



December 22, 2022

Ms. Laura Spencer  
Summit Midstream Partners  
910 Louisiana Street, Suite 4200  
Houston, Texas 77002

**RE: Report of Work Completed  
PN30 Gathering Line Release – Impacted Soils Removal  
COGCC Facility ID: 480936  
Garfield County, Colorado**

Ms. Spencer,

Entrada Consulting Group (Entrada) has prepared this report of work complete for impacted soil removal at the Summit Midstream Partners (Summit) PN30 gathering line release location (Site) located in Garfield County, Colorado. The center location coordinates of the release area are approximately 39.4041844° latitude, and -108.0401936 longitude.

The release was originally discovered on September 16<sup>th</sup>, 2021 and reported to the Colorado Oil and Gas Conservation Commission (COGCC) on September 17<sup>th</sup>, 2021. This report was completed in accordance with the COGCC approved Form 19 (Document Number 402844279). Please see that document for additional details.

A search of the Colorado Division of Water Resources (DWR) database revealed that the closest water well to the Site with a static water level is 7,470 feet north (Permit # 61206-F). Static water level in this well was recorded at 52 feet below ground surface (ft-bgs). The closest drainage is Dry Creek, an ephemeral stream, located 1120' south and 282' lower in elevation than the Site. Based on this, Entrada asserts that there is no clear path to groundwater on this Site and that Residential Soil Screening Levels (RSSLs) should be applied.

## **FIELD SCREENING AND SAMPLING ACTIVITIES**

On January 26<sup>th</sup>, 2022, a Summit representative was onsite to oversee excavation, field screen soil, and collect soil samples from the excavation.

Soil from each of the sample locations was visually examined for evidence of potential environmental impacts (e.g., petroleum staining and odor) and screened for volatile organic compounds. Screening was conducted by placing the soil into a re-sealable bag, allowing the soil to warm and volatilize any organic compounds, and monitoring the headspace in the bag with a photoionization detector (PID) equipped with a 10.6 eV lamp. The maximum PID reading observed during the investigations was 10.30 parts per million (ppm) at the point of release (Floor POR @ 9').

In total, six (6) samples were collected and submitted for laboratory analysis. Three soil samples (Floor POR @ 9', W. Floor POR @ 6', and E. Floor POR @ 6') were collected from the excavation base at depths from 6 ft-bgs to 9 ft-bgs. Additionally, two soil samples (S. Wall POR @ 5' and N. Wall POR @ 6') were collected from the excavation sidewalls at depths from 5 ft-bgs to 6 ft-bgs. Due to the excavation floor being ramped at the east and west ends, the east and west "floor" samples are functionally wall samples.

In addition, one local background sample was collected at an undisturbed location outside of the spill area. Groundwater was not observed at any point during field activities. The field screening and soil sample locations are presented on **Figure 1**.

## SOIL ANALYSIS

Soil samples were collected in sample containers appropriate for the specified analyses, sealed, labeled, and placed into an ice filled cooler for preservation. Soil samples were submitted to Pace Analytical in Mt. Juliet, Tennessee following chain of custody procedures and analyzed for the analytes below.

- Total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) by United States Environmental Protection Agency (EPA) Method 8015D;
- TPH as diesel range organics (DRO) and TPH as oil range organics (ORO) by EPA Method 8015M;
- Benzene, toluene, ethylbenzene, total xylenes, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene by EPA Method 8260B;
- Polycyclic aromatic hydrocarbons by EPA Method 8270C-SIM;
- Metals (COGCC Table 915-1 list) by EPA Method 6010B except arsenic and hexavalent chromium, which were analyzed by EPA Method 6020 and EPA Method 7199, respectively;
- Sodium adsorption ratio (SAR) by calculation;
- Hot water soluble boron by EPA Method 6010B-NE493 Ch 2;
- pH by EPA Method 9045D; and
- Specific Conductance by EPA Method 9050A Modified.

## SOIL ANALYTICAL RESULTS

Analytical results are summarized in **Table 1** and are compared to COGCC Table 915-1 RSSLs.

Laboratory analysis reports and chain-of-custody documentation are included as an attachment. Soil analytical results were reported for six (6) soil samples at depths ranging from 5 to 9 ft-bgs.

- Arsenic was identified in soil sampling results above the COGCC Table 915-1 RSSL's in all confirmation samples with results ranging from 8.10 mg/kg to 12.7 mg/kg. The COGCC Table 915-1 RSSL for arsenic is 0.68 mg/kg.
- pH was identified in soil sampling results above the COGCC Table 915-1 allowable concentration in Floor POR @ 9', S. Wall POR @ 5', and W. Floor POR @ 6' at a

levels ranging from 8.41 to 8.60. The COGCC Table 915-1 allowable range for pH is 6 to 8.3.

The soil analytical results are summarized in **Table 1** and laboratory analytical reports are included in the attachments.

## **CONCLUSIONS**

Soil analytical results of the January soil sampling event identified subsurface concentrations of arsenic and pH above the applicable COGCC Table 915-1 cleanup concentrations. All remaining sample results were compliant with the applicable COGCC Table 915-1 cleanup concentrations. Entrada recommends the collection of produced water samples to understand the chemistry of the produced water in terms of Arsenic and pH.

Based upon field screening and soil sampling activities completed at the site and laboratory analytical data presented herein, Entrada recommends that Summit file an initial form 27 remediation workplan with the COGCC. Once the Form 27 is approved, a request of closure of Form 19 (402844279) should also be filed.

We appreciate the opportunity to assist Summit Midstream Partners. Please contact me (720) 253-2940 if you have any questions.

Sincerely,

**ENTRADA CONSULTING GROUP**



Reed Johnson  
*Senior Project Geologist*

Attachments:

**Table 1 – Soil Data Summary**  
**Figure 1 – Sample Location Map**  
**Laboratory Analytical Reports**

# TABLES

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**Table 1**  
**Summit Midstream PN30 Spill**  
**Soil Analytical Results**

LABORATORY DATA SUMMARY									
Sample ID	Floor POR @ 9'	S. Wall POR @ 5'	W. Floor POR @ 6'	N. Wall POR @ 6'	E. Floor POR @ 6'	PN30 BG	COGCC TABLE 915-1 CONCENTRATION LEVELS		UNITS
Sample Depth	9'	5'	6'	6'	6'	5'			
Longitude	-108.0401936	-108.0401923	-108.0402352	-108.040197	-108.040152	-108.040209			
Latitude	39.4041844	39.4041673	39.4041824	39.4042015	39.4041875	39.4040373			
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab			
Sample Description	Soil Confirmation	Soil Confirmation	Soil Confirmation	Soil Confirmation	Soil Confirmation	Soil Background			
Sample Date	1/26/2022	1/26/2022	1/26/2022	1/26/2022	1/26/2022	1/26/2022			
Analytical Parameters							Residential Soil Screening Level	Protection of Groundwater Screening Level	
TPH									
TPH Gasoline Range Organics	1.24	0.158	ND	ND	ND	NT	500	mg/kg	
TPH Diesel Range Organics	140	49.10	44.0	35.3	37.3	NT			
TPH Oil Range Organics	64.2	29.3	40.1	61.8	77.2	NT			
TOTAL TPH	205.4	78.6	84.1	97.1	114.5	NT			
BTEX									
Benzene	0.00458	0.00143	0.00315	0.0124	0.0917	NT	1.2	0.0026	mg/kg
Toluene	0.0423	0.0113	0.0264	0.101	0.667	NT	490	0.69	mg/kg
Ethylbenzene	0.00802	0.00388	0.00395	0.0154	0.0992	NT	5.8	0.78	mg/kg
Total Xylenes	0.125	0.03010	0.0572	0.236	1.58	NT	58	9.9	mg/kg
TMB									
1,2,4-Trimethylbenzene	0.0848	0.0725	0.0299	0.0538	0.291	NT	30	0.0081	mg/kg
1,3,5-Trimethylbenzene	0.0964	0.0494	0.0201	0.0726	0.251	NT	27	0.0087	mg/kg
Metals									
Arsenic	8.78	12.7	8.10	8.67	9.16	7.54	0.68	0.29	mg/kg
Barium	324	246	327	485	2050	NT	15,000	82	mg/kg
Cadmium	ND	ND	ND	0.575	ND	NT	71	0.38	mg/kg
Chromium (Hexavalent)	ND	ND	ND	ND	ND	NT	0.3	0.00067	mg/kg
Copper	18.5	18.1	18.9	17.6	19.4	NT	3,100	46	mg/kg
Lead	9.34	10.8	9.23	9.77	10.9	NT	400	14	mg/kg
Nickel	27.8	30.9	35.4	26.0	28.1	NT	1,500	26	mg/kg
Selenium	ND	2.54	ND	3.41	2.17	NT	390	0.26	mg/kg
Silver	ND	ND	ND	ND	ND	NT	390	0.8	mg/kg
Zinc	39.5	38.4	36.0	39	41.6	NT	23,000	370	mg/kg
SAR Metals Analysis									
Sodium Adsorption Ratio	2.02	0.458	0.330	0.747	1.97	0.151	<6		ratio
Polynuclear Aromatic Hydrocarbons									
Acenaphthene	ND	ND	ND	ND	ND	NT	360	0.55	mg/kg
Anthracene	ND	ND	ND	ND	ND	NT	1,800	5.8	mg/kg
Benzo(a)anthracene	ND	ND	ND	ND	ND	NT	1.1	0.011	mg/kg
Benzo(a)pyrene	ND	ND	ND	ND	ND	NT	0.11	0.24	mg/kg
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	NT	1.1	0.3	mg/kg
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	NT	11	2.9	mg/kg
Chrysene	ND	ND	ND	ND	ND	NT	110	9	mg/kg
Dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	NT	0.11	0.096	mg/kg
Fluoranthene	ND	ND	ND	ND	ND	NT	240	8.9	mg/kg
Fluorene	0.00641	ND	0.00716	ND	ND	NT	240	0.54	mg/kg
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	NT	1.1	0.98	mg/kg
1-Methylnaphthalene	ND	0.0326	ND	ND	0.0236	NT	18	0.006	mg/kg
2-Methylnaphthalene	0.0284	ND	0.0233	0.0217	0.0608	NT	24	0.019	mg/kg
Naphthalene	ND	0.0267	ND	ND	0.0247	NT	2	0.0038	mg/kg
Pyrene	ND	ND	ND	ND	ND	NT	180	1.3	mg/kg
General Chemistry									
Boron	0.675	0.682	0.503	0.45	0.611	NT	2		mg/L
Specific Conductivity	1.02	2.88	0.438	0.708	1.28	0.396	<4		mmhos/cm
pH	8.60	8.43	8.41	8.25	7.36	8.21	6-8.3		su

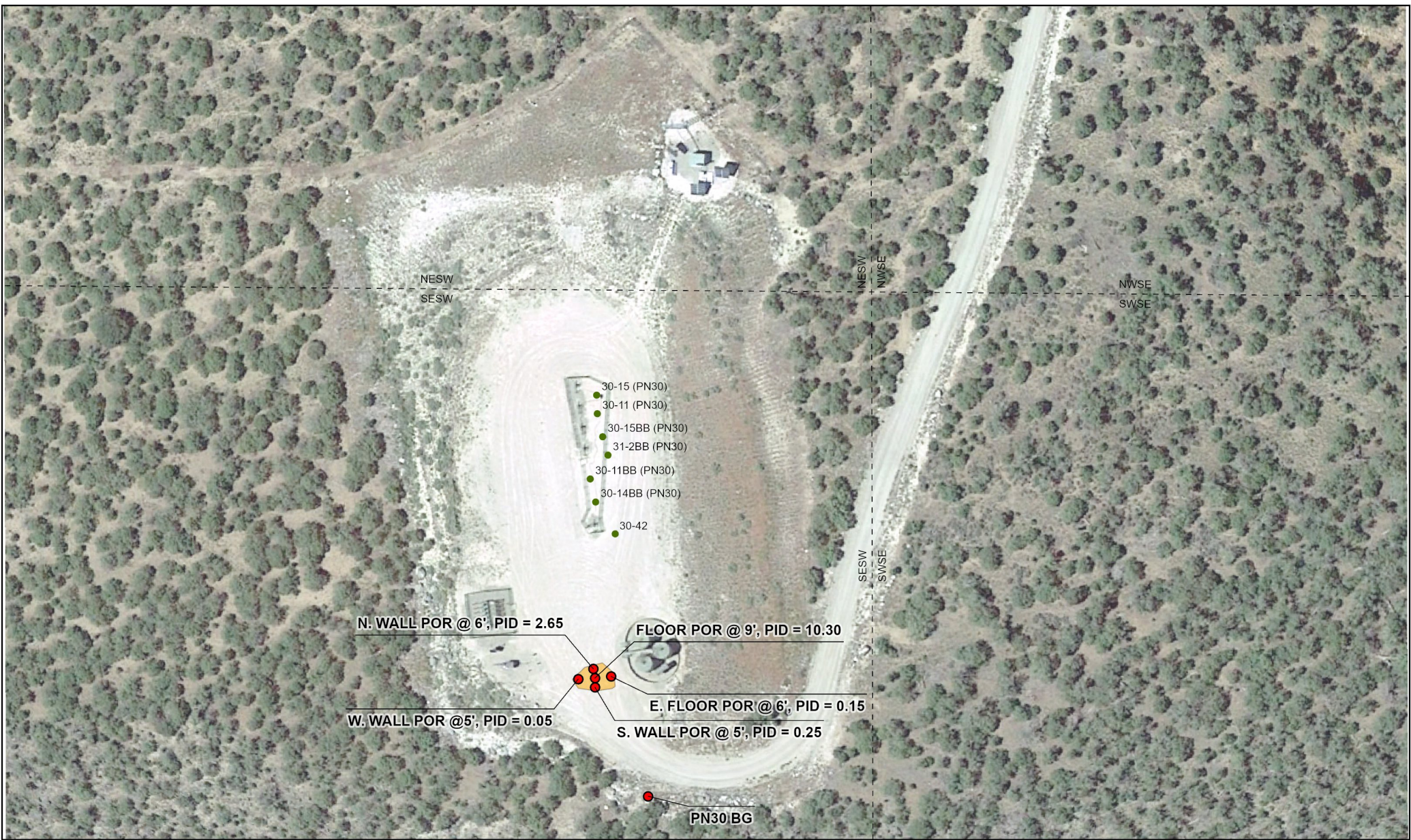
mg/kg - milligrams per kilogram  
mg/L - milligrams per liter  
J - indicates an estimated value  
mmhos/cm - millimhos per centimeter  
mv - millivolts  
su - standard units  
NA - not applicable  
NT - parameter was not tested  
ND - not detected above method detection limit  
TS - Samples received past/too close to holding time expiration  
V - The sample volume is too high to evaluate accurate spike recoveries

Over COGCC Table 915-1 concentration levels but under BACKGROUND level.  
Over COGCC Table 915-1 concentration levels and not within BACKGROUND level.  
Over COGCC Table 915-1 concentration levels

# FIGURES

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**LEGEND**

- Well Location
- Excavation
- Soil Sample Location

0120240ft

1 inch = 120 ft

Project No: 021-201	<b>PN30 Site Diagram</b> Summit Midstream SESW, Section 30, T7S R95W, 6th PM Garfield County, Colorado	 <div>330 Grand Avenue, Unit C Grand Junction, CO 81501 970-549-1015</div>	Figure
Map By: NDB			1
Date: 12/14/2022			



# SOIL ANALYTICAL REPORTS

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**Entrada Consulting Group**

Sample Delivery Group: L1455810

Samples Received: 01/28/2022

Project Number:

Description: PN30 Leak

Report To: Stuart Hall  
240 Mesa Avenue  
Grand Junction, CO 81501

Entire Report Reviewed By:



Chris Ward  
Project Manager

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

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

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<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

# SAMPLE SUMMARY

## FLOOR POR @ 9' L1455810-01 Solid

Collected by  
Grayson Lewis

Collected date/time  
01/26/22 13:00

Received date/time  
01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1810052	1	02/02/22 12:41	02/02/22 12:41	KMG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1810606	1	01/31/22 12:32	02/01/22 17:44	JER	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1810094	1	01/29/22 09:00	01/29/22 11:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1810253	1	01/30/22 03:36	01/30/22 06:23	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1810888	1	02/01/22 17:54	02/03/22 01:57	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1810051	1	01/31/22 16:02	02/02/22 13:45	KMG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1810900	5	02/01/22 17:46	02/03/22 17:31	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1810468	1	01/30/22 08:59	01/31/22 05:44	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1811249	1	01/30/22 08:59	02/01/22 15:06	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1811403	1	02/02/22 16:17	02/03/22 08:21	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1810855	1	02/01/22 04:14	02/01/22 15:56	LEA	Mt. Juliet, TN



## S. WALL POR @ 5' L1455810-02 Solid

Collected by  
Grayson Lewis

Collected date/time  
01/26/22 13:15

Received date/time  
01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1810052	1	02/02/22 12:43	02/02/22 12:43	KMG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1810606	1	01/31/22 12:32	02/01/22 17:50	JER	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1810094	1	01/29/22 09:00	01/29/22 11:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1810253	1	01/30/22 03:36	01/30/22 06:23	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1810888	1	02/01/22 17:54	02/03/22 02:00	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1810051	1	01/31/22 16:02	02/02/22 13:48	KMG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1810900	5	02/01/22 17:46	02/03/22 17:35	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1810468	1	01/30/22 08:59	01/31/22 06:05	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1811249	1	01/30/22 08:59	02/01/22 15:25	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1811403	5	02/02/22 16:17	02/03/22 01:19	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1810855	1	02/01/22 04:14	02/01/22 16:16	LEA	Mt. Juliet, TN

## W. FLOOR POR @ 6' L1455810-03 Solid

Collected by  
Grayson Lewis

Collected date/time  
01/26/22 13:20

Received date/time  
01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1810052	1	02/02/22 12:46	02/02/22 12:46	KMG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1810606	1	01/31/22 12:32	02/01/22 18:00	JER	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1810094	1	01/29/22 09:00	01/29/22 11:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1810253	1	01/30/22 03:36	01/30/22 06:23	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1810888	1	02/01/22 17:54	02/03/22 02:03	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1810051	1	01/31/22 16:02	02/02/22 13:51	KMG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1810900	5	02/01/22 17:46	02/03/22 17:38	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1810468	1	01/30/22 08:59	01/31/22 06:27	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1811249	1	01/30/22 08:59	02/01/22 15:45	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1811403	1	02/02/22 16:17	02/03/22 04:36	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1811363	1	02/02/22 10:49	02/02/22 18:37	ADF	Mt. Juliet, TN

## N. WALL POR @ 6' L1455810-04 Solid

Collected by  
Grayson Lewis

Collected date/time  
01/26/22 13:35

Received date/time  
01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1811594	1	02/03/22 08:07	02/03/22 08:07	KMG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1810606	1	01/31/22 12:32	02/01/22 18:05	JER	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1810094	1	01/29/22 09:00	01/29/22 11:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1810253	1	01/30/22 03:36	01/30/22 06:23	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1810888	1	02/01/22 17:54	02/03/22 02:07	CCE	Mt. Juliet, TN

# SAMPLE SUMMARY

## N. WALL POR @ 6' L1455810-04 Solid

Collected by  
Grayson Lewis

Collected date/time  
01/26/22 13:35

Received date/time  
01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1810051	1	01/31/22 16:02	02/02/22 13:54	KMG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1810900	5	02/01/22 17:46	02/03/22 17:41	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1810468	1	01/30/22 08:59	01/31/22 06:48	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1811249	1	01/30/22 08:59	02/01/22 16:03	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1811403	5	02/02/22 16:17	02/03/22 01:33	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1811363	1	02/02/22 10:49	02/02/22 18:57	AMG	Mt. Juliet, TN

## E. FLOOR POR @ 6' L1455810-05 Solid

Collected by  
Grayson Lewis

Collected date/time  
01/26/22 13:50

Received date/time  
01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1811594	1	02/03/22 08:10	02/03/22 08:10	KMG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1810606	1	01/31/22 12:32	02/01/22 18:10	JER	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1810094	1	01/29/22 09:00	01/29/22 11:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1810253	1	01/30/22 03:36	01/30/22 06:23	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1810888	1	02/01/22 17:54	02/03/22 02:10	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1810051	1	01/31/22 16:02	02/02/22 13:57	KMG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1810900	5	02/01/22 17:46	02/03/22 17:45	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1812070	1	01/30/22 08:59	02/02/22 16:16	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1811249	1	01/30/22 08:59	02/01/22 16:22	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1811403	1	02/02/22 16:17	02/03/22 04:09	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1811363	1	02/02/22 10:49	02/02/22 19:16	AMG	Mt. Juliet, TN

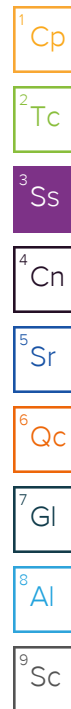
## PN30 B6 L1455810-06 Solid

Collected by  
Grayson Lewis

Collected date/time  
01/26/22 13:55

Received date/time  
01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1810052	1	02/02/22 12:49	02/02/22 12:49	KMG	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1810095	1	02/01/22 08:00	02/01/22 08:11	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1810253	1	01/30/22 03:36	01/30/22 06:23	ARD	Mt. Juliet, TN



# CASE NARRATIVE

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



Chris Ward  
Project Manager





## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.02		1	02/02/2022 12:41	WG1810052

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	02/01/2022 17:44	<a href="#">WG1810606</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.60	<a href="#">T8</a>	1	01/29/2022 11:00	<a href="#">WG1810094</a>

## Sample Narrative:

L1455810-01 WG1810094: 8.6 at 17.8C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1020		10.0	1	01/30/2022 06:23	<a href="#">WG1810253</a>

## Sample Narrative:

L1455810-01 WG1810253: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	324		0.500	1	02/03/2022 01:57	<a href="#">WG1810888</a>
Cadmium	ND		0.500	1	02/03/2022 01:57	<a href="#">WG1810888</a>
Copper	18.5		2.00	1	02/03/2022 01:57	<a href="#">WG1810888</a>
Lead	9.34		0.500	1	02/03/2022 01:57	<a href="#">WG1810888</a>
Nickel	27.8		2.00	1	02/03/2022 01:57	<a href="#">WG1810888</a>
Selenium	ND		2.00	1	02/03/2022 01:57	<a href="#">WG1810888</a>
Silver	ND		1.00	1	02/03/2022 01:57	<a href="#">WG1810888</a>
Zinc	39.5		5.00	1	02/03/2022 01:57	<a href="#">WG1810888</a>

## Metals (ICP) by Method 6010B-NE493 Ch 2

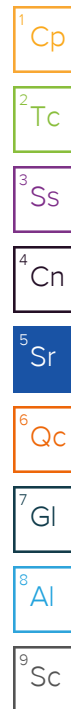
Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.675		0.200	1	02/02/2022 13:45	<a href="#">WG1810051</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	8.78		1.00	5	02/03/2022 17:31	<a href="#">WG1810900</a>

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.24		0.100	1	01/31/2022 05:44	<a href="#">WG1810468</a>
(S) a,a,a-Trifluorotoluene(FID)	108		77.0-120		01/31/2022 05:44	<a href="#">WG1810468</a>



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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00458		0.00100	1	02/01/2022 15:06	<a href="#">WG1811249</a>
Toluene	0.0423		0.00500	1	02/01/2022 15:06	<a href="#">WG1811249</a>
Ethylbenzene	0.00802		0.00250	1	02/01/2022 15:06	<a href="#">WG1811249</a>
Xylenes, Total	0.125		0.00650	1	02/01/2022 15:06	<a href="#">WG1811249</a>
Naphthalene	0.0915		0.0125	1	02/01/2022 15:06	<a href="#">WG1811249</a>
1,2,4-Trimethylbenzene	0.0848		0.00500	1	02/01/2022 15:06	<a href="#">WG1811249</a>
1,3,5-Trimethylbenzene	0.0964		0.00500	1	02/01/2022 15:06	<a href="#">WG1811249</a>
(S) Toluene-d8	98.5		75.0-131		02/01/2022 15:06	<a href="#">WG1811249</a>
(S) 4-Bromofluorobenzene	110		67.0-138		02/01/2022 15:06	<a href="#">WG1811249</a>
(S) 1,2-Dichloroethane-d4	86.4		70.0-130		02/01/2022 15:06	<a href="#">WG1811249</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	140		4.00	1	02/03/2022 08:21	<a href="#">WG1811403</a>
C28-C36 Motor Oil Range	64.2		4.00	1	02/03/2022 08:21	<a href="#">WG1811403</a>
(S) o-Terphenyl	53.1		18.0-148		02/03/2022 08:21	<a href="#">WG1811403</a>

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Acenaphthene	ND		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Acenaphthylene	ND		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Benzo(a)anthracene	ND		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Benzo(a)pyrene	ND		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Benzo(b)fluoranthene	ND		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Benzo(g,h,i)perylene	ND		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Benzo(k)fluoranthene	ND		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Chrysene	ND		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Dibenz(a,h)anthracene	ND		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Fluoranthene	ND		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Fluorene	0.00641		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Naphthalene	ND		0.0200	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Phenanthrene	0.0116		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
Pyrene	ND		0.00600	1	02/01/2022 15:56	<a href="#">WG1810855</a>
1-Methylnaphthalene	ND		0.0200	1	02/01/2022 15:56	<a href="#">WG1810855</a>
2-Methylnaphthalene	0.0284		0.0200	1	02/01/2022 15:56	<a href="#">WG1810855</a>
2-Chloronaphthalene	ND		0.0200	1	02/01/2022 15:56	<a href="#">WG1810855</a>
(S) p-Terphenyl-d14	86.9		23.0-120		02/01/2022 15:56	<a href="#">WG1810855</a>
(S) Nitrobenzene-d5	133		14.0-149		02/01/2022 15:56	<a href="#">WG1810855</a>
(S) 2-Fluorobiphenyl	83.8		34.0-125		02/01/2022 15:56	<a href="#">WG1810855</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.458		1	02/02/2022 12:43	WG1810052

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	02/01/2022 17:50	<a href="#">WG1810606</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.43	<a href="#">T8</a>	1	01/29/2022 11:00	<a href="#">WG1810094</a>

## Sample Narrative:

L1455810-02 WG1810094: 8.43 at 18.2C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2880		10.0	1	01/30/2022 06:23	<a href="#">WG1810253</a>

## Sample Narrative:

L1455810-02 WG1810253: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	246		0.500	1	02/03/2022 02:00	<a href="#">WG1810888</a>
Cadmium	ND		0.500	1	02/03/2022 02:00	<a href="#">WG1810888</a>
Copper	18.1		2.00	1	02/03/2022 02:00	<a href="#">WG1810888</a>
Lead	10.8		0.500	1	02/03/2022 02:00	<a href="#">WG1810888</a>
Nickel	30.9		2.00	1	02/03/2022 02:00	<a href="#">WG1810888</a>
Selenium	2.54		2.00	1	02/03/2022 02:00	<a href="#">WG1810888</a>
Silver	ND		1.00	1	02/03/2022 02:00	<a href="#">WG1810888</a>
Zinc	38.4		5.00	1	02/03/2022 02:00	<a href="#">WG1810888</a>

## Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.682		0.200	1	02/02/2022 13:48	<a href="#">WG1810051</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	12.7		1.00	5	02/03/2022 17:35	<a href="#">WG1810900</a>

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.158		0.100	1	01/31/2022 06:05	<a href="#">WG1810468</a>
(S) a,a,a-Trifluorotoluene(FID)	107		77.0-120		01/31/2022 06:05	<a href="#">WG1810468</a>



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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00143		0.00100	1	02/01/2022 15:25	<a href="#">WG1811249</a>
Toluene	0.0113		0.00500	1	02/01/2022 15:25	<a href="#">WG1811249</a>
Ethylbenzene	0.00388		0.00250	1	02/01/2022 15:25	<a href="#">WG1811249</a>
Xylenes, Total	0.0301		0.00650	1	02/01/2022 15:25	<a href="#">WG1811249</a>
Naphthalene	0.0785		0.0125	1	02/01/2022 15:25	<a href="#">WG1811249</a>
1,2,4-Trimethylbenzene	0.0725		0.00500	1	02/01/2022 15:25	<a href="#">WG1811249</a>
1,3,5-Trimethylbenzene	0.0494		0.00500	1	02/01/2022 15:25	<a href="#">WG1811249</a>
(S) Toluene-d8	97.6		75.0-131		02/01/2022 15:25	<a href="#">WG1811249</a>
(S) 4-Bromofluorobenzene	96.1		67.0-138		02/01/2022 15:25	<a href="#">WG1811249</a>
(S) 1,2-Dichloroethane-d4	81.8		70.0-130		02/01/2022 15:25	<a href="#">WG1811249</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	49.1		20.0	5	02/03/2022 01:19	<a href="#">WG1811403</a>
C28-C36 Motor Oil Range	29.3		20.0	5	02/03/2022 01:19	<a href="#">WG1811403</a>
(S) o-Terphenyl	76.4		18.0-148		02/03/2022 01:19	<a href="#">WG1811403</a>

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Acenaphthene	ND		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Acenaphthylene	ND		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Benzo(a)anthracene	ND		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Benzo(a)pyrene	ND		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Benzo(b)fluoranthene	ND		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Benzo(g,h,i)perylene	ND		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Benzo(k)fluoranthene	ND		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Chrysene	ND		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Dibenz(a,h)anthracene	ND		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Fluoranthene	ND		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Fluorene	ND		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Naphthalene	0.0267		0.0200	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Phenanthrene	0.0101		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
Pyrene	ND		0.00600	1	02/01/2022 16:16	<a href="#">WG1810855</a>
1-Methylnaphthalene	ND		0.0200	1	02/01/2022 16:16	<a href="#">WG1810855</a>
2-Methylnaphthalene	0.0326		0.0200	1	02/01/2022 16:16	<a href="#">WG1810855</a>
2-Chloronaphthalene	ND		0.0200	1	02/01/2022 16:16	<a href="#">WG1810855</a>
(S) p-Terphenyl-d14	89.9		23.0-120		02/01/2022 16:16	<a href="#">WG1810855</a>
(S) Nitrobenzene-d5	103		14.0-149		02/01/2022 16:16	<a href="#">WG1810855</a>
(S) 2-Fluorobiphenyl	82.9		34.0-125		02/01/2022 16:16	<a href="#">WG1810855</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.330		1	02/02/2022 12:46	WG1810052

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	02/01/2022 18:00	<a href="#">WG1810606</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.41	<a href="#">T8</a>	1	01/29/2022 11:00	<a href="#">WG1810094</a>

## Sample Narrative:

L1455810-03 WG1810094: 8.41 at 18.1C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	438		10.0	1	01/30/2022 06:23	<a href="#">WG1810253</a>

## Sample Narrative:

L1455810-03 WG1810253: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	327		0.500	1	02/03/2022 02:03	<a href="#">WG1810888</a>
Cadmium	ND		0.500	1	02/03/2022 02:03	<a href="#">WG1810888</a>
Copper	18.9		2.00	1	02/03/2022 02:03	<a href="#">WG1810888</a>
Lead	9.23		0.500	1	02/03/2022 02:03	<a href="#">WG1810888</a>
Nickel	35.4		2.00	1	02/03/2022 02:03	<a href="#">WG1810888</a>
Selenium	ND		2.00	1	02/03/2022 02:03	<a href="#">WG1810888</a>
Silver	ND		1.00	1	02/03/2022 02:03	<a href="#">WG1810888</a>
Zinc	36.0		5.00	1	02/03/2022 02:03	<a href="#">WG1810888</a>

## Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.503		0.200	1	02/02/2022 13:51	<a href="#">WG1810051</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	8.10		1.00	5	02/03/2022 17:38	<a href="#">WG1810900</a>

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	ND		0.100	1	01/31/2022 06:27	<a href="#">WG1810468</a>
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-120		01/31/2022 06:27	<a href="#">WG1810468</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00315		0.00100	1	02/01/2022 15:45	<a href="#">WG1811249</a>
Toluene	0.0264		0.00500	1	02/01/2022 15:45	<a href="#">WG1811249</a>
Ethylbenzene	0.00395		0.00250	1	02/01/2022 15:45	<a href="#">WG1811249</a>
Xylenes, Total	0.0572		0.00650	1	02/01/2022 15:45	<a href="#">WG1811249</a>
Naphthalene	0.0354		0.0125	1	02/01/2022 15:45	<a href="#">WG1811249</a>
1,2,4-Trimethylbenzene	0.0299		0.00500	1	02/01/2022 15:45	<a href="#">WG1811249</a>
1,3,5-Trimethylbenzene	0.0201		0.00500	1	02/01/2022 15:45	<a href="#">WG1811249</a>
(S) Toluene-d8	100		75.0-131		02/01/2022 15:45	<a href="#">WG1811249</a>
(S) 4-Bromofluorobenzene	95.0		67.0-138		02/01/2022 15:45	<a href="#">WG1811249</a>
(S) 1,2-Dichloroethane-d4	85.7		70.0-130		02/01/2022 15:45	<a href="#">WG1811249</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	44.0		4.00	1	02/03/2022 04:36	<a href="#">WG1811403</a>
C28-C36 Motor Oil Range	40.1		4.00	1	02/03/2022 04:36	<a href="#">WG1811403</a>
(S) o-Terphenyl	47.8		18.0-148		02/03/2022 04:36	<a href="#">WG1811403</a>

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Acenaphthene	ND		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Acenaphthylene	ND		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Benzo(a)anthracene	ND		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Benzo(a)pyrene	ND		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Benzo(b)fluoranthene	ND		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Benzo(g,h,i)perylene	ND		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Benzo(k)fluoranthene	ND		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Chrysene	ND		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Dibenz(a,h)anthracene	ND		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Fluoranthene	ND		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Fluorene	0.00716		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Naphthalene	ND		0.0200	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Phenanthrene	0.0109		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
Pyrene	ND		0.00600	1	02/02/2022 18:37	<a href="#">WG1811363</a>
1-Methylnaphthalene	ND		0.0200	1	02/02/2022 18:37	<a href="#">WG1811363</a>
2-Methylnaphthalene	0.0233		0.0200	1	02/02/2022 18:37	<a href="#">WG1811363</a>
2-Chloronaphthalene	ND		0.0200	1	02/02/2022 18:37	<a href="#">WG1811363</a>
(S) p-Terphenyl-d14	60.7		23.0-120		02/02/2022 18:37	<a href="#">WG1811363</a>
(S) Nitrobenzene-d5	57.0		14.0-149		02/02/2022 18:37	<a href="#">WG1811363</a>
(S) 2-Fluorobiphenyl	61.3		34.0-125		02/02/2022 18:37	<a href="#">WG1811363</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.747		1	02/03/2022 08:07	WG1811594

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	02/01/2022 18:05	<a href="#">WG1810606</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.25	<a href="#">T8</a>	1	01/29/2022 11:00	<a href="#">WG1810094</a>

## Sample Narrative:

L1455810-04 WG1810094: 8.25 at 18.5C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	708		10.0	1	01/30/2022 06:23	<a href="#">WG1810253</a>

## Sample Narrative:

L1455810-04 WG1810253: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	485		0.500	1	02/03/2022 02:07	<a href="#">WG1810888</a>
Cadmium	0.575		0.500	1	02/03/2022 02:07	<a href="#">WG1810888</a>
Copper	17.6		2.00	1	02/03/2022 02:07	<a href="#">WG1810888</a>
Lead	9.77		0.500	1	02/03/2022 02:07	<a href="#">WG1810888</a>
Nickel	26.0		2.00	1	02/03/2022 02:07	<a href="#">WG1810888</a>
Selenium	3.41		2.00	1	02/03/2022 02:07	<a href="#">WG1810888</a>
Silver	ND		1.00	1	02/03/2022 02:07	<a href="#">WG1810888</a>
Zinc	39.0		5.00	1	02/03/2022 02:07	<a href="#">WG1810888</a>

## Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.453		0.200	1	02/02/2022 13:54	<a href="#">WG1810051</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	8.67		1.00	5	02/03/2022 17:41	<a href="#">WG1810900</a>

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	ND		0.100	1	01/31/2022 06:48	<a href="#">WG1810468</a>
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-120		01/31/2022 06:48	<a href="#">WG1810468</a>



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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.0124		0.00100	1	02/01/2022 16:03	<a href="#">WG1811249</a>
Toluene	0.101		0.00500	1	02/01/2022 16:03	<a href="#">WG1811249</a>
Ethylbenzene	0.0154		0.00250	1	02/01/2022 16:03	<a href="#">WG1811249</a>
Xylenes, Total	0.236		0.00650	1	02/01/2022 16:03	<a href="#">WG1811249</a>
Naphthalene	0.0234		0.0125	1	02/01/2022 16:03	<a href="#">WG1811249</a>
1,2,4-Trimethylbenzene	0.0538		0.00500	1	02/01/2022 16:03	<a href="#">WG1811249</a>
1,3,5-Trimethylbenzene	0.0726		0.00500	1	02/01/2022 16:03	<a href="#">WG1811249</a>
(S) Toluene-d8	99.3		75.0-131		02/01/2022 16:03	<a href="#">WG1811249</a>
(S) 4-Bromofluorobenzene	96.8		67.0-138		02/01/2022 16:03	<a href="#">WG1811249</a>
(S) 1,2-Dichloroethane-d4	86.3		70.0-130		02/01/2022 16:03	<a href="#">WG1811249</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	35.3		20.0	5	02/03/2022 01:33	<a href="#">WG1811403</a>
C28-C36 Motor Oil Range	61.8		20.0	5	02/03/2022 01:33	<a href="#">WG1811403</a>
(S) o-Terphenyl	71.3		18.0-148		02/03/2022 01:33	<a href="#">WG1811403</a>

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Acenaphthene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Acenaphthylene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Benzo(a)anthracene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Benzo(a)pyrene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Benzo(b)fluoranthene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Benzo(g,h,i)perylene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Benzo(k)fluoranthene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Chrysene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Dibenz(a,h)anthracene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Fluoranthene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Fluorene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Naphthalene	ND		0.0200	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Phenanthrene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
Pyrene	ND		0.00600	1	02/02/2022 18:57	<a href="#">WG1811363</a>
1-Methylnaphthalene	ND		0.0200	1	02/02/2022 18:57	<a href="#">WG1811363</a>
2-Methylnaphthalene	0.0217		0.0200	1	02/02/2022 18:57	<a href="#">WG1811363</a>
2-Chloronaphthalene	ND		0.0200	1	02/02/2022 18:57	<a href="#">WG1811363</a>
(S) p-Terphenyl-d14	46.4		23.0-120		02/02/2022 18:57	<a href="#">WG1811363</a>
(S) Nitrobenzene-d5	45.1		14.0-149		02/02/2022 18:57	<a href="#">WG1811363</a>
(S) 2-Fluorobiphenyl	48.0		34.0-125		02/02/2022 18:57	<a href="#">WG1811363</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.97		1	02/03/2022 08:10	WG1811594

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	02/01/2022 18:10	<a href="#">WG1810606</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.36	<a href="#">T8</a>	1	01/29/2022 11:00	<a href="#">WG1810094</a>

## Sample Narrative:

L1455810-05 WG1810094: 7.36 at 18.4C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1280		10.0	1	01/30/2022 06:23	<a href="#">WG1810253</a>

## Sample Narrative:

L1455810-05 WG1810253: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	2050		0.500	1	02/03/2022 02:10	<a href="#">WG1810888</a>
Cadmium	ND		0.500	1	02/03/2022 02:10	<a href="#">WG1810888</a>
Copper	19.4		2.00	1	02/03/2022 02:10	<a href="#">WG1810888</a>
Lead	10.9		0.500	1	02/03/2022 02:10	<a href="#">WG1810888</a>
Nickel	28.1		2.00	1	02/03/2022 02:10	<a href="#">WG1810888</a>
Selenium	2.17		2.00	1	02/03/2022 02:10	<a href="#">WG1810888</a>
Silver	ND		1.00	1	02/03/2022 02:10	<a href="#">WG1810888</a>
Zinc	41.6		5.00	1	02/03/2022 02:10	<a href="#">WG1810888</a>

## Metals (ICP) by Method 6010B-NE493 Ch 2

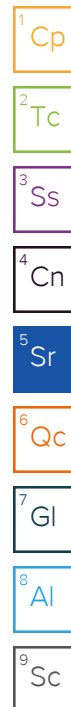
Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.611		0.200	1	02/02/2022 13:57	<a href="#">WG1810051</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	9.16		1.00	5	02/03/2022 17:45	<a href="#">WG1810900</a>

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	ND		0.100	1	02/02/2022 16:16	<a href="#">WG1812070</a>
(S) a,a,a-Trifluorotoluene(FID)	108		77.0-120		02/02/2022 16:16	<a href="#">WG1812070</a>



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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.0917		0.00100	1	02/01/2022 16:22	<a href="#">WG1811249</a>
Toluene	0.667		0.00500	1	02/01/2022 16:22	<a href="#">WG1811249</a>
Ethylbenzene	0.0992		0.00250	1	02/01/2022 16:22	<a href="#">WG1811249</a>
Xylenes, Total	1.58		0.00650	1	02/01/2022 16:22	<a href="#">WG1811249</a>
Naphthalene	0.0387		0.0125	1	02/01/2022 16:22	<a href="#">WG1811249</a>
1,2,4-Trimethylbenzene	0.291		0.00500	1	02/01/2022 16:22	<a href="#">WG1811249</a>
1,3,5-Trimethylbenzene	0.251		0.00500	1	02/01/2022 16:22	<a href="#">WG1811249</a>
(S) Toluene-d8	100		75.0-131		02/01/2022 16:22	<a href="#">WG1811249</a>
(S) 4-Bromofluorobenzene	97.4		67.0-138		02/01/2022 16:22	<a href="#">WG1811249</a>
(S) 1,2-Dichloroethane-d4	84.7		70.0-130		02/01/2022 16:22	<a href="#">WG1811249</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	37.3		4.00	1	02/03/2022 04:09	<a href="#">WG1811403</a>
C28-C36 Motor Oil Range	77.2		4.00	1	02/03/2022 04:09	<a href="#">WG1811403</a>
(S) o-Terphenyl	71.8		18.0-148		02/03/2022 04:09	<a href="#">WG1811403</a>

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Acenaphthene	ND		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Acenaphthylene	ND		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Benzo(a)anthracene	ND		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Benzo(a)pyrene	ND		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Benzo(b)fluoranthene	ND		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Benzo(g,h,i)perylene	ND		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Benzo(k)fluoranthene	ND		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Chrysene	ND		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Dibenz(a,h)anthracene	ND		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Fluoranthene	ND		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Fluorene	ND		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Naphthalene	0.0247		0.0200	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Phenanthrene	0.0106		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
Pyrene	ND		0.00600	1	02/02/2022 19:16	<a href="#">WG1811363</a>
1-Methylnaphthalene	0.0236		0.0200	1	02/02/2022 19:16	<a href="#">WG1811363</a>
2-Methylnaphthalene	0.0608		0.0200	1	02/02/2022 19:16	<a href="#">WG1811363</a>
2-Chloronaphthalene	ND		0.0200	1	02/02/2022 19:16	<a href="#">WG1811363</a>
(S) p-Terphenyl-d14	55.1		23.0-120		02/02/2022 19:16	<a href="#">WG1811363</a>
(S) Nitrobenzene-d5	58.7		14.0-149		02/02/2022 19:16	<a href="#">WG1811363</a>
(S) 2-Fluorobiphenyl	55.3		34.0-125		02/02/2022 19:16	<a href="#">WG1811363</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.151		1	02/02/2022 12:49	WG1810052

<sup>1</sup>Cp

<sup>2</sup>Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.21	T8	1	02/01/2022 08:11	<a href="#">WG1810095</a>

<sup>3</sup>Ss

<sup>4</sup>Cn

Sample Narrative:

L1455810-06 WG1810095: 8.21 at 16.9C

<sup>5</sup>Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	396		10.0	1	01/30/2022 06:23	<a href="#">WG1810253</a>

<sup>6</sup>Qc

<sup>7</sup>Gl

Sample Narrative:

L1455810-06 WG1810253: at 25C

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3755872-1 02/01/22 14:33

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Hexavalent Chromium	U		0.255	1.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1455496-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1455496-01 02/01/22 16:37 • (DUP) R3755872-7 02/01/22 16:42

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	ND	ND	1	13.6		20

L1455810-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1455810-02 02/01/22 17:50 • (DUP) R3755872-8 02/01/22 17:55

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	ND	ND	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3755872-2 02/01/22 14:41

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.3	103	80.0-120	

L1455414-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455414-02 02/01/22 14:51 • (MS) R3755872-3 02/01/22 14:56 • (MSD) R3755872-4 02/01/22 15:02

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Hexavalent Chromium	20.0	ND	19.9	19.2	97.7	94.0	1	75.0-125			3.74	20

L1455751-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1455751-08 01/29/22 11:00 • (DUP) R3754881-2 01/29/22 11:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.55	7.57	1	0.265		1

Sample Narrative:

OS: 7.55 at 18.1C

DUP: 7.57 at 18.3C



L1455810-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1455810-01 01/29/22 11:00 • (DUP) R3754881-3 01/29/22 11:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.60	8.60	1	0.000		1

Sample Narrative:

OS: 8.6 at 17.8C

DUP: 8.6 at 17.8C

Laboratory Control Sample (LCS)

(LCS) R3754881-1 01/29/22 11:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	su	su	%	%	
pH	10.0	9.99	99.9	99.0-101	

Sample Narrative:

LCS: 9.99 at 16.3C

L1455810-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1455810-06 02/01/22 08:11 • (DUP) R3755560-2 02/01/22 08:11

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.21	8.27	1	0.728		1

Sample Narrative:

OS: 8.21 at 16.9C

DUP: 8.27 at 16.4C

L1455977-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1455977-01 02/01/22 08:11 • (DUP) R3755560-3 02/01/22 08:11

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.72	7.72	1	0.000		1

Sample Narrative:

OS: 7.72 at 16.5C

DUP: 7.72 at 16.7C

Laboratory Control Sample (LCS)

(LCS) R3755560-1 02/01/22 08:11

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10.01 at 14.8C



Method Blank (MB)

(MB) R3754941-1 01/30/22 06:23

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	U		10.0	10.0

Sample Narrative:  
BLANK: at 25C

L1455977-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1455977-01 01/30/22 06:23 • (DUP) R3754941-3 01/30/22 06:23

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2340	2410	1	2.95		20

Sample Narrative:  
OS: at 25C  
DUP: at 25C

L1456113-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1456113-01 01/30/22 06:23 • (DUP) R3754941-4 01/30/22 06:23

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1860	1790	1	3.73		20

Sample Narrative:  
OS: at 25C  
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3754941-2 01/30/22 06:23

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	271	101	85.0-115	

Sample Narrative:  
LCS: at 25C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3756385-1 02/03/22 01:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Copper	U		0.400	2.00
Lead	U		0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3756385-2 02/03/22 01:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	99.5	99.5	80.0-120	
Cadmium	100	95.2	95.2	80.0-120	
Copper	100	98.2	98.2	80.0-120	
Lead	100	94.7	94.7	80.0-120	
Nickel	100	97.6	97.6	80.0-120	
Selenium	100	94.8	94.8	80.0-120	
Silver	20.0	17.1	85.5	80.0-120	
Zinc	100	94.5	94.5	80.0-120	

L1455532-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455532-05 02/03/22 01:13 • (MS) R3756385-5 02/03/22 01:21 • (MSD) R3756385-6 02/03/22 01:24

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	313	357	373	44.1	60.2	1	75.0-125	J6	J6	4.42	20
Cadmium	100	ND	92.3	95.1	92.0	94.8	1	75.0-125			2.99	20
Copper	100	15.2	113	115	97.3	100	1	75.0-125			2.54	20
Lead	100	14.4	110	116	95.5	102	1	75.0-125			5.44	20
Nickel	100	17.3	121	126	104	108	1	75.0-125			3.79	20
Selenium	100	ND	90.5	93.9	89.6	93.1	1	75.0-125			3.71	20
Silver	20.0	ND	16.4	16.5	82.0	82.6	1	75.0-125			0.830	20
Zinc	100	47.7	139	141	91.5	93.5	1	75.0-125			1.47	20

Method Blank (MB)

(MB) R3756329-1 02/02/22 12:58

Analyte	MB Result mg/l	<u>MB Qualifier</u>	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R3756329-2 02/02/22 13:01 • (LCSD) R3756329-3 02/02/22 13:03

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.05	1.04	105	104	80.0-120			1.12	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



Method Blank (MB)

(MB) R3756734-4 02/03/22 16:18

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3756734-5 02/03/22 16:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	101	101	80.0-120	

L1455532-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455532-05 02/03/22 16:25 • (MS) R3756734-8 02/03/22 16:35 • (MSD) R3756734-9 02/03/22 16:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	5.15	85.2	96.6	80.0	91.4	5	75.0-125			12.5	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3756152-2 01/30/22 20:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	109			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3756152-1 01/30/22 19:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.63	84.2	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			96.9	77.0-120	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3756444-1 02/02/22 12:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	108			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3756444-2 02/02/22 12:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.26	77.5	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			100	77.0-120	

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

Method Blank (MB)

(MB) R3755987-3 02/01/22 13:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Naphthalene	U		0.00488	0.0125
Toluene	U		0.00130	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	99.7			75.0-131
(S) 4-Bromofluorobenzene	99.1			67.0-138
(S) 1,2-Dichloroethane-d4	86.8			70.0-130

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

(LCS) R3755987-1 02/01/22 12:18 • (LCSD) R3755987-2 02/01/22 12:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.126	0.127	101	102	70.0-123			0.791	20
Ethylbenzene	0.125	0.134	0.134	107	107	74.0-126			0.000	20
Naphthalene	0.125	0.124	0.111	99.2	88.8	59.0-130			11.1	20
Toluene	0.125	0.118	0.123	94.4	98.4	75.0-121			4.15	20
1,2,4-Trimethylbenzene	0.125	0.132	0.137	106	110	70.0-126			3.72	20
1,3,5-Trimethylbenzene	0.125	0.126	0.131	101	105	73.0-127			3.89	20
Xylenes, Total	0.375	0.396	0.405	106	108	72.0-127			2.25	20
(S) Toluene-d8				96.6	96.6	75.0-131				
(S) 4-Bromofluorobenzene				103	96.6	67.0-138				
(S) 1,2-Dichloroethane-d4				98.3	95.1	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3756379-1 02/02/22 22:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	59.9			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3756379-2 02/02/22 22:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	34.3	68.6	50.0-150	
(S) o-Terphenyl			78.8	18.0-148	

L1455810-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455810-01 02/03/22 08:21 • (MS) R3756379-3 02/03/22 04:49 • (MSD) R3756379-4 02/03/22 05:03

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	140	199	205	118	130	1	50.0-150			2.97	20
(S) o-Terphenyl					59.6	68.8		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3755648-2 02/01/22 09:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	90.9			14.0-149
(S) 2-Fluorobiphenyl	96.3			34.0-125
(S) p-Terphenyl-d14	108			23.0-120

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3755648-1 02/01/22 09:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0661	82.6	50.0-126	
Acenaphthene	0.0800	0.0722	90.3	50.0-120	
Acenaphthylene	0.0800	0.0709	88.6	50.0-120	
Benzo(a)anthracene	0.0800	0.0649	81.1	45.0-120	
Benzo(a)pyrene	0.0800	0.0627	78.4	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0787	98.4	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0721	90.1	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0748	93.5	49.0-125	
Chrysene	0.0800	0.0703	87.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0732	91.5	47.0-125	
Fluoranthene	0.0800	0.0710	88.8	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3755648-1 02/01/22 09:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0714	89.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0748	93.5	46.0-125	
Naphthalene	0.0800	0.0689	86.1	50.0-120	
Phenanthrene	0.0800	0.0702	87.8	47.0-120	
Pyrene	0.0800	0.0768	96.0	43.0-123	
1-Methylnaphthalene	0.0800	0.0668	83.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0712	89.0	50.0-120	
2-Chloronaphthalene	0.0800	0.0736	92.0	50.0-120	
(S) Nitrobenzene-d5			98.6	14.0-149	
(S) 2-Fluorobiphenyl			100	34.0-125	
(S) p-Terphenyl-d14			103	23.0-120	

L1454531-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1454531-07 02/01/22 13:56 • (MS) R3755648-3 02/01/22 14:16 • (MSD) R3755648-4 02/01/22 14:36

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	ND	0.0555	0.0553	69.4	69.1	1	10.0-145			0.361	30
Acenaphthene	0.0800	ND	0.0567	0.0583	70.9	72.9	1	14.0-127			2.78	27
Acenaphthylene	0.0800	ND	0.0587	0.0606	73.4	75.8	1	21.0-124			3.19	25
Benzo(a)anthracene	0.0800	ND	0.0545	0.0555	68.1	69.4	1	10.0-139			1.82	30
Benzo(a)pyrene	0.0800	ND	0.0614	0.0633	76.8	79.1	1	10.0-141			3.05	31
Benzo(b)fluoranthene	0.0800	ND	0.0545	0.0568	68.1	71.0	1	10.0-140			4.13	36
Benzo(g,h,i)perylene	0.0800	ND	0.0553	0.0562	69.1	70.3	1	10.0-140			1.61	33
Benzo(k)fluoranthene	0.0800	ND	0.0587	0.0591	73.4	73.9	1	10.0-137			0.679	31
Chrysene	0.0800	ND	0.0574	0.0596	71.8	74.5	1	10.0-145			3.76	30
Dibenz(a,h)anthracene	0.0800	ND	0.0583	0.0595	72.9	74.4	1	10.0-132			2.04	31
Fluoranthene	0.0800	ND	0.0579	0.0573	72.4	71.6	1	10.0-153			1.04	33
Fluorene	0.0800	ND	0.0554	0.0564	69.3	70.5	1	11.0-130			1.79	29
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0585	0.0575	73.1	71.9	1	10.0-137			1.72	32
Naphthalene	0.0800	ND	0.0567	0.0594	70.9	74.3	1	10.0-135			4.65	27
Phenanthrene	0.0800	ND	0.0556	0.0567	69.5	70.9	1	10.0-144			1.96	31
Pyrene	0.0800	ND	0.0601	0.0602	75.1	75.3	1	10.0-148			0.166	35
1-Methylnaphthalene	0.0800	ND	0.0547	0.0569	68.4	71.1	1	10.0-142			3.94	28
2-Methylnaphthalene	0.0800	ND	0.0574	0.0602	71.8	75.3	1	10.0-137			4.76	28
2-Chloronaphthalene	0.0800	ND	0.0576	0.0604	72.0	75.5	1	29.0-120			4.75	24
(S) Nitrobenzene-d5					87.6	98.2		14.0-149				
(S) 2-Fluorobiphenyl					85.3	95.7		34.0-125				
(S) p-Terphenyl-d14					86.0	95.7		23.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3756456-2 02/02/22 17:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	69.8			14.0-149
(S) 2-Fluorobiphenyl	73.5			34.0-125
(S) p-Terphenyl-d14	75.3			23.0-120

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3756456-1 02/02/22 17:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0540	67.5	50.0-126	
Acenaphthene	0.0800	0.0529	66.1	50.0-120	
Acenaphthylene	0.0800	0.0513	64.1	50.0-120	
Benzo(a)anthracene	0.0800	0.0520	65.0	45.0-120	
Benzo(a)pyrene	0.0800	0.0475	59.4	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0546	68.3	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0535	66.9	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0533	66.6	49.0-125	
Chrysene	0.0800	0.0563	70.4	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0533	66.6	47.0-125	
Fluoranthene	0.0800	0.0556	69.5	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3756456-1 02/02/22 17:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0541	67.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0546	68.3	46.0-125	
Naphthalene	0.0800	0.0561	70.1	50.0-120	
Phenanthrene	0.0800	0.0543	67.9	47.0-120	
Pyrene	0.0800	0.0531	66.4	43.0-123	
1-Methylnaphthalene	0.0800	0.0555	69.4	51.0-121	
2-Methylnaphthalene	0.0800	0.0568	71.0	50.0-120	
2-Chloronaphthalene	0.0800	0.0523	65.4	50.0-120	
(S) Nitrobenzene-d5			82.6	14.0-149	
(S) 2-Fluorobiphenyl			81.9	34.0-125	
(S) p-Terphenyl-d14			82.4	23.0-120	

L1455979-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455979-01 02/02/22 22:13 • (MS) R3756456-3 02/02/22 22:33 • (MSD) R3756456-4 02/02/22 22:53

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	ND	0.0644	0.0576	76.7	68.2	1	10.0-145			11.1	30
Acenaphthene	0.0800	ND	0.0583	0.0535	72.9	66.9	1	14.0-127			8.59	27
Acenaphthylene	0.0800	ND	0.0585	0.0554	73.1	69.3	1	21.0-124			5.44	25
Benzo(a)anthracene	0.0800	ND	0.0694	0.0639	80.7	73.9	1	10.0-139			8.25	30
Benzo(a)pyrene	0.0800	ND	0.0718	0.0647	82.4	73.5	1	10.0-141			10.4	31
Benzo(b)fluoranthene	0.0800	0.0176	0.0789	0.0719	76.6	67.9	1	10.0-140			9.28	36
Benzo(g,h,i)perylene	0.0800	0.00778	0.0634	0.0566	69.5	61.0	1	10.0-140			11.3	33
Benzo(k)fluoranthene	0.0800	ND	0.0632	0.0580	72.0	65.5	1	10.0-137			8.58	31
Chrysene	0.0800	0.0100	0.0798	0.0723	87.3	77.9	1	10.0-145			9.86	30
Dibenz(a,h)anthracene	0.0800	ND	0.0562	0.0520	70.3	65.0	1	10.0-132			7.76	31
Fluoranthene	0.0800	0.0154	0.0958	0.0813	101	82.4	1	10.0-153			16.4	33
Fluorene	0.0800	ND	0.0602	0.0552	75.3	69.0	1	11.0-130			8.67	29
Indeno(1,2,3-cd)pyrene	0.0800	0.00729	0.0673	0.0609	75.0	67.0	1	10.0-137			9.98	32
Naphthalene	0.0800	ND	0.0674	0.0613	84.3	76.6	1	10.0-135			9.48	27
Phenanthrene	0.0800	0.00639	0.0787	0.0624	90.4	70.0	1	10.0-144			23.1	31
Pyrene	0.0800	0.0132	0.0845	0.0707	89.1	71.9	1	10.0-148			17.8	35
1-Methylnaphthalene	0.0800	ND	0.0612	0.0572	76.5	71.5	1	10.0-142			6.76	28
2-Methylnaphthalene	0.0800	ND	0.0661	0.0607	82.6	75.9	1	10.0-137			8.52	28
2-Chloronaphthalene	0.0800	ND	0.0547	0.0519	68.4	64.9	1	29.0-120			5.25	24
(S) Nitrobenzene-d5					82.6	79.3		14.0-149				
(S) 2-Fluorobiphenyl					77.7	75.2		34.0-125				
(S) p-Terphenyl-d14					76.4	73.4		23.0-120				

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

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

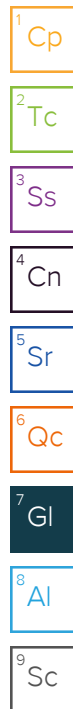
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

## Abbreviations and Definitions

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

## Qualifier Description

J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.



# ACCREDITATIONS & LOCATIONS

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

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

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

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

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







## Entrada Consulting Group

Sample Delivery Group: L1459084

Samples Received: 01/28/2022

Project Number:

Description: PN30 Leak

Report To: Stuart Hall  
240 Mesa Avenue  
Grand Junction, CO 81501

Entire Report Reviewed By:



Chris Ward  
Project Manager

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

## Pace Analytical National

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

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<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



# SAMPLE SUMMARY

PN30 B6 L1459084-01 Solid

Collected by  
Grayson Lewis

Collected date/time  
01/26/22 13:55

Received date/time  
01/28/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1816558	5	02/12/22 17:15	02/14/22 17:56	LD	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

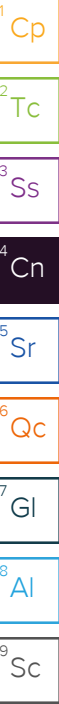
<sup>9</sup>Sc

# CASE NARRATIVE

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



Chris Ward  
Project Manager



Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	7.54		0.100	1.00	5	02/14/2022 17:56	<a href="#">WG1816558</a>

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3759952-1 02/14/22 17:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3759952-2 02/14/22 17:36

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	97.4	97.4	80.0-120	

L1459982-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1459982-13 02/14/22 17:40 • (MS) R3759952-5 02/14/22 17:50 • (MSD) R3759952-6 02/14/22 17:53

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	99.9	2.05	86.8	89.0	84.8	87.0	5	75.0-125			2.54	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

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## Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

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<sup>9</sup> Sc

# ACCREDITATIONS & LOCATIONS

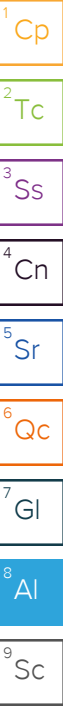
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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



[illegible]



L1455810-06 \*ENTOONGJCO\* RX

R3/R4/RX/EX

Please relog L1455810-06 to a new SDG for ASG

\* \_ \*

*\*Please note that email addresses for staff at the Pace Analytical National Center for Testing & Innovation have changed\*.*

\_My new email address is <u>Chris.Ward@pacelabs.com</u>. Please update your records accordingly.

-

\*\*

\*Thanks,\*

Project Manager2\_

\_ \*Pace Analytical National

\*

12065 Lebanon Road | Mt. Juliet, TN 37122\*\*

[Chris.ward@pacelabs.com](mailto:Chris.ward@pacelabs.com)

| [www.pacenational.com](http://www.pacenational.com)

<u>615.773.9712</u>

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**Time estimate:** oh

**Time spent:** oh

**Members**



Chris Ward (responsible)