,2-Dichloropropane	30.1U	1800	1980	110	1800	1980	110	67-133	0.07	(< 20)
2-Butanone (MEK)	301U	5410	5220	97	5410	5390	100	51-148	3.10	(< 20)
2-Chlorotoluene	30.1U	1800	1850	103	1800	1840	102	75-122	0.76	(< 20)
2-Hexanone	145U	5410	5730	106	5410	5920	110	53-145	3.20	(< 20)
4-Chlorotoluene	24.1U	1800	1950	108	1800	1940	108	72-124	0.71	(< 20)
4-Isopropyltoluene	96.0U	1800	1790	100	1800	1810	101	73-127	1.00	(< 20)
4-Methyl-2-pentanone (MIBK)	301U	5410	5750	106	5410	5900	109	65-135	2.60	(< 20)
Acetone	301U	5410	5230	97	5410	5490	101	36-164	4.80	(< 20)
Benzene	15.1U	1800	1830	101	1800	1840	102	77-121	0.48	(< 20)
Bromobenzene	30.1U	1800	1980	110	1800	1950	108	78-121	1.10	(< 20)
Bromochloromethane	30.1U	1800	1830	102	1800	1840	102	78-125	0.48	(< 20)
Bromodichloromethane	2.40U	1800	1970	110	1800	1980	110	75-127	0.39	(< 20)
Bromoform	30.1U	1800	1970	109	1800	2030	113	67-132	3.00	(< 20)
Bromomethane	24.1U	1800	1750	97	1800	1730	96	53-143	1.50	(< 20)
Carbon disulfide	121U	2700	2980	110	2700	2970	110	63-132	0.40	(< 20)
Carbon tetrachloride	15.1U	1800	1940	107	1800	1950	108	70-135	0.70	(< 20)
Chlorobenzene	30.1U	1800	1880	104	1800	1900	105	79-120	1.10	(< 20)

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Matrix Spike Summary

Original Sample ID: 1691506
MS Sample ID: 1691507 MS
MSD Sample ID: 1691508 MSD

Analysis Date: 10/13/2022 15:32
Analysis Date: 10/13/2022 12:53
Analysis Date: 10/13/2022 13:09
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1226138004, 1226138005, 1226138007, 1226138008

Results by **SW8260D**

		Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloroethane	241U	1800	1700	94	1800	1330	74	59-139	24.50 *	(< 20)
Chloroform	7.20U	1800	1800	100	1800	1810	101	78-123	0.80	(< 20)
Chloromethane	30.1U	1800	1590	88	1800	1510	84	50-136	5.10	(< 20)
cis-1,2-Dichloroethene	30.1U	1800	1850	102	1800	1870	104	77-123	1.50	(< 20)
cis-1,3-Dichloropropene	15.1U	1800	2080	115	1800	2090	116	74-126	0.67	(< 20)
Dibromochloromethane	6.00U	1800	2170	120	1800	2200	122	74-126	1.80	(< 20)
Dibromomethane	30.1U	1800	1910	106	1800	1930	107	78-125	1.20	(< 20)
Dichlorodifluoromethane	121U	1800	1520	85	1800	1400	78	29-149	8.20	(< 20)
Ethylbenzene	30.1U	1800	1810	101	1800	1870	104	76-122	2.90	(< 20)
Freon-113	121U	2700	2770	102	2700	2760	102	66-136	0.10	(< 20)
Hexachlorobutadiene	24.1U	1800	1740	97	1800	1840	102	61-135	5.80	(< 20)
Isopropylbenzene (Cumene)	30.1U	1800	1830	101	1800	1820	101	68-134	0.50	(< 20)
Methylene chloride	121U	1800	1810	101	1800	1840	102	70-128	1.20	(< 20)
Methyl-t-butyl ether	121U	2700	2730	101	2700	2780	103	73-125	1.70	(< 20)
Naphthalene	30.1U	1800	2000	111	1800	2230	124	62-129	11.00	(< 20)
n-Butylbenzene	30.1U	1800	1880	104	1800	1900	106	70-128	1.50	(< 20)
n-Propylbenzene	30.1U	1800	1890	105	1800	1890	105	73-125	0.03	(< 20)
o-Xylene	30.1U	1800	1860	103	1800	1890	105	77-123	1.80	(< 20)
P & M -Xylene	60.0U	3600	3650	101	3600	3670	102	77-124	0.58	(< 20)
sec-Butylbenzene	30.1U	1800	1820	101	1800	1820	101	73-126	0.43	(< 20)
Styrene	30.1U	1800	1960	109	1800	1950	108	76-124	0.10	(< 20)
tert-Butylbenzene	30.1U	1800	1870	104	1800	1870	104	73-125	0.05	(< 20)
Tetrachloroethene	15.1U	1800	1890	105	1800	1820	101	73-128	3.90	(< 20)
Toluene	30.1U	1800	1780	99	1800	1830	101	77-121	2.60	(< 20)
trans-1,2-Dichloroethene	30.1U	1800	1950	108	1800	1940	107	74-125	0.60	(< 20)
trans-1,3-Dichloropropene	15.1U	1800	2090	116	1800	2120	118	71-130	1.50	(< 20)
Trichloroethene	12.1U	1800	1880	104	1800	1900	105	77-123	0.82	(< 20)
Trichlorofluoromethane	60.0U	1800	1810	100	1800	1730	96	62-140	4.50	(< 20)
Vinyl acetate	121U	1800	1870	104	1800	1900	105	50-151	1.70	(< 20)
Vinyl chloride	0.960U	1800	1540	86	1800	1670	93	56-135	7.90	(< 20)
Xylenes (total)	90.0U	5410	5510	102	5410	5570	103	78-124	1.00	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		1800	1770	98	1800	1770	99	71-136	0.52	
4-Bromofluorobenzene (surr)		2350	2410	103	2350	2400	102	55-151	0.33	
Toluene-d8 (surr)		1800	1820	101	1800	1830	102	85-116	0.78	

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Matrix Spike Summary

Original Sample ID: 1691506
MS Sample ID: 1691507 MS
MSD Sample ID: 1691508 MSD

Analysis Date:
Analysis Date: 10/13/2022 12:53
Analysis Date: 10/13/2022 13:09
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1226138004, 1226138005, 1226138007, 1226138008

Results by **SW8260D**

		Matrix Spike (%)			Spike Duplicate (%)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL

Batch Information

Analytical Batch: VMS22063
Analytical Method: SW8260D
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: S.S
Analytical Date/Time: 10/13/2022 12:53:00PM

Prep Batch: VXX39328
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 10/13/2022 6:00:00AM
Prep Initial Wt./Vol.: 26.63g
Prep Extract Vol: 32.03mL

Print Date: 10/31/2022 2:58:45PM

Method Blank

Blank ID: MB for HBN 1846260 [VXX/39340]
Blank Lab ID: 1691754

Matrix: Solid/Soil (Wet Weight)

QC for Samples:
1226138001, 1226138002, 1226138003, 1226138005, 1226138006

Results by **SW8260D-SIM**

Parameter	Results	LOQ/CL	DL	Units
1,2-Dibromoethane	0.0625U	0.125	0.0310	ug/kg
Surrogates				
4-Bromofluorobenzene (surr)	97.3	55-151		%
Toluene-d8 (surr)	99.9	85-116		%

Batch Information

Analytical Batch: VMS22067
Analytical Method: SW8260D-SIM
Instrument: VSA Agilent GC/MS 7890B/5977A
Analyst: NRB
Analytical Date/Time: 10/11/2022 10:24:00AM

Prep Batch: VXX39340
Prep Method: SW5035A
Prep Date/Time: 10/11/2022 12:30:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [VXX39340]
Blank Spike Lab ID: 1691755
Date Analyzed: 10/11/2022 10:39

Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1226138001, 1226138002, 1226138003, 1226138005, 1226138006

Results by **SW8260D-SIM**

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
1,2-Dibromoethane	5	5.08	102	(78-122)
Surrogates				
4-Bromofluorobenzene (surr)	750		100	(55-151)
Toluene-d8 (surr)	750		99	(85-116)

Batch Information

Analytical Batch: **VMS22067**
Analytical Method: **SW8260D-SIM**
Instrument: **VSA Agilent GC/MS 7890B/5977A**
Analyst: **NRB**

Prep Batch: **VXX39340**
Prep Method: **SW5035A**
Prep Date/Time: **10/11/2022 00:30**
Spike Init Wt./Vol.: 5 ug/kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: Extract Vol:

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Matrix Spike Summary

Original Sample ID: 1691750
MS Sample ID: 1691757 MS
MSD Sample ID: 1691758 MSD

Analysis Date: 10/11/2022 11:55
Analysis Date: 10/11/2022 10:54
Analysis Date: 10/11/2022 11:09
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1226138001, 1226138002, 1226138003, 1226138005, 1226138006

Results by **SW8260D-SIM**

		Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2-Dibromoethane	0.0535U	4.30	4.32	100	4.30	4.46	104	78-122	3.10	(< 20)
Surrogates										
4-Bromofluorobenzene (surr)		717	796	111	717	804	112	55-151	0.96	
Toluene-d8 (surr)		642	648	101	642	649	101	85-116	0.20	

Batch Information

Analytical Batch: VMS22067
Analytical Method: SW8260D-SIM
Instrument: VSA Agilent GC/MS 7890B/5977A
Analyst: NRB
Analytical Date/Time: 10/11/2022 10:54:00AM

Prep Batch: VXX39340
Prep Method: 8260SIM (S) SW5035 Prep
Prep Date/Time: 10/11/2022 12:30:00AM
Prep Initial Wt./Vol.: 87.17g
Prep Extract Vol: 37.44mL

Print Date: 10/31/2022 2:58:50PM

Method Blank

Blank ID: MB for HBN 1846263 [VXX/39341]
Blank Lab ID: 1691767

Matrix: Solid/Soil (Wet Weight)

QC for Samples:
1226138004, 1226138007, 1226138008, 1226138009

Results by **SW8260D-SIM**

Parameter	Results	LOQ/CL	DL	Units
1,2-Dibromoethane	0.0625U	0.125	0.0310	ug/kg
Surrogates				
4-Bromofluorobenzene (surr)	96.2	55-151		%
Toluene-d8 (surr)	101	85-116		%

Batch Information

Analytical Batch: VMS22068
Analytical Method: SW8260D-SIM
Instrument: VSA Agilent GC/MS 7890B/5977A
Analyst: NRB
Analytical Date/Time: 10/11/2022 5:21:00PM

Prep Batch: VXX39341
Prep Method: SW5035A
Prep Date/Time: 10/11/2022 12:30:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [VXX39341]
Blank Spike Lab ID: 1691768
Date Analyzed: 10/11/2022 17:37

Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1226138004, 1226138007, 1226138008, 1226138009

Results by **SW8260D-SIM**

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
1,2-Dibromoethane	5	5.01	100	(78-122)
Surrogates				
4-Bromofluorobenzene (surr)	750		94	(55-151)
Toluene-d8 (surr)	750		100	(85-116)

Batch Information

Analytical Batch: **VMS22068**
Analytical Method: **SW8260D-SIM**
Instrument: **VSA Agilent GC/MS 7890B/5977A**
Analyst: **NRB**

Prep Batch: **VXX39341**
Prep Method: **SW5035A**
Prep Date/Time: **10/11/2022 00:30**
Spike Init Wt./Vol.: 5 ug/kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: Extract Vol:

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Matrix Spike Summary

Original Sample ID: 1691766
MS Sample ID: 1691770 MS
MSD Sample ID: 1691771 MSD

Analysis Date: 10/11/2022 19:09
Analysis Date: 10/11/2022 17:52
Analysis Date: 10/11/2022 18:07
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1226138004, 1226138007, 1226138008, 1226138009

Results by **SW8260D-SIM**

		Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2-Dibromoethane	0.0620U	4.96	5.29	107	4.96	5.17	104	78-122	2.40	(< 20)
Surrogates										
4-Bromofluorobenzene (surr)		873	865	99	873	860	99	55-151	0.57	
Toluene-d8 (surr)		747	755	101	747	748	100	85-116	0.89	

Batch Information

Analytical Batch: VMS22068
Analytical Method: SW8260D-SIM
Instrument: VSA Agilent GC/MS 7890B/5977A
Analyst: NRB
Analytical Date/Time: 10/11/2022 5:52:00PM

Prep Batch: VXX39341
Prep Method: 8260SIM (S) SW5035 Prep
Prep Date/Time: 10/11/2022 12:30:00AM
Prep Initial Wt./Vol.: 71.62g
Prep Extract Vol: 35.58mL

Print Date: 10/31/2022 2:58:55PM

Method Blank

Blank ID: MB for HBN 1846342 [VXX/39345]
Blank Lab ID: 1691911

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138007

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units
1,2,4-Trimethylbenzene	50.0U	100	30.0	ug/kg
Surrogates				
1,2-Dichloroethane-D4 (surr)	103	71-136		%
4-Bromofluorobenzene (surr)	114	55-151		%
Toluene-d8 (surr)	101	85-116		%

Batch Information

Analytical Batch: VMS22072
Analytical Method: SW8260D
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: S.S
Analytical Date/Time: 10/14/2022 12:26:00PM

Prep Batch: VXX39345
Prep Method: SW5035A
Prep Date/Time: 10/14/2022 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [VXX39345]
Blank Spike Lab ID: 1691912
Date Analyzed: 10/14/2022 12:42

Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138007

Results by **SW8260D**

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
1,2,4-Trimethylbenzene	750	731	97	(75-123)
Surrogates				
1,2-Dichloroethane-D4 (surr)	750		100	(71-136)
4-Bromofluorobenzene (surr)	750		110	(55-151)
Toluene-d8 (surr)	750		101	(85-116)

Batch Information

Analytical Batch: **VMS22072**
Analytical Method: **SW8260D**
Instrument: **VRA Agilent GC/MS 7890B/5977A**
Analyst: **S.S**

Prep Batch: **VXX39345**
Prep Method: **SW5035A**
Prep Date/Time: **10/14/2022 06:00**
Spike Init Wt./Vol.: 750 ug/kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: Extract Vol:

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Matrix Spike Summary

Original Sample ID: 1691913
MS Sample ID: 1691914 MS
MSD Sample ID: 1691915 MSD

Analysis Date: 10/14/2022 17:26
Analysis Date: 10/14/2022 14:15
Analysis Date: 10/14/2022 14:31
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1226138007

Results by **SW8260D**

		Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2,4-Trimethylbenzene	59.5U	893	891	100	893	915	102	75-123	2.60	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		893	887	99	893	879	98	71-136	0.90	
4-Bromofluorobenzene (surr)		900	770	86	900	796	88	55-151	3.30	
Toluene-d8 (surr)		893	915	102	893	920	103	85-116	0.49	

Batch Information

Analytical Batch: VMS22072
Analytical Method: SW8260D
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: S.S
Analytical Date/Time: 10/14/2022 2:15:00PM

Prep Batch: VXX39345
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 10/14/2022 6:00:00AM
Prep Initial Wt./Vol.: 69.41g
Prep Extract Vol: 41.47mL

Print Date: 10/31/2022 2:59:00PM

Method Blank

Blank ID: MB for HBN 1846555 [XXX/47185]
Blank Lab ID: 1692035

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138001, 1226138002, 1226138003, 1226138006

Results by **8270D SIM (PAH)**

Parameter	Results	LOQ/CL	DL	Units
1-Methylnaphthalene	12.5U	25.0	6.25	ug/kg
2-Methylnaphthalene	12.5U	25.0	6.25	ug/kg
Acenaphthene	12.5U	25.0	6.25	ug/kg
Acenaphthylene	12.5U	25.0	6.25	ug/kg
Anthracene	12.5U	25.0	6.25	ug/kg
Benzo(a)Anthracene	12.5U	25.0	6.25	ug/kg
Benzo[a]pyrene	12.5U	25.0	6.25	ug/kg
Benzo[b]Fluoranthene	12.5U	25.0	6.25	ug/kg
Benzo[g,h,i]perylene	12.5U	25.0	6.25	ug/kg
Benzo[k]fluoranthene	12.5U	25.0	6.25	ug/kg
Chrysene	12.5U	25.0	6.25	ug/kg
Dibenzo[a,h]anthracene	12.5U	25.0	6.25	ug/kg
Fluoranthene	12.5U	25.0	6.25	ug/kg
Fluorene	12.5U	25.0	6.25	ug/kg
Indeno[1,2,3-c,d] pyrene	12.5U	25.0	6.25	ug/kg
Naphthalene	10.0U	20.0	5.00	ug/kg
Phenanthrene	12.5U	25.0	6.25	ug/kg
Pyrene	12.5U	25.0	6.25	ug/kg
Surrogates				
2-Methylnaphthalene-d10 (surr)	103	58-103		%
Fluoranthene-d10 (surr)	121*	54-113		%

Batch Information

Analytical Batch: XMS13421
Analytical Method: 8270D SIM (PAH)
Instrument: Agilent 8890 GC/MS US2210A024
Analyst: NGG
Analytical Date/Time: 10/25/2022 11:06:00PM

Prep Batch: XXX47185
Prep Method: SW3550C
Prep Date/Time: 10/18/2022 2:30:13PM
Prep Initial Wt./Vol.: 22.5 g
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [XXX47185]
Blank Spike Lab ID: 1692036
Date Analyzed: 10/25/2022 23:22

Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138001, 1226138002, 1226138003, 1226138006

Results by **8270D SIM (PAH)**

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
1-Methylnaphthalene	111	112	101	(43-111)
2-Methylnaphthalene	111	112	101	(39-114)
Acenaphthene	111	114	103	(44-111)
Acenaphthylene	111	107	96	(39-116)
Anthracene	111	103	93	(50-114)
Benzo(a)Anthracene	111	108	97	(54-122)
Benzo[a]pyrene	111	115	104	(50-125)
Benzo[b]Fluoranthene	111	119	107	(53-128)
Benzo[g,h,i]perylene	111	113	102	(49-127)
Benzo[k]fluoranthene	111	117	105	(56-123)
Chrysene	111	113	101	(57-118)
Dibenzo[a,h]anthracene	111	114	102	(50-129)
Fluoranthene	111	118	106	(55-119)
Fluorene	111	109	98	(47-114)
Indeno[1,2,3-c,d] pyrene	111	114	102	(49-130)
Naphthalene	111	111	100	(38-111)
Phenanthrene	111	104	94	(49-113)
Pyrene	111	118	106	(55-117)
Surrogates				
2-Methylnaphthalene-d10 (surr)	111		98	(58-103)
Fluoranthene-d10 (surr)	111		102	(54-113)

Batch Information

Analytical Batch: **XMS13421**
Analytical Method: **8270D SIM (PAH)**
Instrument: **Agilent 8890 GC/MS US2210A024**
Analyst: **NGG**

Prep Batch: **XXX47185**
Prep Method: **SW3550C**
Prep Date/Time: **10/18/2022 14:30**
Spike Init Wt./Vol.: 111 ug/kg Extract Vol: 5 mL
Dupe Init Wt./Vol.: Extract Vol:

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Matrix Spike Summary

Original Sample ID: 1226202011
MS Sample ID: 1692038 MS
MSD Sample ID: 1692039 MSD

Analysis Date: 10/25/2022 23:38
Analysis Date: 10/25/2022 23:54
Analysis Date: 10/26/2022 0:10
Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138001, 1226138002, 1226138003, 1226138006

Results by **8270D SIM (PAH)**

		Matrix Spike (ug/kg)				Spike Duplicate (ug/kg)					
Parameter	Sample	Spike	Result	Rec (%)		Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1-Methylnaphthalene	11.4J	130	119	82		129	92.9	63	43-111	24.00 *	(< 20)
2-Methylnaphthalene	26.3J	130	140	87		129	109	64	39-114	24.50 *	(< 20)
Acenaphthene	14.6U	130	117	90		129	93.2	72	44-111	22.90 *	(< 20)
Acenaphthylene	14.6U	130	121	93		129	92.0	72	39-116	27.60 *	(< 20)
Anthracene	14.6U	130	105	81		129	80.4	63	50-114	26.90 *	(< 20)
Benzo(a)Anthracene	9.07J	130	135	97		129	109	78	54-122	21.40 *	(< 20)
Benzo[a]pyrene	11.9J	130	112	77		129	116	81	50-125	3.60	(< 20)
Benzo[b]Fluoranthene	26.5J	130	121	73		129	127	78	53-128	4.30	(< 20)
Benzo[g,h,i]perylene	14.6U	130	101	78		129	82.0	64	49-127	21.10 *	(< 20)
Benzo[k]fluoranthene	14.6U	130	108	83		129	113	88	56-123	4.70	(< 20)
Chrysene	16.2J	130	143	98		129	116	78	57-118	21.10 *	(< 20)
Dibenzo[a,h]anthracene	14.6U	130	102	79		129	83.4	65	50-129	20.10 *	(< 20)
Fluoranthene	7.56J	130	112	80		129	112	81	55-119	0.26	(< 20)
Fluorene	14.6U	130	113	87		129	83.0	65	47-114	30.20 *	(< 20)
Indeno[1,2,3-c,d] pyrene	14.6U	130	103	79		129	83.8	65	49-130	20.50 *	(< 20)
Naphthalene	15.1J	130	121	82		129	103	68	38-111	16.40	(< 20)
Phenanthrene	14.6U	130	114	87		129	83.4	65	49-113	30.70 *	(< 20)
Pyrene	55.8	130	146	70		129	157	79	55-117	7.50	(< 20)
Surrogates											
2-Methylnaphthalene-d10 (surr)		130	145	111	*	129	122	95	58-103	16.20	
Fluoranthene-d10 (surr)		130	94.5	73		129	100	78	54-113	5.70	

Batch Information

Analytical Batch: XMS13421
Analytical Method: 8270D SIM (PAH)
Instrument: Agilent 8890 GC/MS US2210A024
Analyst: NGG
Analytical Date/Time: 10/25/2022 11:54:00PM

Prep Batch: XXX47185
Prep Method: Sonication Extr Soil 8270 PAH SIM 5ml
Prep Date/Time: 10/18/2022 2:30:13PM
Prep Initial Wt./Vol.: 22.58g
Prep Extract Vol: 5.00mL

Print Date: 10/31/2022 2:59:05PM

Method Blank

Blank ID: MB for HBN 1846564 [XXX/47188]
Blank Lab ID: 1692072

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138001, 1226138002, 1226138003, 1226138004, 1226138005, 1226138006, 1226138007, 1226138008

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	10.0U	20.0	9.00	mg/kg
Surrogates				
5a Androstane (surr)	91.9	60-120		%

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: MAP
Analytical Date/Time: 10/22/2022 8:48:00PM

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/2022 4:20:59PM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [XXX47188]
Blank Spike Lab ID: 1692073
Date Analyzed: 10/22/2022 20:59

Spike Duplicate ID: LCSD for HBN 1226138 [XXX47188]
Spike Duplicate Lab ID: 1692074
Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138001, 1226138002, 1226138003, 1226138004, 1226138005, 1226138006, 1226138007, 1226138008

Results by **AK102**

	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range Organics	667	658	99	667	654	98	(75-125)	0.55	(< 20)
Surrogates									
5a Androstane (surr)	16.7		102	16.7		102	(60-120)	0.22	

Batch Information

Analytical Batch: **XFC16376**
Analytical Method: **AK102**
Instrument: **Agilent 7890B R**
Analyst: **MAP**

Prep Batch: **XXX47188**
Prep Method: **SW3550C**
Prep Date/Time: **10/18/2022 16:20**
Spike Init Wt./Vol.: 16.7 mg/kg Extract Vol: 5 mL
Dupe Init Wt./Vol.: 16.7 mg/kg Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1846564 [XXX/47188]
Blank Lab ID: 1692072

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138001, 1226138002, 1226138003, 1226138004, 1226138005, 1226138006, 1226138007, 1226138008

Results by **AK103**

Parameter	Results	LOQ/CL	DL	Units
Residual Range Organics	50.0U	100	43.0	mg/kg
Surrogates				
n-Triacontane-d62 (surr)	86	60-120		%

Batch Information

Analytical Batch: XFC16376
Analytical Method: AK103
Instrument: Agilent 7890B R
Analyst: MAP
Analytical Date/Time: 10/22/2022 8:48:00PM

Prep Batch: XXX47188
Prep Method: SW3550C
Prep Date/Time: 10/18/2022 4:20:59PM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [XXX47188]
Blank Spike Lab ID: 1692073
Date Analyzed: 10/22/2022 20:59

Spike Duplicate ID: LCSD for HBN 1226138 [XXX47188]
Spike Duplicate Lab ID: 1692074
Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138001, 1226138002, 1226138003, 1226138004, 1226138005, 1226138006, 1226138007, 1226138008

Results by **AK103**

	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Residual Range Organics	667	598	90	667	586	88	(60-120)	2.00	(< 20)
Surrogates									
n-Triacontane-d62 (surr)	16.7		90	16.7		87	(60-120)	2.50	

Batch Information

Analytical Batch: **XFC16376**
Analytical Method: **AK103**
Instrument: **Agilent 7890B R**
Analyst: **MAP**

Prep Batch: **XXX47188**
Prep Method: **SW3550C**
Prep Date/Time: **10/18/2022 16:20**
Spike Init Wt./Vol.: 16.7 mg/kg Extract Vol: 5 mL
Dupe Init Wt./Vol.: 16.7 mg/kg Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1846661 [XXX/47198]
Blank Lab ID: 1692216

Matrix: Soil/Solid (dry weight)

QC for Samples:
1226138004, 1226138005, 1226138007, 1226138008

Results by **8270D SIM (PAH)**

Parameter	Results	LOQ/CL	DL	Units
1-Methylnaphthalene	12.5U	25.0	6.25	ug/kg
2-Methylnaphthalene	12.5U	25.0	6.25	ug/kg
Acenaphthene	12.5U	25.0	6.25	ug/kg
Acenaphthylene	12.5U	25.0	6.25	ug/kg
Anthracene	12.5U	25.0	6.25	ug/kg
Benzo(a)Anthracene	12.5U	25.0	6.25	ug/kg
Benzo[a]pyrene	12.5U	25.0	6.25	ug/kg
Benzo[b]Fluoranthene	12.5U	25.0	6.25	ug/kg
Benzo[g,h,i]perylene	12.5U	25.0	6.25	ug/kg
Benzo[k]fluoranthene	12.5U	25.0	6.25	ug/kg
Chrysene	12.5U	25.0	6.25	ug/kg
Dibenzo[a,h]anthracene	12.5U	25.0	6.25	ug/kg
Fluoranthene	12.5U	25.0	6.25	ug/kg
Fluorene	12.5U	25.0	6.25	ug/kg
Indeno[1,2,3-c,d] pyrene	12.5U	25.0	6.25	ug/kg
Naphthalene	10.0U	20.0	5.00	ug/kg
Phenanthrene	12.5U	25.0	6.25	ug/kg
Pyrene	12.5U	25.0	6.25	ug/kg
Surrogates				
2-Methylnaphthalene-d10 (surr)	103	58-103		%
Fluoranthene-d10 (surr)	94.3	54-113		%

Batch Information

Analytical Batch: XMS13424
Analytical Method: 8270D SIM (PAH)
Instrument: Agilent 8890 GC/MS US2210A024
Analyst: NGG
Analytical Date/Time: 10/27/2022 10:15:00PM

Prep Batch: XXX47198
Prep Method: SW3550C
Prep Date/Time: 10/19/2022 1:00:32PM
Prep Initial Wt./Vol.: 22.5 g
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1226138 [XXX47198]
Blank Spike Lab ID: 1692217
Date Analyzed: 10/27/2022 22:31

Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138004, 1226138005, 1226138007, 1226138008

Results by **8270D SIM (PAH)**

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
1-Methylnaphthalene	111	115	104	(43-111)
2-Methylnaphthalene	111	117	105	(39-114)
Acenaphthene	111	117	105	(44-111)
Acenaphthylene	111	113	101	(39-116)
Anthracene	111	112	101	(50-114)
Benzo(a)Anthracene	111	112	101	(54-122)
Benzo[a]pyrene	111	119	107	(50-125)
Benzo[b]Fluoranthene	111	125	112	(53-128)
Benzo[g,h,i]perylene	111	117	105	(49-127)
Benzo[k]fluoranthene	111	113	101	(56-123)
Chrysene	111	115	104	(57-118)
Dibenzo[a,h]anthracene	111	119	107	(50-129)
Fluoranthene	111	117	106	(55-119)
Fluorene	111	112	101	(47-114)
Indeno[1,2,3-c,d] pyrene	111	118	106	(49-130)
Naphthalene	111	118	107	(38-111)
Phenanthrene	111	112	100	(49-113)
Pyrene	111	118	106	(55-117)
Surrogates				
2-Methylnaphthalene-d10 (surr)	111		102	(58-103)
Fluoranthene-d10 (surr)	111		99	(54-113)

Batch Information

Analytical Batch: **XMS13424**
Analytical Method: **8270D SIM (PAH)**
Instrument: **Agilent 8890 GC/MS US2210A024**
Analyst: **NGG**

Prep Batch: **XXX47198**
Prep Method: **SW3550C**
Prep Date/Time: **10/19/2022 13:00**
Spike Init Wt./Vol.: 111 ug/kg Extract Vol: 5 mL
Dupe Init Wt./Vol.: Extract Vol:

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

Matrix Spike Summary

Original Sample ID: 1226275004
MS Sample ID: 1692218 MS
MSD Sample ID: 1692219 MSD

Analysis Date: 10/28/2022 1:44
Analysis Date: 10/28/2022 2:00
Analysis Date:
Matrix: Soil/Solid (dry weight)

QC for Samples: 1226138004, 1226138005, 1226138007, 1226138008

Results by **8270D SIM (PAH)**

		Matrix Spike (ug/kg)				Spike Duplicate (ug/kg)					
Parameter	Sample	Spike	Result	Rec (%)		Spike	Result	Rec (%)		CL	RPD (%)	RPD CL
1-Methylnaphthalene	63.5U	114	125J	110						43-111		
2-Methylnaphthalene	63.5U	114	127	113						39-114		
Acenaphthene	63.5U	114	130	115	*					44-111		
Acenaphthylene	63.5U	114	121J	107						39-116		
Anthracene	63.5U	114	125J	110						50-114		
Benzo(a)Anthracene	63.5U	114	117J	103						54-122		
Benzo[a]pyrene	63.5U	114	154	136	*					50-125		
Benzo[b]Fluoranthene	63.5U	114	156	137	*					53-128		
Benzo[g,h,i]perylene	63.5U	114	151	133	*					49-127		
Benzo[k]fluoranthene	63.5U	114	151	134	*					56-123		
Chrysene	63.5U	114	121J	106						57-118		
Dibenzo[a,h]anthracene	63.5U	114	153	135	*					50-129		
Fluoranthene	63.5U	114	152	134	*					55-119		
Fluorene	63.5U	114	123J	109						47-114		
Indeno[1,2,3-c,d] pyrene	63.5U	114	151	133	*					49-130		
Naphthalene	51.0U	114	121	107						38-111		
Phenanthrene	63.5U	114	123J	108						49-113		
Pyrene	63.5U	114	155	137	*					55-117		
Surrogates												
2-Methylnaphthalene-d10 (surr)		114	232	204	*	113	215	190	*	58-103	7.50	
Fluoranthene-d10 (surr)		114	144	127	*	113	89.0	79		54-113	47.10	

Batch Information

Analytical Batch: XMS13424
Analytical Method: 8270D SIM (PAH)
Instrument: Agilent 8890 GC/MS US2210A024
Analyst: NGG
Analytical Date/Time: 10/28/2022 2:00:00AM

Prep Batch: XXX47198
Prep Method: Sonication Extr Soil 8270 PAH SIM 5ml
Prep Date/Time: 10/19/2022 1:00:32PM
Prep Initial Wt./Vol.: 22.80g
Prep Extract Vol: 5.00mL

Print Date: 10/31/2022 2:59:19PM

SGS

SGS North America Inc.
CHAIN OF CUSTODY RECORD

1226138

SGS North
200 West P
Anchorage,
engage.sgs.
www.us.sgs.

Profile #: Int.:

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

Page 1 of 1

Section 1

CLIENT: STANTEC CONSULTULTING SERVICES, INC

CONTACT: Leslie Petre | PHONE #: 907-251-6153

PROJECT NAME: SPEEDWAY STORE 5310 | Project/Permit Number: NPDL Number(DOD): 185705775

REPORTS TO: Leslie Petre | E-MAIL: leslie.petre@stantec.com

INVOICE TO: Leslie Petre | QUOTE #: P.O. #:

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Sample Type: Comp	Grab	MI	Analysis*: DRO(AK102) RRO(AK103)	PAH(EPA8270D) TOTAL LEAD(6020D)	GRO(AK101)/VOC(8260D) EDB(EPA 8260D-SIM) MeOH+BFB	NOTE: *The following analyses require specific method and/or compound list: BTEX, Metals, PFAS	REMARKS/LOC ID
1AB	IW-2022A-1	10/5/22	1244	S	2		G		x	X	x		
2AB	IW-2022B-1	10/5/22	1627	S	2		G		x	X	x		
3AB	IW-2022B-2	10/5/22	1634	S	2		G		x	X	x		
4AB	IW-2022C-1	10/6/22	910	S	2		G		x	X	x		
5AB	IW-2022C-2	10/6/22	934	S	2		G		x	X	x		
6AB	DUP 1	10/5/22	1627	S	2		G		x	X	x		
7AB	IW-2022D-1	10/6/22	1102	S	2		G		x	X	x		
8AB	IW-2022 D-2	10/6/22	1134	S	2		G		x	X	x		
9AB													

Comments:

Section 4

DOD Project? YES NO

Data Deliverables Requested: DataView, Level 4, SEDD, ERPIMS, EQUIS, Other:

Turnaround Time Requested: Standard, Rush, Requested Rush Report Date:

SGS Sample Receipt (Lab Use Only)

Delivery Method: Client, Commercial

Did each cooler have a corresponding COC? Yes No

Chain of Custody Seal Condition: ANC: INTACT BROKEN ABSENT

COC Seal Location(s): 1F1B

Section 5

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	Cooler ID	Temperature (°C)	Therm. ID
Leslie Petre	10/6/22	1456		1	1.9	D50
	10/6/22	1600		1	3.0	D55
	10/7/22	9:30	(2)			

If more than three coolers are received, or for documentation of non-compliant coolers, use form FS-0029.

Note: If temp. is outside 0-6 °and samples were not taken <8 hours ago OR are waste samples, Client or PM should initial here or attach an email change order to proceed with analysis. If ice is present, note on form F102B.

Intials:

Laboratory Use Only

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

e-Sample Receipt Form FBK

SGS Workorder #: **Stantec** | Stantec

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		Yes — Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	
COC accompanied samples?	Yes	
DOD: Were samples received in COC corresponding coolers?	N/A	
**Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	Yes	Cooler ID: 1 @ 1.9 °C Therm. ID: D50
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
If >6°C, were samples collected <8 hours ago?		
If <0°C, were sample containers ice free?		
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)?	N/C	
**Note: If times differ <1hr, record details & login per COC.		
***Note: If sample information on containers differs from COC, SGS will default to COC information.		
Were samples in good condition (no leaks/cracks/breakage)?	Yes	
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)	Yes	
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	Yes	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with MeOH+BFB?	N/C	
For Rush/Short Hold Time, was RUSH/Short HT email sent?	N/A	

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

Additional notes (if applicable):

SGS Profile #		0

e-Sample Receipt Form

SGS Workorder #:	1226138	1226138

Review Criteria	Condition (Yes, No, N/A	Exceptions Noted below
Chain of Custody / Temperature Requirements	*Note:* Temperature and COC seal information is found on the chain of custody form	
DOD only: Did all sample coolers have a corresponding COC?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note containers received with ice:		
Identify any containers received at non-compliant temperature: *(Use form FS-0029 if more space is needed)*		
Holding Time / Documentation / Sample Condition Requirements	*Note:* Refer to form F-083 "Sample Guide" for specific holding times and sample containers.	
Were samples received within analytical holding time?	Yes	
Do sample labels match COC? Record discrepancies.	Yes	
Note: *If information on containers differs from COC, default to COC information for login. If times differ <1hr, record details & login per COC.*		
Were analytical requests clear? *(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)*	Yes	
Were proper containers (type/mass/volume/preservative)used? Note: Exemption for metals analysis by 200.8/6020 in water.	Yes	
Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)		
Were all soil VOAs received with a corresponding % solids container?	Yes	
Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples?	Yes	
Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with Methanol+BFB?	Yes	

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

Additional notes (if applicable):

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1226138001-A	No Preservative Required	OK			
1226138001-B	Methanol field pres. 4 C	OK			
1226138002-A	No Preservative Required	OK			
1226138002-B	Methanol field pres. 4 C	OK			
1226138003-A	No Preservative Required	OK			
1226138003-B	Methanol field pres. 4 C	OK			
1226138004-A	No Preservative Required	OK			
1226138004-B	Methanol field pres. 4 C	OK			
1226138005-A	No Preservative Required	OK			
1226138005-B	Methanol field pres. 4 C	OK			
1226138006-A	No Preservative Required	OK			
1226138006-B	Methanol field pres. 4 C	OK			
1226138007-A	No Preservative Required	OK			
1226138007-B	Methanol field pres. 4 C	OK			
1226138008-A	No Preservative Required	OK			
1226138008-B	Methanol field pres. 4 C	OK			
1226138009-A	Methanol field pres. 4 C	OK			
1226138009-B	Methanol field pres. 4 C	OK			

Container Condition Glossary

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

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM - The container was received damaged.
FR - The container was received frozen and not usable for Bacteria or BOD analyses.
IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.
NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.
PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
QN - Insufficient sample quantity provided.

Laboratory Data Review Checklist

Completed By:

Jeremiah Malenfant

Title:

Geologist-In-Training

Date:

11/2/2022

Consultant Firm:

Stantec Consulting Services, Inc.

Laboratory Name:

SGS Laboratories

Laboratory Report Number:

1226138

Laboratory Report Date:

10/31/2022

CS Site Name:

7-Eleven Store #43003 (Former Speedway Store #5310 TNS 112)

ADEC File Number:

100.26.159

Hazard Identification Number:

24476

1226138

Laboratory Report Date:

10/31/2022

CS Site Name:

7-Eleven Store #43003 (Former Speedway Store #5310 TNS 112)

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

1. Laboratory

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

   Yes☒ No☐ N/A☐ Comments:

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

   Yes☐ No☐ N/A☒ Comments:

   Samples not transferred

2. Chain of Custody (CoC)

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

   Yes☒ No☐ N/A☐ Comments:

   b. Correct analyses requested?

   Yes☒ No☐ N/A☐ Comments:

3. Laboratory Sample Receipt Documentation

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

   Yes☒ No☐ N/A☐ Comments:

   1.9, 3.0 ºC

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

   Yes☒ No☐ N/A☐ Comments:

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CS Site Name:

7-Eleven Store #43003 (Former Speedway Store #5310 TNS 112)

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

Yes☒ No☐ N/A☐ Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes☐ No☐ N/A☒ Comments:

No discrepancies documented.

e. Data quality or usability affected?

Comments:

No.

4. Case Narrative

a. Present and understandable?

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

Many QC discrepancies, however none impact reported analytes.

c. Were all corrective actions documented?

Yes☒ No☐ N/A☐ Comments:

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

Comments:

Analytes impacted are not reported.

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CS Site Name:

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5. Samples Results

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

Yes☒ No☐ N/A☐ Comments:

b. All applicable holding times met?

Yes☒ No☐ N/A☐ Comments:

c. All soils reported on a dry weight basis?

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

e. Data quality or usability affected?

No.

6. QC Samples

a. Method Blank

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

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CS Site Name:

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

Comments:

None.

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

Yes☐ No☐ N/A☒ Comments:

No samples affected.

v. Data quality or usability affected?

Comments:

No.

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

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

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Laboratory Report Date:

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CS Site Name:

7-Eleven Store #43003 (Former Speedway Store #5310 TNS 112)

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

Comments:

N/A

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

Yes☐ No☐ N/A☒ Comments:

No affected samples

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

Comments:

No.

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

Note: Leave blank if not required for project

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☐ No☒ N/A☐ Comments:

Many analytes in 8270D-SIM had recoveries outside range; Naphthalene unaffected. 1,2,3-Trichlorobenzene by 8260D had recovery out of range.

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

Yes☐ No☒ N/A☐ Comments:

Many analytes in 8270D-SIM had recoveries outside range; Naphthalene unaffected. Chloroethane by 8260D had RPD out of range.

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Laboratory Report Date:

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

Comments:

Affected analytes not reported, no data affected.

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

Yes☒ No☐ N/A☐ Comments:

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

Comments:

No; see above.

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

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

Yes☐ No☐ N/A☒ Comments:

Not included.

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)

Yes☐ No☐ N/A☒ Comments:

Not included.

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

Yes☐ No☐ N/A☒ Comments:

Not included.

iv. Data quality or usability affected?

Comments:

No affected samples.

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Laboratory Report Date:

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CS Site Name:

7-Eleven Store #43003 (Former Speedway Store #5310 TNS 112)

e. Trip Blanks

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

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

Comments:

No affected samples.

v. Data quality or usability affected?

Comments:

No affected samples.

f. Field Duplicate

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

Yes☒ No☐ N/A☐ Comments:

ii. Submitted blind to lab?

Yes☒ No☐ N/A☐ Comments:

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Laboratory Report Date:

10/31/2022

CS Site Name:

7-Eleven Store #43003 (Former Speedway Store #5310 TNS 112)

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

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

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

Yes☐ No☒ N/A☐ Comments:

RPDs for ethylbenzene, DRO, GRO, and naphthalene out of range.

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

Comments:

No; Results well below (above for naphthalene) SCLs.

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

Yes☐ No☐ N/A☒ Comments:

All disposable equipment.

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

Yes☐ No☐ N/A☒ Comments:

All disposable equipment.

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

Comments:

None.

iii. Data quality or usability affected?

Comments:

No.

1226138

Laboratory Report Date:

10/31/2022

CS Site Name:

7-Eleven Store #43003 (Former Speedway Store #5310 TNS 112)

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

   a. Defined and appropriate?

      Yes☒ No☐ N/A☐ Comments: