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## Report of Work Completed – Facility Decommissioning

<b>COGCC Location Name (ID)</b>	RIO BLANCO FED-63N97W /30NENE (315221)
<b>Client Location Name</b>	Federal 1-30
<b>COGCC Remediation Project #</b>	22838
<b>Legal Description</b>	NENE Section 30, T3N-R97W
<b>Coordinates (Lat/Long)</b>	40.205187 / -108.313490
<b>County</b>	Rio Blanco County, Colorado

Ms. Clark,

Confluence Compliance Companies, LLC (Confluence) prepared this Report of Work Completed (ROWC) for XTO Energy Inc. (XTO) to document recent site investigation activities associated with the abandonment of the FEDERAL 1-30 (API# 05-103-08096) well and associated infrastructure at the Federal 1-30 well pad (Location) previously operated by Sonterra Energy LLC (Sonterra). The Location is 23.5 miles northwest of Meeker, Colorado in Rio Blanco County, as illustrated in the attached Topographic Location Map. Additional information on the Location and the associated remediation project is provided in the title block above, the attached Site Diagrams, and the attached Laboratory Results Summary Table. This ROWC provides background on the Location, methods used to complete the investigation, results of the investigation, and recommendations for how to proceed with this information.

### Background

As required by Colorado Oil and Gas Conservation Commission (COGCC) Rule 911.a, XTO submitted an Initial eForm 27 (Document 402891749) proposing site investigation activities associated with the plans to plug and abandon (P&A) the well and decommission the Location.

### Methodology

From May 10 to July 19, 2022, Confluence was tasked with sampling the Location in accordance with COGCC Rule 911.a to facilitate facility decommissioning. Confluence personnel inspected the wellhead excavation, flowline trenches, and the footprints of all previous equipment and infrastructure, including the tanks, pump jack, separator, meter house, and dehydration unit. Soil from each location was characterized using visual and olfactory observations and field-screened for volatile organic compounds using a photoionization detector (PID). Where field screening indicated impacts to soil in any of these locations, the sample exhibiting the highest degree of impacts based on field screening was collected from the associated area and submitted for laboratory analysis of the complete list of constituents in COGCC Table 915-1. Any impacted soil was segregated and stockpiled on site, and the extent of impacts were investigated through additional excavation and confirmation soil sampling. When no impacts were observed, one sample was collected from the

base of the wellhead excavation, immediately adjacent to the well, areas mostly like to be impacted within the flowline trenches such as connection points or elbows, and in the middle of each equipment footprint.

All characterization soil samples were collected in laboratory provided jars, immediately placed on ice, and shipped for laboratory analysis of constituents listed in COGCC Table 915-1. Additionally, background soil samples were collected from comparable, nearby, non-impacted soil to establish native soil conditions for pH, electrical conductivity (EC), sodium adsorption ratio (SAR) and metals per Rule 915.e.(2).D. Sample locations are illustrated in the attached Site Diagrams.

## Results

These results summarize observations from onsite investigation efforts and associated field screening results. For organizational and presentation purposes the results summary is divided between general observations of lithology and hydrogeology for the entire Location and investigation activities.

### Lithology and Hydrogeology

Lithology at the Location is characterized by fine sandy loam. Groundwater is expected to flow southeast toward Crooked Wash and ultimately the White River, located 3.0 miles southwest of the Location.

### Wellhead Investigation Results

During initial investigation of the wellhead, field screening did not indicate any hydrocarbon impacts within the excavation adjacent to the well. Therefore, one sample collected from the base of the excavation adjacent to the well.

Laboratory results of wellhead excavation sample 220713-FED\_1-30WH@6' indicate compliance with COGCC Table 915-1 Residential Screening Levels except for EC, SAR, and arsenic. EC exceeds at 13.400 millimhos per centimeter (mmhos/cm). SAR exceeds 24.5. Arsenic exceeds at 6.06 milligrams per kilogram (mg/kg). All other analytes are compliant with COGCC Table 915-1 Residential Screening Levels.

### Equipment Footprint Investigation Results

Field screening and observations did not indicate impacts to soil within any of the previous equipment footprints. Therefore, one sample was collected from the center of each footprint and submitted for laboratory analysis. All results are compared to COGCC Table 915-1 Residential Screening Levels.

Laboratory results of the soil sample collected from the separator footprint indicate compliance with COGCC Table 915-1 except for SAR, pH, and arsenic with values of 19.3, 8.73, and 4.41 mg/kg, respectively.

Laboratory results of the soil sample collected from the pumpjack footprint indicate compliance with COGCC Table 915-1 except for EC, SAR, and arsenic with values of 8.840 mmhos/cm, 41.8, and 5.25 mg/kg, respectively.



Laboratory results of the soil sample collected from the meter house footprint indicate compliance with COGCC Table 915-1 except arsenic and chromium (VI) with values of 2.11 mg/kg and 0.565 mg/kg, respectively.

Laboratory results of the soil sample collected from the dehydration unit footprint indicate compliance with COGCC Table 915-1 except arsenic at a value of 3.47 mg/kg.

Laboratory results of the soil sample collected from the above ground produced water tank footprint indicate compliance with COGCC Table 915-1 except for SAR, pH, arsenic, and chromium (VI) with values of 8.96, 9.07, 4.67 mg/kg, and 0.451 mg/kg, respectively.

Laboratory results of the soil sample collected from the oil tank footprint indicate compliance with COGCC Table 915-1 except for SAR, pH, arsenic, and chromium (VI) with values of 6.84, 9.96, 0.810 mg/kg, and 0.345 mg/kg, respectively.

### **Flowline Investigation Results**

Field screening and observations did not indicate impacts to the flowline trenches. Therefore, soil samples were collected from areas most likely to be impacted, such as connections and elbows, and submitted for laboratory analysis. Laboratory results of flowline trench soil samples indicate compliance with COGCC Table 915-1 except for EC, SAR, pH, arsenic, and chromium (VI). EC exceedances range from 8.450 mmhos/cm to 9.220 mmhos/cm. SAR exceedances range from 6.11 to 60.7. Values of pH exceeding COGCC Table 915-1 range from 8.40 to 9.35. Arsenic exceedances within the flowline trenches range from 2.33 mg/kg to 6.48 mg/kg. Chromium (VI) exceedances range from 0.361 mg/kg to 1.35 mg/kg. All other analytes are compliant with COGCC Table 915-1 allowable limits.

### **Dumpline Investigation Results**

Field screening and observations did not indicate impacts to the dumpline excavations. Therefore, soil samples were collected from areas most likely to be impacted and submitted for laboratory analysis. Laboratory results of dumpline soil samples indicate compliance with COGCC Table 915-1 except for EC, SAR, pH, arsenic, and chromium (VI). EC and SAR exceedances were only observed at the produced water tank dumpline with values of 6.140 mmhos/cm and 67.4, respectively. Values of pH exceeding COGCC Table 915-1 range from 8.41 to 9.35. Arsenic exceedances range from 3.60 mg/kg to 6.20 mg/kg. Chromium (VI) exceedances range from 0.506 mg/kg to 0.622 mg/kg. All other analytes are compliant with COGCC Table 915-1.

### **Background Investigation Results**

Laboratory results of background soil samples indicate values of EC, SAR, pH, boron, arsenic, and chromium (VI) exceeding COGCC Table 915-1. EC exceedances range from 6.460 mmhos/cm to 20.200 mmhos/cm. SAR exceedances range from 55.3 to 2,030. Values of pH exceeding COGCC Table 915-1 range from 8.52 to 10.3. Boron exceedances range from 2.36 milligrams per liter (mg/L) to 6.29 mg/L. Arsenic exceedances range from 0.843 mg/kg to 6.67 mg/kg. Chromium (VI) exceedances range from 0.344 mg/kg to 0.414 mg/kg.

## **Analysis and Recommendations**



EC, SAR, pH, arsenic, and chromium (VI) values above COGCC Table 915-1 standards remain within investigated areas associated with the P&A of the Location. However, background data indicates the EC, SAR, pH, and arsenic exceedances are within naturally occurring levels at the Location. Although background Soil Suitability for Reclamation (SSR) may appear to be anomalously elevated, the results were confirmed multiple times over multiple sampling events. The native soil near the Location is visibly alkali and the soil type (Tisworth fine sandy loam) is noted to be high in salt and pH. Confluence recommends that XTO request consideration of COGCC Table 915-1 Footnote 1 to establish alternative allowable limits for EC, SAR, pH and COGCC Table 915-1 Footnote 11 to establish an alternative allowable limit for arsenic.

Chromium (VI) exceedances remain within the project area. However, the exceedances in all soil samples except 220719-FED\_1\_30\_WELL\_HEAD\_PUMP\_JACK@4' are labeled with a "J" qualifier; stating that the identification of the analyte was made, however, the concentration is only an estimate due to a minimal amount of the analyte being exhibited in the sample material. Confluence recommends that XTO request the consideration of the "J" qualifier from the COGCC.

Based on these results and analysis, Confluence recommends that XTO conduct additional excavation at the wellhead flowline connection to address the chromium (VI) exceedance of 1.35 mg/kg. Additionally, it is recommended that prior to any additional excavation, XTO present this data to the COGCC with a request to reduce the sampling suite of future confirmation samples to chromium (VI).

Confluence is grateful for the opportunity to support you with this project. If you have any questions about the methods, results, or recommendations presented here, please do not hesitate to contact me.

Regards,



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Senior Project Manager  
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## Attachments

- Topographic Location Map
- Site Diagram – Pipeline Abandonment Soil Samples
- Site Diagram – Equipment Abandonment Soil Samples
- Site Diagram – Background Samples
- Laboratory Results Summary Table
- Laboratory Reports





## Topographic Location Map

SONTERRA ENERGY, L.L.C.

Federal 1-30

(RIO BLANCO FED-63N97W /30NENE)

COGCC Location ID: 315221

Rio Blanco County

NENE Sec. 30 T3N-R97W



Topographic map sourced from 2020 Earth Point using data provided by United States Geological Survey

Created by: Chris McKisson on 12/07/2021.

Federal 1-30

RIDGE

SPRINGS

DANFORTH

HILLS

MOFFAT CO.  
RIO BLANCO CO.

Colorado

Mountain

White

State

Section

Range

Township

County

State

Section

Range

Township

County

State

Section

Range

Township

County

State

Section

Range

Township

County

State



## Site Diagram Pipeline Abandonment Soil Samples

**Sonterra Energy, L.L.C.**

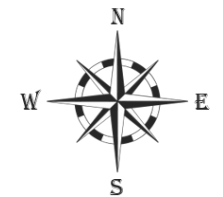
Federal 1-30

( Rio BLANCO FED-63N97W /30NENE)

COGCC Location ID: 315221

Rio Blanco County

NENE Sec. 30 T3S-R97W

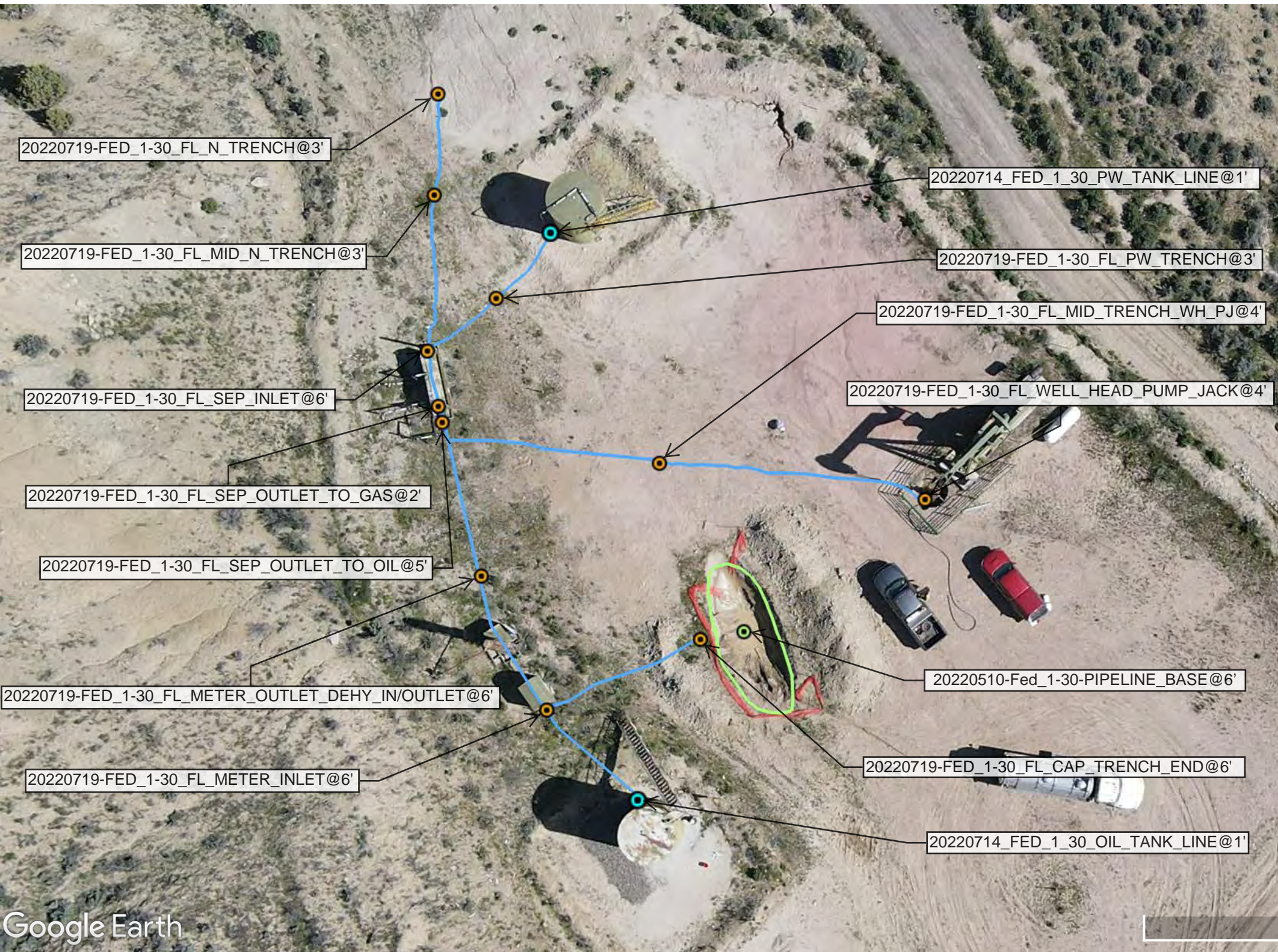


### Legend

- Soil sample – 05/10/2022
- Soil sample – 07/14/2022
- Soil sample – 07/19/2022
- Pipeline Excavation – 05/10/2022
- Piping Trench

Spatial data was collected using a handheld GPS unit with submeter accuracy. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. The position of illustrated data may have been manually adjusted to align with the aerial imagery in a manner more representative of field conditions for presentation purposes only.

Map created by: Chris McKisson on 08/19/2022.





## Site Diagram Equipment Abandonment Soil Samples

**Sonterra Energy, L.L.C.**

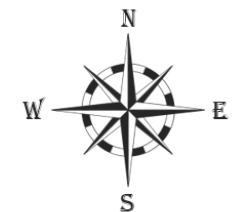
Federal 1-30

( Rio BLANCO FED-63N97W /30NENE)



COGCC Location ID: 315221

Rio Blanco County

NENE Sec. 30 T3S-R97W



### Legend

-  Soil sample – 07/14/2022
-  Soil sample – 07/19/2022

Spatial data was collected using a handheld GPS unit with submeter accuracy. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. The position of illustrated data may have been manually adjusted to align with the aerial imagery in a manner more representative of field conditions for presentation purposes only.

Map created by: Chris McKisson on 08/19/2022.

20220714\_FED\_1\_30\_PW\_TANK@1'

220713-Fed\_1-30-SEP@1'

220713-Fed\_1-30-DEHY@1'

220713-Fed\_1-30-MH@1'

20220714\_FED\_1\_30\_OIL\_TANK@1'

220713-Fed\_1-30-PJ@1'

220713-Fed\_1-30-WH@6'





**Site Diagram**  
**Background Samples**

**SONTERRA ENERGY, L.L.C.**

Federal 1-30  
(RIO BLANCO FED-63N97W /30NENE)  
COGCC Location ID: 315221  
Rio Blanco County  
NENE Sec. 30 T3N-R97W



**Legend**

-  Background Sample – 05/13/2022
-  Background Sample – 07/13/2022

Spatial data was collected using a handheld GPS unit with submeter accuracy. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. The position of illustrated data may have been manually adjusted to align with the aerial imagery in a manner more representative of field conditions for presentation purposes only.

Map created by: Andrew Smith on 07/19/2022.





Soil Screening and Remediation Limits			Organic Compounds (mg/kg [ppm])																									
COGCC Table 915-1 Residential -->			500	NA	NA	NA	1.2	490	5.8	58	30	27	360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	18	24	2	180	
Sample Date	Solid/Soil Source (Equipment [Vault/Sump, Separator, Tank Battery, Dump Line, Pit, Cuttings, Background, etc.]	Sample ID	TPH (total volatile and extractable petroleum hydrocarbons) (GRO+DRO+ORO)	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C28) High Fraction	TPH-ORO (C28-C36) High Fraction	Benzene	Toluene	Ethylbenzene	Xylenes - total (sum of o-, m-, p- isomers)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Acenaphthene	Anthracene	Benzo(A)anthracene	Benzo(A)pyrene	Benzo(B)fluoranthene	Benzo(K)fluoranthene	Chrysene	Dibenzo(A,H)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3,CD)pyrene	1- Methyl-naphthalene	2- Methyl-naphthalene	Naphthalene	Pyrene	
7/13/2022	Well Head	220713-FED_1-30WH@6'	89.1	0.224	32.5	56.4	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	0.00361	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600	
7/14/2022	Tank	PW_TANK@1'	71.9	0.294	40.6	31.0	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600	
7/14/2022	Tank	OIL_TANK@1'	1.74	<0.100	<4.00	1.74	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600	
7/13/2022	Separator	220713-FED_1-30SEP@1'	43.0	<0.100	27.1	15.9	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	0.00213	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600	
7/13/2022	Pump Jack	220713-FED_1-30PJ@1'	5.80	0.0678	2.19	3.54	<0.00100	<0.00500	<0.00250	<0.00650	0.00703	0.0143	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600	
7/13/2022	Meter House	220713-FED_1-30MH@1'	25.5	0.0455	7.41	18.0	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	0.00200	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600	
5/10/2022	Flowline	20220510-Fed_1-30-PIPELINE_BASE@6'	1.62	0.0322	<4.00	1.59	<0.00100	<0.00500	<0.000737	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.00600	
7/19/2022	Flowline	220719_FED_1_30_SEP_INLET@6'	46.2	0.0525	18.1	28.0	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600	
7/19/2022	Flowline	220719-FED_1_30_SEP_OUTLET_TO_OIL@5'	55.5	0.104	35.3	20.1	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	0.00388	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600	
7/19/2022	Flowline	220719-FED_1_30_N_TRENCH@3'	3.35	0.0533	<4.00	3.30	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600	
7/19/2022	Flowline	220719-FED_1_30_METER_OUTLET_DEHY_IN/OUTLET@6'	1.47	0.0727	<4.00	1.40	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600	
7/19/2022	Flowline	220719-FED_1_30_MID_TRENCH_WH_PJ@4'	143	0.0265	112	30.6	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	0.00204	
7/19/2022	Flowline	220719_FED_1_30_MID_N_TRENCH@3'	4.63	0.0402	<4.00	4.59	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600	
7/19/2022	Flowline	220719-FED_1_30_WELL_HEAD_PUMP_JACK@4'	46.8	0.428	24.9	21.5	0.005000	<0.00500	<0.00250	0.00721	0.00660	0.00480	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	0.00510	<0.00600	0.0109	0.00942	<0.0200	<0.00600	
7/19/2022	Flowline	220719-FED_1_30_METER_INLET@6'	4.33	0.0608	<4.00	4.27	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600	
7/19/2022	Flowline	220719-FED_1_30_CAP_TRENCH_END@6'	3.11	0.0580	<4.00	3.05	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	0.00440	<0.00600	
7/14/2022	Dumpline	OIL_TANK_LINE@1'	33.9	0.0616	13.5	20.3	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600	
7/14/2022	Dumpline	PW_TANK_LINE@1'	435	0.108	362	73.0	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	0.0324	<0.00600	0.00246	<0.00600	0.00238	<0.00600	0.00363	<0.00600	0.0129	0.0313	<0.00600	<0.0200	<0.0200	<0.0200	0.0259	
7/13/2022	Dehy	220713-FED_1-30DEHY@1'	6.66	<0.100	2.68	3.98	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600	
5/13/2022	Background	20220513-FED_1-30-BGN(1215)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
5/13/2022	Background	20220513-FED_1-30-BGN(1205)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
5/13/2022	Background	20220513-FED_1-30-BGN(1220)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
5/13/2022	Background	20220513-FED_1-30-BGN(1235)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
7/13/2022	Background	220713-FED_1-30BG(0935)@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
7/13/2022	Background	220713-FED_1-30BG(0945)@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
7/13/2022	Background	220713-FED_1-30BG(0930)@1'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	



Soil Screening and Remediation Limits			Soil Suitability for Reclamation				Metals (mg/kg [ppm])										
COGCC Table 915-1 Residential -->			4	6	6-8.3	2	0.68	15000	71	0.3	3100	400	NA	1500	390	390	23000
Sample Date	Solid/Soil Source (Equipment [Vault/Sump, Separator, Tank Battery, Dump Line, Pit, Cuttings, Background, etc.]	Sample ID	EC (Specific Conductance) (millimhos/centimeter) (by saturated paste method)	SAR (Sodium Adsorption Ratio) (calculation) (by saturated paste method)	pH (pH Units) (by saturated paste method)	Boron - Hot Water Soluble (mg/L)	Arsenic	Barium	Cadmium (mg/kg)	Chromium (VI)	Copper	Lead	Mercury (Total Mercury by EPA 7471)	Nickel	Selenium	Silver	Zinc
7/13/2022	Well Head	220713-FED_1-30WH@6'	13.400	24.5	7.84	1.26	6.06	108	0.470	<1.00	30.2	14.4	NA	17.6	<2.00	<1.00	71.6
7/14/2022	Tank	PW_TANK@1'	1.750	8.96	9.07	0.281	4.67	145	0.246	0.451	19.1	10.9	NA	14.5	<2.00	<1.00	53.2
7/14/2022	Tank	OIL_TANK@1'	0.435	6.84	9.96	0.180	0.810	46.2	2.20	0.345	40.9	31.6	NA	18.8	<2.00	<1.00	64.1
7/13/2022	Separator	220713-FED_1-30SEP@1'	1.260	19.3	8.73	0.676	4.41	156	0.483	<1.00	26.0	18.1	NA	17.0	<2.00	<1.00	64.3
7/13/2022	Pump Jack	220713-FED_1-30PJ@1'	8.840	41.8	8.12	0.632	5.25	776	0.438	<1.00	27.2	28.0	NA	17.2	<2.00	<1.00	101
7/13/2022	Meter House	220713-FED_1-30MH@1'	0.262	0.261	8.26	0.551	2.11	226	0.187	0.565	36.8	11.9	NA	21.8	<2.00	<1.00	78.9
5/10/2022	Flowline	20220510-Fed_1-30-PIPELINE_BASE@6'	0.542	1.23	9.35	0.426	5.47	423	0.687	0.404	23.0	16.3	NA	16.0	<2.00	<1.00	58.0
7/19/2022	Flowline	220719_FED_1_30_SEP_INLET@6'	1.280	8.98	8.59	0.794	2.33	199	0.294	0.361	27.3	25.1	NA	15.2	<2.00	<1.00	56.7
7/19/2022	Flowline	220719-FED_1_30_SEP_OUTLET_TO_OIL@5'	0.507	6.46	9.15	0.949	2.65	2590	0.362	0.425	32.0	15.5	NA	19.6	<2.00	<1.00	77.6
7/19/2022	Flowline	220719-FED_1_30_N_TRENCH@3'	3.200	42.5	9.15	0.942	4.01	2520	0.382	0.435	26.1	30.0	NA	15.4	<2.00	<1.00	64.5
7/19/2022	Flowline	220719-FED_1_30_METER_OUTLET_DEHY_IN/OUTLET@6'	1.000	16.0	9.11	0.848	5.71	81.6	0.397	0.441	25.8	13.9	NA	17.6	<2.00	<1.00	63.7
7/19/2022	Flowline	220719-FED_1_30_MID_TRENCH_WH_PJ@4'	8.450	60.7	8.86	0.419	6.40	589	0.384	0.538	24.8	23.7	NA	16.3	<2.00	<1.00	84.2
7/19/2022	Flowline	220719_FED_1_30_MID_N_TRENCH@3'	1.120	6.11	8.42	0.586	6.05	196	0.597	0.854	34.3	20.3	NA	19.5	<2.00	<1.00	74.4
7/19/2022	Flowline	220719-FED_1_30_WELL_HEAD_PUMP_JACK@4'	9.220	36.5	8.03	0.935	5.95	302	0.456	1.35	28.7	19.6	NA	16.2	<2.00	<1.00	72.2
7/19/2022	Flowline	220719-FED_1_30_METER_INLET@6'	0.304	1.14	8.40	0.712	5.64	123	0.400	<1.00	25.8	14.6	NA	18.5	<2.00	<1.00	67.6
7/19/2022	Flowline	220719-FED_1_30_CAP_TRENCH_END@6'	2.740	16.5	8.50	0.503	6.48	105	0.372	<1.00	24.6	15.6	NA	16.6	<2.00	<1.00	61.9
7/14/2022	Dumpline	OIL_TANK_LINE@1'	0.439	3.10	9.35	0.212	3.60	126	0.266	0.622	41.3	12.9	NA	21.8	<2.00	<1.00	69.7
7/14/2022	Dumpline	PW_TANK_LINE@1'	6.140	67.4	8.41	1.04	6.20	608	0.217	0.506	23.2	16.5	NA	17.0	<2.00	<1.00	65.5
7/13/2022	Dehy	220713-FED_1-30DEHY@1'	0.933	3.04	7.99	1.42	3.47	223	0.579	<1.00	35.1	12.8	NA	22.3	<2.00	<1.00	84.7
5/13/2022	Background	20220513-FED_1-30-BGN(1215)	0.0592	1.38	8.25	0.502	0.843	18.2	0.131	0.414	46.9	21.2	NA	13.1	<2.00	<1.00	56.3
5/13/2022	Background	20220513-FED_1-30-BGN(1205)	0.120	0.378	8.13	0.316	1.47	28.2	0.582	<1.00	41.3	20.5	NA	24.1	<2.00	<1.00	91.6
5/13/2022	Background	20220513-FED_1-30-BGN(1220)	0.136	0.306	8.52	0.283	2.52	38.1	0.344	0.344	33.6	18.2	NA	18.0	<2.00	<1.00	74.3
5/13/2022	Background	20220513-FED_1-30-BGN(1235)	20.200	2030	10.1	6.29	6.76	36.1	0.292	0.298	23.0	12.5	NA	12.9	<2.00	<1.00	54.6
7/13/2022	Background	220713-FED_1-30BG(0935)@0.5'	6.460	308	9.84	2.36	2.68	34.9	0.210	<1.00	7.56	5.95	NA	5.97	<2.00	<1.00	24.3
7/13/2022	Background	220713-FED_1-30BG(0945)@0.5'	8.600	306	10.3	1.89	2.72	95.6	0.172	<1.00	8.71	6.62	NA	5.91	<2.00	<1.00	24.8
7/13/2022	Background	220713-FED_1-30BG(0930)@1'	1.630	55.3	9.57	1.32	3.83	44.6	0.281	<1.00	10.0	7.66	NA	7.28	<2.00	<1.00	29.0



## Confluence Compliance Companies - CO

Sample Delivery Group: L1492937

Samples Received: 05/12/2022

Project Number:

Description: P&amp;A

Report To: Chris McKisson  
403 ½ Rockwood Lane  
Grand Junction, CO 81507

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.



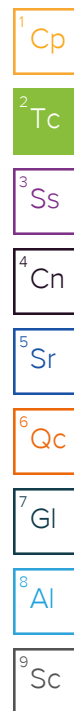
## Pace Analytical National

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



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# SAMPLE SUMMARY

20220510-FED_1-30-PIPELINE_BASE@6' L1492937-01 Solid				Collected by Alex Slorby	Collected date/time 05/10/22 13:30	Received date/time 05/12/22 09:00	1 Cp
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location	2 Tc
Calculated Results	WG1865266	1	05/18/22 23:43	05/18/22 23:43	CCE	Mt. Juliet, TN	3 Ss
Wet Chemistry by Method 7199	WG1864659	1	05/17/22 23:57	05/19/22 11:38	SCM	Mt. Juliet, TN	4 Cn
Wet Chemistry by Method 9045D	WG1866246	1	05/19/22 13:50	05/19/22 13:55	EPW	Mt. Juliet, TN	5 Sr
Wet Chemistry by Method 9050AMod	WG1864049	1	05/15/22 13:56	05/15/22 17:41	ARD	Mt. Juliet, TN	6 Qc
Metals (ICP) by Method 6010B	WG1864463	1	05/17/22 07:23	05/18/22 18:06	ZSA	Mt. Juliet, TN	7 Gl
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1865268	2	05/18/22 00:08	05/19/22 02:00	CCE	Mt. Juliet, TN	8 Al
Metals (ICPMS) by Method 6020	WG1864465	5	05/17/22 07:42	05/17/22 17:00	LD	Mt. Juliet, TN	9 Sc
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1863882	1	05/13/22 16:46	05/18/22 12:22	BMB	Mt. Juliet, TN	
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1864071	1	05/13/22 16:46	05/15/22 11:41	ACG	Mt. Juliet, TN	
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1867115	1	05/20/22 17:30	05/21/22 15:51	JDG	Mt. Juliet, TN	
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1865823	1	05/18/22 21:12	05/19/22 05:20	AMG	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	1.23		1	05/18/2022 23:43	WG1865266

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.404	J	0.255	1.00	1	05/19/2022 11:38	WG1864659

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.35	T8	1	05/19/2022 13:55	WG1866246

Sample Narrative:  
L1492937-01 WG1866246: 9.35 at 23C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	542		10.0	1	05/15/2022 17:41	WG1864049

Sample Narrative:  
L1492937-01 WG1864049: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	423	J3 V	0.0852	0.500	1	05/18/2022 18:06	WG1864463
Cadmium	0.687		0.0471	0.500	1	05/18/2022 18:06	WG1864463
Copper	23.0		0.400	2.00	1	05/18/2022 18:06	WG1864463
Lead	16.3	O1	0.208	0.500	1	05/18/2022 18:06	WG1864463
Nickel	16.0		0.132	2.00	1	05/18/2022 18:06	WG1864463
Selenium	U		0.764	2.00	1	05/18/2022 18:06	WG1864463
Silver	U		0.127	1.00	1	05/18/2022 18:06	WG1864463
Zinc	58.0		0.832	5.00	1	05/18/2022 18:06	WG1864463

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.426		0.0334	0.400	2	05/19/2022 02:00	WG1865268

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.47	O1	0.100	1.00	5	05/17/2022 17:00	WG1864465

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0322	J	0.0217	0.100	1	05/18/2022 12:22	WG1863882
(S) a,a,a-Trifluorotoluene(FID)	94.5			77.0-120		05/18/2022 12:22	WG1863882

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	05/15/2022 11:41	<a href="#">WG1864071</a>
Toluene	U		0.00130	0.00500	1	05/15/2022 11:41	<a href="#">WG1864071</a>
Ethylbenzene	U		0.000737	0.00250	1	05/15/2022 11:41	<a href="#">WG1864071</a>
Xylenes, Total	U		0.000880	0.00650	1	05/15/2022 11:41	<a href="#">WG1864071</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/15/2022 11:41	<a href="#">WG1864071</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/15/2022 11:41	<a href="#">WG1864071</a>
(S) Toluene-d8	112			75.0-131		05/15/2022 11:41	<a href="#">WG1864071</a>
(S) 4-Bromofluorobenzene	87.1			67.0-138		05/15/2022 11:41	<a href="#">WG1864071</a>
(S) 1,2-Dichloroethane-d4	102			70.0-130		05/15/2022 11:41	<a href="#">WG1864071</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.61	4.00	1	05/21/2022 15:51	<a href="#">WG1867115</a>
C28-C36 Motor Oil Range	1.59	<a href="#">B J</a>	0.274	4.00	1	05/21/2022 15:51	<a href="#">WG1867115</a>
(S) o-Terphenyl	52.5			18.0-148		05/21/2022 15:51	<a href="#">WG1867115</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Acenaphthene	U		0.00209	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Acenaphthylene	U		0.00216	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Chrysene	U		0.00232	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Fluoranthene	U		0.00227	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Fluorene	U		0.00205	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Naphthalene	U		0.00408	0.0200	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Phenanthrene	U		0.00231	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
Pyrene	U		0.00200	0.00600	1	05/19/2022 05:20	<a href="#">WG1865823</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	05/19/2022 05:20	<a href="#">WG1865823</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	05/19/2022 05:20	<a href="#">WG1865823</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	05/19/2022 05:20	<a href="#">WG1865823</a>
(S) p-Terphenyl-d14	86.3			23.0-120		05/19/2022 05:20	<a href="#">WG1865823</a>
(S) Nitrobenzene-d5	65.3			14.0-149		05/19/2022 05:20	<a href="#">WG1865823</a>
(S) 2-Fluorobiphenyl	67.9			34.0-125		05/19/2022 05:20	<a href="#">WG1865823</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3793808-1 05/19/22 10:51

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

L1489944-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1489944-01 05/19/22 11:02 • (DUP) R3793808-3 05/19/22 11:07

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	0.555	0.610	1	9.50	⌵	20

L1492939-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1492939-06 05/19/22 12:19 • (DUP) R3793808-4 05/19/22 12:25

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

Laboratory Control Sample (LCS)

(LCS) R3793808-2 05/19/22 10:56

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.1	101	80.0-120	

L1492955-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1492955-04 05/19/22 12:56 • (MS) R3793808-5 05/19/22 13:01 • (MSD) R3793808-6 05/19/22 13:06

	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	U	16.0	13.1	80.0	65.5	1	75.0-125		J6	19.9	20

L1492955-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1492955-04 05/19/22 12:56 • (MS) R3793808-7 05/19/22 13:11

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	651	U	656	101	50	75.0-125	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



L1494981-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1494981-02 05/19/22 13:55 • (DUP) R3793910-2 05/19/22 13:55

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	pH	su		%		%
pH	7.72	7.66	1	0.780		1

Sample Narrative:

OS: 7.72 at 22.8C

DUP: 7.66 at 22.9C



L1494981-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1494981-03 05/19/22 13:55 • (DUP) R3793910-3 05/19/22 13:55

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	pH	su		%		%
pH	7.58	7.57	1	0.132		1

Sample Narrative:

OS: 7.58 at 23C

DUP: 7.57 at 23.2C

Laboratory Control Sample (LCS)

(LCS) R3793910-1 05/19/22 13:55

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	9.91	99.1	99.0-101	

Sample Narrative:

LCS: 9.91 at 23C

Method Blank (MB)

(MB) R3791987-1 05/15/22 17:41

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

L1492939-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1492939-01 05/15/22 17:41 • (DUP) R3791987-3 05/15/22 17:41

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1300	1310	1	0.614		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1492957-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1492957-01 05/15/22 17:41 • (DUP) R3791987-4 05/15/22 17:41

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	687	619	1	10.4		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3791987-2 05/15/22 17:41

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	280	105	85.0-115	

Sample Narrative:

LCS: at 25C

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



Method Blank (MB)

(MB) R3793447-1 05/18/22 18:01

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

Laboratory Control Sample (LCS)

(LCS) R3793447-2 05/18/22 18:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	104	104	80.0-120	
Cadmium	100	100	100	80.0-120	
Copper	100	102	102	80.0-120	
Lead	100	100	100	80.0-120	
Nickel	100	102	102	80.0-120	
Selenium	100	104	104	80.0-120	
Silver	20.0	19.9	99.7	80.0-120	
Zinc	100	98.2	98.2	80.0-120	

L1492937-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1492937-01 05/18/22 18:06 • (MS) R3793447-5 05/18/22 18:15 • (MSD) R3793447-6 05/18/22 18:17

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	423	612	500	189	77.2	1	75.0-125	V	J3	20.1	20
Cadmium	100	0.687	109	101	109	100	1	75.0-125			7.75	20
Copper	100	23.0	138	130	115	107	1	75.0-125			6.58	20
Lead	100	16.3	127	118	111	102	1	75.0-125			7.42	20
Nickel	100	16.0	130	121	114	105	1	75.0-125			7.00	20
Selenium	100	U	113	105	113	105	1	75.0-125			7.57	20
Silver	20.0	U	21.8	20.3	109	102	1	75.0-125			6.96	20
Zinc	100	58.0	166	156	108	97.6	1	75.0-125			6.48	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3793538-1 05/19/22 01:53

Analyte	MB Result mg/l	MB Qualifier	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) R3793538-2 05/19/22 01:55 • (LCSD) R3793538-3 05/19/22 01:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.06	1.06	106	106	80.0-120			0.497	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) R3792911-1 05/17/22 16:53

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) R3792911-2 05/17/22 16:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	88.7	88.7	80.0-120	

L1492937-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1492937-01 05/17/22 17:00 • (MS) R3792911-5 05/17/22 17:10 • (MSD) R3792911-6 05/17/22 17:13

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	5.47	96.6	86.0	91.2	80.6	5	75.0-125			11.6	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3793487-2 05/18/22 11:35

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)	98.9			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3793487-1 05/18/22 10:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.82	106	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			105	77.0-120	

L1492937-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1492937-01 05/18/22 12:22 • (MS) R3793487-3 05/18/22 19:10 • (MSD) R3793487-4 05/18/22 19:30

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 %
TPH (GC/FID) Low Fraction	5.45	0.0322	5.53	6.11	101	111	1	10.0-151			9.97	28
(S) a,a,a-Trifluorotoluene(FID)					109	112		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3792603-3 05/15/22 09:45

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	113			75.0-131
(S) 4-Bromofluorobenzene	83.1			67.0-138
(S) 1,2-Dichloroethane-d4	97.2			70.0-130

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

(LCS) R3792603-1 05/15/22 08:28 • (LCSD) R3792603-2 05/15/22 08:47

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	0.115	0.116	92.0	92.8	70.0-123			0.866	20
Toluene	0.125	0.130	0.128	104	102	75.0-121			1.55	20
Ethylbenzene	0.125	0.142	0.143	114	114	74.0-126			0.702	20
Xylenes, Total	0.375	0.416	0.411	111	110	72.0-127			1.21	20
1,2,4-Trimethylbenzene	0.125	0.125	0.122	100	97.6	70.0-126			2.43	20
1,3,5-Trimethylbenzene	0.125	0.119	0.118	95.2	94.4	73.0-127			0.844	20
(S) Toluene-d8				99.4	101	75.0-131				
(S) 4-Bromofluorobenzene				93.8	94.8	67.0-138				
(S) 1,2-Dichloroethane-d4				113	112	70.0-130				

1  
Cp

2  
Tc

3  
Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

Method Blank (MB)

(MB) R3794924-1 05/21/22 10:17

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	0.316	⌵	0.274	4.00
(S) o-Terphenyl	66.5			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3794924-2 05/21/22 10:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	33.4	66.8	50.0-150	
(S) o-Terphenyl			55.6	18.0-148	

L1492939-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1492939-07 05/21/22 16:46 • (MS) R3794924-3 05/21/22 16:59 • (MSD) R3794924-4 05/21/22 17:13

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	227	304	461	154	468	1	50.0-150	⌵	E J3 ⌵	41.0	20
(S) o-Terphenyl					43.4	84.5		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3793741-2 05/19/22 05:02

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) p-Terphenyl-d14	101			23.0-120
(S) Nitrobenzene-d5	67.3			14.0-149
(S) 2-Fluorobiphenyl	77.2			34.0-125

<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) R3793741-1 05/19/22 04:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0573	71.6	50.0-126	
Acenaphthene	0.0800	0.0622	77.8	50.0-120	
Acenaphthylene	0.0800	0.0610	76.3	50.0-120	
Benzo(a)anthracene	0.0800	0.0579	72.4	45.0-120	
Benzo(a)pyrene	0.0800	0.0543	67.9	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0767	95.9	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0668	83.5	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0715	89.4	49.0-125	
Chrysene	0.0800	0.0667	83.4	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0645	80.6	47.0-125	
Fluoranthene	0.0800	0.0597	74.6	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3793741-1 05/19/22 04:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0624	78.0	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0617	77.1	46.0-125	
Naphthalene	0.0800	0.0609	76.1	50.0-120	
Phenanthrene	0.0800	0.0644	80.5	47.0-120	
Pyrene	0.0800	0.0693	86.6	43.0-123	
1-Methylnaphthalene	0.0800	0.0622	77.8	51.0-121	
2-Methylnaphthalene	0.0800	0.0596	74.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0633	79.1	50.0-120	
(S) p-Terphenyl-d14			98.2	23.0-120	
(S) Nitrobenzene-d5			74.6	14.0-149	
(S) 2-Fluorobiphenyl			78.7	34.0-125	

L1492236-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1492236-16 05/19/22 10:59 • (MS) R3793741-3 05/19/22 11:17 • (MSD) R3793741-4 05/19/22 11:35

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	U	0.0646	0.0705	80.7	88.1	1	10.0-145			8.73	30
Acenaphthene	0.0800	0.113	0.0993	0.0954	0.000	0.000	1	14.0-127	J6	J6	4.01	27
Acenaphthylene	0.0800	U	0.0694	0.0728	86.8	91.0	1	21.0-124			4.78	25
Benzo(a)anthracene	0.0800	0.0377	0.0736	0.0835	44.9	57.3	1	10.0-139			12.6	30
Benzo(a)pyrene	0.0800	0.0422	0.0675	0.0822	31.6	50.0	1	10.0-141			19.6	31
Benzo(b)fluoranthene	0.0800	0.0510	0.0692	0.0915	22.8	50.6	1	10.0-140			27.8	36
Benzo(g,h,i)perylene	0.0800	0.0428	0.0627	0.0808	24.9	47.5	1	10.0-140			25.2	33
Benzo(k)fluoranthene	0.0800	0.0170	0.0556	0.0696	48.3	65.8	1	10.0-137			22.4	31
Chrysene	0.0800	0.0483	0.0789	0.0907	38.3	53.0	1	10.0-145			13.9	30
Dibenz(a,h)anthracene	0.0800	0.00784	0.0527	0.0612	56.1	66.7	1	10.0-132			14.9	31
Fluoranthene	0.0800	0.112	0.100	0.0991	0.000	0.000	1	10.0-153	J6	J6	0.904	33
Fluorene	0.0800	0.139	0.0896	0.0971	0.000	0.000	1	11.0-130	J6	J6	8.03	29
Indeno(1,2,3-cd)pyrene	0.0800	0.0327	0.0599	0.0801	34.0	59.3	1	10.0-137			28.9	32
Naphthalene	0.0800	0.0814	0.0669	0.0776	0.000	0.000	1	10.0-135	J6	J6	14.8	27
Phenanthrene	0.0800	0.211	0.118	0.129	0.000	0.000	1	10.0-144	J6	J6	8.91	31
Pyrene	0.0800	0.169	0.128	0.114	0.000	0.000	1	10.0-148	J6	J6	11.6	35
1-Methylnaphthalene	0.0800	0.249	0.106	0.177	0.000	0.000	1	10.0-142	J6	J3 J6	50.2	28
2-Methylnaphthalene	0.0800	0.138	0.0807	0.237	0.000	124	1	10.0-137	J6	J3	98.4	28
2-Chloronaphthalene	0.0800	U	0.0532	0.0571	66.5	71.4	1	29.0-120			7.07	24
(S) p-Terphenyl-d14					78.7	88.1		23.0-120				
(S) Nitrobenzene-d5					58.0	68.3		14.0-149				
(S) 2-Fluorobiphenyl					68.3	73.5		34.0-125				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

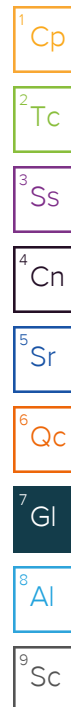
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

### Abbreviations and Definitions

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

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.



# ACCREDITATIONS & LOCATIONS

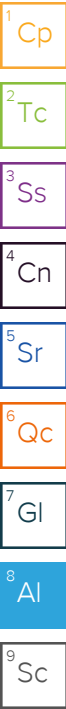
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.





H71 Mar

**Confluence Compliance Companies - CO**

Sample Delivery Group: L1516270  
Samples Received: 07/19/2022  
Project Number:  
Description: Federal 1-30 P&A  
Site: FEDERAL 1-30  
Report To: Chris McKisson  
403 ½ Rockwood Lane  
Grand Junction, CO 81507

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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# SAMPLE SUMMARY

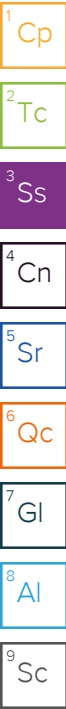
## 220713-FED\_1-30MH@1' L1516270-01 Solid

Collected by  
Andrew Smith

Collected date/time  
07/13/22 08:50

Received date/time  
07/19/22 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902326	1	08/01/22 17:42	08/01/22 17:42	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1904736	1	08/10/22 23:49	08/12/22 08:55	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1898105	1	07/20/22 13:16	07/20/22 14:50	SDE	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901909	1	07/31/22 07:01	07/31/22 09:54	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1898401	1	07/28/22 17:04	07/30/22 00:11	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903564	1	07/31/22 17:02	08/05/22 00:05	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1898410	5	07/28/22 17:08	07/30/22 03:18	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1897815	1	07/19/22 19:30	07/22/22 04:45	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899141	1	07/19/22 19:30	07/22/22 12:38	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1900464	1	07/25/22 17:39	07/26/22 21:13	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1900466	1	07/26/22 04:51	07/27/22 00:21	AMM	Mt. Juliet, TN



## 220713-FED\_1-30PJ@1' L1516270-02 Solid

Collected by  
Andrew Smith

Collected date/time  
07/13/22 08:55

Received date/time  
07/19/22 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902326	1	08/01/22 17:45	08/01/22 17:45	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1904736	1	08/10/22 23:49	08/12/22 09:00	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1898105	1	07/20/22 13:16	07/20/22 14:50	SDE	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901909	1	07/31/22 07:01	07/31/22 09:54	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1898401	1	07/28/22 17:04	07/29/22 22:59	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903564	1	07/31/22 17:02	08/05/22 00:08	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1898410	5	07/28/22 17:08	07/30/22 01:49	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1897815	1	07/19/22 19:30	07/22/22 05:20	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899141	1	07/19/22 19:30	07/22/22 12:58	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1900464	1	07/25/22 17:39	07/26/22 19:54	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1900466	1	07/26/22 04:51	07/27/22 00:39	AMM	Mt. Juliet, TN

## 220713-FED\_1-30WH@6' L1516270-03 Solid

Collected by  
Andrew Smith

Collected date/time  
07/13/22 09:05

Received date/time  
07/19/22 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902326	1	08/01/22 17:47	08/01/22 17:47	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1904736	1	08/10/22 23:49	08/12/22 09:05	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1898105	1	07/20/22 13:16	07/20/22 14:50	SDE	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901909	1	07/31/22 07:01	07/31/22 09:54	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1898413	1	07/25/22 15:54	07/26/22 10:48	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903564	1	07/31/22 17:02	08/05/22 00:11	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1898419	5	07/25/22 16:15	07/26/22 01:08	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1897815	1	07/19/22 19:30	07/22/22 05:42	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899141	1	07/19/22 19:30	07/22/22 13:17	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1900464	1	07/25/22 17:39	07/26/22 21:26	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1900466	1	07/26/22 04:51	07/27/22 00:57	AMM	Mt. Juliet, TN

## 220713-FED\_1-30DEHY@1' L1516270-04 Solid

Collected by  
Andrew Smith

Collected date/time  
07/13/22 16:10

Received date/time  
07/19/22 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902326	1	08/01/22 17:50	08/01/22 17:50	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1904736	1	08/10/22 23:49	08/12/22 09:10	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1898105	1	07/20/22 13:16	07/20/22 14:50	SDE	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901909	1	07/31/22 07:01	07/31/22 09:54	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1898413	1	07/25/22 15:54	07/26/22 10:51	CCE	Mt. Juliet, TN

# SAMPLE SUMMARY

## 220713-FED\_1-30DEHY@1' L1516270-04 Solid

Collected by  
Andrew Smith

Collected date/time  
07/13/22 16:10

Received date/time  
07/19/22 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903564	1	07/31/22 17:02	08/05/22 00:14	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1898419	5	07/25/22 16:15	07/26/22 01:12	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1897815	1	07/19/22 19:30	07/22/22 06:04	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899141	1	07/19/22 19:30	07/22/22 13:37	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1900464	1	07/25/22 17:39	07/26/22 20:07	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1900466	1	07/26/22 04:51	07/27/22 01:15	AMM	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

## 220713-FED\_1-30SEP@1' L1516270-05 Solid

Collected by  
Andrew Smith

Collected date/time  
07/13/22 16:15

Received date/time  
07/19/22 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902326	1	08/01/22 17:53	08/01/22 17:53	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1904736	1	08/10/22 23:49	08/12/22 09:15	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1898105	1	07/20/22 13:16	07/20/22 14:50	SDE	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901909	1	07/31/22 07:01	07/31/22 09:54	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1905586	1	08/04/22 14:06	08/05/22 14:30	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903564	1	07/31/22 17:02	08/05/22 00:17	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1905637	5	08/04/22 13:53	08/05/22 13:53	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1897815	1	07/19/22 19:30	07/22/22 06:25	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899168	1	07/19/22 19:30	07/22/22 09:46	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1900464	1	07/25/22 17:39	07/26/22 20:20	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1900466	1	07/26/22 04:51	07/27/22 01:32	AMM	Mt. Juliet, TN

<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





## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.261		1	08/01/2022 17:42	WG1902326

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.565	J	0.255	1.00	1	08/12/2022 08:55	<a href="#">WG1904736</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.26	T8	1	07/20/2022 14:50	<a href="#">WG1898105</a>

## Sample Narrative:

L1516270-01 WG1898105: 8.26 at 25.3C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	262		10.0	1	07/31/2022 09:54	<a href="#">WG1901909</a>

## Sample Narrative:

L1516270-01 WG1901909: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	226		0.0852	0.500	1	07/30/2022 00:11	<a href="#">WG1898401</a>
Cadmium	0.187	J	0.0471	0.500	1	07/30/2022 00:11	<a href="#">WG1898401</a>
Copper	36.8		0.400	2.00	1	07/30/2022 00:11	<a href="#">WG1898401</a>
Lead	11.9		0.208	0.500	1	07/30/2022 00:11	<a href="#">WG1898401</a>
Nickel	21.8		0.132	2.00	1	07/30/2022 00:11	<a href="#">WG1898401</a>
Selenium	U		0.764	2.00	1	07/30/2022 00:11	<a href="#">WG1898401</a>
Silver	U		0.127	1.00	1	07/30/2022 00:11	<a href="#">WG1898401</a>
Zinc	78.9		0.832	5.00	1	07/30/2022 00:11	<a href="#">WG1898401</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.551		0.0167	0.200	1	08/05/2022 00:05	<a href="#">WG1903564</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.11		0.100	1.00	5	07/30/2022 03:18	<a href="#">WG1898410</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0455	J	0.0217	0.100	1	07/22/2022 04:45	<a href="#">WG1897815</a>
(S) a,a,a-Trifluorotoluene(FID)	111			77.0-120		07/22/2022 04:45	<a href="#">WG1897815</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	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	07/22/2022 12:38	<a href="#">WG1899141</a>
Toluene	U		0.00130	0.00500	1	07/22/2022 12:38	<a href="#">WG1899141</a>
Ethylbenzene	U		0.000737	0.00250	1	07/22/2022 12:38	<a href="#">WG1899141</a>
Xylenes, Total	U		0.000880	0.00650	1	07/22/2022 12:38	<a href="#">WG1899141</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/22/2022 12:38	<a href="#">WG1899141</a>
1,3,5-Trimethylbenzene	0.00200	J	0.00200	0.00500	1	07/22/2022 12:38	<a href="#">WG1899141</a>
(S) Toluene-d8	104			75.0-131		07/22/2022 12:38	<a href="#">WG1899141</a>
(S) 4-Bromofluorobenzene	102			67.0-138		07/22/2022 12:38	<a href="#">WG1899141</a>
(S) 1,2-Dichloroethane-d4	94.8			70.0-130		07/22/2022 12:38	<a href="#">WG1899141</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	7.41		1.61	4.00	1	07/26/2022 21:13	<a href="#">WG1900464</a>
C28-C36 Motor Oil Range	18.0		0.274	4.00	1	07/26/2022 21:13	<a href="#">WG1900464</a>
(S) o-Terphenyl	63.1			18.0-148		07/26/2022 21:13	<a href="#">WG1900464</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Acenaphthene	U		0.00209	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Acenaphthylene	U		0.00216	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Chrysene	U		0.00232	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Fluoranthene	U		0.00227	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Fluorene	U		0.00205	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Naphthalene	U		0.00408	0.0200	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Phenanthrene	U		0.00231	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
Pyrene	U		0.00200	0.00600	1	07/27/2022 00:21	<a href="#">WG1900466</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/27/2022 00:21	<a href="#">WG1900466</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/27/2022 00:21	<a href="#">WG1900466</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/27/2022 00:21	<a href="#">WG1900466</a>
(S) p-Terphenyl-d14	75.5			23.0-120		07/27/2022 00:21	<a href="#">WG1900466</a>
(S) Nitrobenzene-d5	62.8			14.0-149		07/27/2022 00:21	<a href="#">WG1900466</a>
(S) 2-Fluorobiphenyl	70.4			34.0-125		07/27/2022 00:21	<a href="#">WG1900466</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	41.8		1	08/01/2022 17:45	WG1902326

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	08/12/2022 09:00	<a href="#">WG1904736</a>

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.12	<a href="#">T8</a>	1	07/20/2022 14:50	<a href="#">WG1898105</a>

Sample Narrative:  
L1516270-02 WG1898105: 8.12 at 24.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	8840		10.0	1	07/31/2022 09:54	<a href="#">WG1901909</a>

Sample Narrative:  
L1516270-02 WG1901909: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	776	<a href="#">V</a>	0.0852	0.500	1	07/29/2022 22:59	<a href="#">WG1898401</a>
Cadmium	0.438	<a href="#">J</a>	0.0471	0.500	1	07/29/2022 22:59	<a href="#">WG1898401</a>
Copper	27.2		0.400	2.00	1	07/29/2022 22:59	<a href="#">WG1898401</a>
Lead	28.0		0.208	0.500	1	07/29/2022 22:59	<a href="#">WG1898401</a>
Nickel	17.2		0.132	2.00	1	07/29/2022 22:59	<a href="#">WG1898401</a>
Selenium	U		0.764	2.00	1	07/29/2022 22:59	<a href="#">WG1898401</a>
Silver	U		0.127	1.00	1	07/29/2022 22:59	<a href="#">WG1898401</a>
Zinc	101		0.832	5.00	1	07/29/2022 22:59	<a href="#">WG1898401</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.632		0.0167	0.200	1	08/05/2022 00:08	<a href="#">WG1903564</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.25		0.100	1.00	5	07/30/2022 01:49	<a href="#">WG1898410</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0678	<a href="#">J</a>	0.0217	0.100	1	07/22/2022 05:20	<a href="#">WG1897815</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	107			77.0-120		07/22/2022 05:20	<a href="#">WG1897815</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	07/22/2022 12:58	<a href="#">WG1899141</a>
Toluene	U		0.00130	0.00500	1	07/22/2022 12:58	<a href="#">WG1899141</a>
Ethylbenzene	U		0.000737	0.00250	1	07/22/2022 12:58	<a href="#">WG1899141</a>
Xylenes, Total	U		0.000880	0.00650	1	07/22/2022 12:58	<a href="#">WG1899141</a>
1,2,4-Trimethylbenzene	0.00703		0.00158	0.00500	1	07/22/2022 12:58	<a href="#">WG1899141</a>
1,3,5-Trimethylbenzene	0.0143		0.00200	0.00500	1	07/22/2022 12:58	<a href="#">WG1899141</a>
(S) Toluene-d8	104			75.0-131		07/22/2022 12:58	<a href="#">WG1899141</a>
(S) 4-Bromofluorobenzene	103			67.0-138		07/22/2022 12:58	<a href="#">WG1899141</a>
(S) 1,2-Dichloroethane-d4	96.3			70.0-130		07/22/2022 12:58	<a href="#">WG1899141</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.19	J	1.61	4.00	1	07/26/2022 19:54	<a href="#">WG1900464</a>
C28-C36 Motor Oil Range	3.54	J	0.274	4.00	1	07/26/2022 19:54	<a href="#">WG1900464</a>
(S) o-Terphenyl	57.5			18.0-148		07/26/2022 19:54	<a href="#">WG1900464</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Acenaphthene	U		0.00209	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Acenaphthylene	U		0.00216	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Chrysene	U		0.00232	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Fluoranthene	U		0.00227	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Fluorene	U		0.00205	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Naphthalene	U		0.00408	0.0200	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Phenanthrene	U		0.00231	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
Pyrene	U		0.00200	0.00600	1	07/27/2022 00:39	<a href="#">WG1900466</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/27/2022 00:39	<a href="#">WG1900466</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/27/2022 00:39	<a href="#">WG1900466</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/27/2022 00:39	<a href="#">WG1900466</a>
(S) p-Terphenyl-d14	76.1			23.0-120		07/27/2022 00:39	<a href="#">WG1900466</a>
(S) Nitrobenzene-d5	68.7			14.0-149		07/27/2022 00:39	<a href="#">WG1900466</a>
(S) 2-Fluorobiphenyl	74.4			34.0-125		07/27/2022 00:39	<a href="#">WG1900466</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	24.5		1	08/01/2022 17:47	WG1902326

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	08/12/2022 09:05	<a href="#">WG1904736</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.84	<a href="#">T8</a>	1	07/20/2022 14:50	<a href="#">WG1898105</a>

## Sample Narrative:

L1516270-03 WG1898105: 7.84 at 25C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	13400		10.0	1	07/31/2022 09:54	<a href="#">WG1901909</a>

## Sample Narrative:

L1516270-03 WG1901909: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	108		0.0852	0.500	1	07/26/2022 10:48	<a href="#">WG1898413</a>
Cadmium	0.470	<a href="#">J</a>	0.0471	0.500	1	07/26/2022 10:48	<a href="#">WG1898413</a>
Copper	30.2		0.400	2.00	1	07/26/2022 10:48	<a href="#">WG1898413</a>
Lead	14.4		0.208	0.500	1	07/26/2022 10:48	<a href="#">WG1898413</a>
Nickel	17.6		0.132	2.00	1	07/26/2022 10:48	<a href="#">WG1898413</a>
Selenium	U		0.764	2.00	1	07/26/2022 10:48	<a href="#">WG1898413</a>
Silver	U		0.127	1.00	1	07/26/2022 10:48	<a href="#">WG1898413</a>
Zinc	71.6		0.832	5.00	1	07/26/2022 10:48	<a href="#">WG1898413</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.26		0.0167	0.200	1	08/05/2022 00:11	<a href="#">WG1903564</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.06		0.100	1.00	5	07/26/2022 01:08	<a href="#">WG1898419</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.224		0.0217	0.100	1	07/22/2022 05:42	<a href="#">WG1897815</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	110			77.0-120		07/22/2022 05:42	<a href="#">WG1897815</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	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	07/22/2022 13:17	<a href="#">WG1899141</a>
Toluene	U		0.00130	0.00500	1	07/22/2022 13:17	<a href="#">WG1899141</a>
Ethylbenzene	U		0.000737	0.00250	1	07/22/2022 13:17	<a href="#">WG1899141</a>
Xylenes, Total	U		0.000880	0.00650	1	07/22/2022 13:17	<a href="#">WG1899141</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/22/2022 13:17	<a href="#">WG1899141</a>
1,3,5-Trimethylbenzene	0.00361	<u>J</u>	0.00200	0.00500	1	07/22/2022 13:17	<a href="#">WG1899141</a>
(S) Toluene-d8	107			75.0-131		07/22/2022 13:17	<a href="#">WG1899141</a>
(S) 4-Bromofluorobenzene	105			67.0-138		07/22/2022 13:17	<a href="#">WG1899141</a>
(S) 1,2-Dichloroethane-d4	97.4			70.0-130		07/22/2022 13:17	<a href="#">WG1899141</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	32.5		1.61	4.00	1	07/26/2022 21:26	<a href="#">WG1900464</a>
C28-C36 Motor Oil Range	56.4		0.274	4.00	1	07/26/2022 21:26	<a href="#">WG1900464</a>
(S) o-Terphenyl	49.8			18.0-148		07/26/2022 21:26	<a href="#">WG1900464</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Acenaphthene	U		0.00209	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Acenaphthylene	U		0.00216	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Chrysene	U		0.00232	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Fluoranthene	U		0.00227	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Fluorene	U		0.00205	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Naphthalene	U		0.00408	0.0200	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Phenanthrene	U		0.00231	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
Pyrene	U		0.00200	0.00600	1	07/27/2022 00:57	<a href="#">WG1900466</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/27/2022 00:57	<a href="#">WG1900466</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/27/2022 00:57	<a href="#">WG1900466</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/27/2022 00:57	<a href="#">WG1900466</a>
(S) p-Terphenyl-d14	52.7			23.0-120		07/27/2022 00:57	<a href="#">WG1900466</a>
(S) Nitrobenzene-d5	62.8			14.0-149		07/27/2022 00:57	<a href="#">WG1900466</a>
(S) 2-Fluorobiphenyl	44.8			34.0-125		07/27/2022 00:57	<a href="#">WG1900466</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	3.04		1	08/01/2022 17:50	WG1902326

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	08/12/2022 09:10	<a href="#">WG1904736</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.99	<a href="#">T8</a>	1	07/20/2022 14:50	<a href="#">WG1898105</a>

## Sample Narrative:

L1516270-04 WG1898105: 7.99 at 24.9C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	933		10.0	1	07/31/2022 09:54	<a href="#">WG1901909</a>

## Sample Narrative:

L1516270-04 WG1901909: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	223		0.0852	0.500	1	07/26/2022 10:51	<a href="#">WG1898413</a>
Cadmium	0.579		0.0471	0.500	1	07/26/2022 10:51	<a href="#">WG1898413</a>
Copper	35.1		0.400	2.00	1	07/26/2022 10:51	<a href="#">WG1898413</a>
Lead	12.8		0.208	0.500	1	07/26/2022 10:51	<a href="#">WG1898413</a>
Nickel	22.3		0.132	2.00	1	07/26/2022 10:51	<a href="#">WG1898413</a>
Selenium	U		0.764	2.00	1	07/26/2022 10:51	<a href="#">WG1898413</a>
Silver	U		0.127	1.00	1	07/26/2022 10:51	<a href="#">WG1898413</a>
Zinc	84.7		0.832	5.00	1	07/26/2022 10:51	<a href="#">WG1898413</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.42		0.0167	0.200	1	08/05/2022 00:14	<a href="#">WG1903564</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.47		0.100	1.00	5	07/26/2022 01:12	<a href="#">WG1898419</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0217	0.100	1	07/22/2022 06:04	<a href="#">WG1897815</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	111			77.0-120		07/22/2022 06:04	<a href="#">WG1897815</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	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	07/22/2022 13:37	<a href="#">WG1899141</a>
Toluene	U		0.00130	0.00500	1	07/22/2022 13:37	<a href="#">WG1899141</a>
Ethylbenzene	U		0.000737	0.00250	1	07/22/2022 13:37	<a href="#">WG1899141</a>
Xylenes, Total	U		0.000880	0.00650	1	07/22/2022 13:37	<a href="#">WG1899141</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/22/2022 13:37	<a href="#">WG1899141</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	07/22/2022 13:37	<a href="#">WG1899141</a>
(S) Toluene-d8	104			75.0-131		07/22/2022 13:37	<a href="#">WG1899141</a>
(S) 4-Bromofluorobenzene	102			67.0-138		07/22/2022 13:37	<a href="#">WG1899141</a>
(S) 1,2-Dichloroethane-d4	99.1			70.0-130		07/22/2022 13:37	<a href="#">WG1899141</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.68	U	1.61	4.00	1	07/26/2022 20:07	<a href="#">WG1900464</a>
C28-C36 Motor Oil Range	3.98	U	0.274	4.00	1	07/26/2022 20:07	<a href="#">WG1900464</a>
(S) o-Terphenyl	65.5			18.0-148		07/26/2022 20:07	<a href="#">WG1900464</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Acenaphthene	U		0.00209	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Acenaphthylene	U		0.00216	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Chrysene	U		0.00232	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Fluoranthene	U		0.00227	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Fluorene	U		0.00205	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Naphthalene	U		0.00408	0.0200	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Phenanthrene	U		0.00231	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
Pyrene	U		0.00200	0.00600	1	07/27/2022 01:15	<a href="#">WG1900466</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/27/2022 01:15	<a href="#">WG1900466</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/27/2022 01:15	<a href="#">WG1900466</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/27/2022 01:15	<a href="#">WG1900466</a>
(S) p-Terphenyl-d14	68.7			23.0-120		07/27/2022 01:15	<a href="#">WG1900466</a>
(S) Nitrobenzene-d5	60.7			14.0-149		07/27/2022 01:15	<a href="#">WG1900466</a>
(S) 2-Fluorobiphenyl	65.9			34.0-125		07/27/2022 01:15	<a href="#">WG1900466</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	19.3		1	08/01/2022 17:53	WG1902326

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	08/12/2022 09:15	<a href="#">WG1904736</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.73	<a href="#">T8</a>	1	07/20/2022 14:50	<a href="#">WG1898105</a>

## Sample Narrative:

L1516270-05 WG1898105: 8.73 at 24.7C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1260		10.0	1	07/31/2022 09:54	<a href="#">WG1901909</a>

## Sample Narrative:

L1516270-05 WG1901909: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	156		0.0852	0.500	1	08/05/2022 14:30	<a href="#">WG1905586</a>
Cadmium	0.483	<a href="#">J</a>	0.0471	0.500	1	08/05/2022 14:30	<a href="#">WG1905586</a>
Copper	26.0		0.400	2.00	1	08/05/2022 14:30	<a href="#">WG1905586</a>
Lead	18.1		0.208	0.500	1	08/05/2022 14:30	<a href="#">WG1905586</a>
Nickel	17.0		0.132	2.00	1	08/05/2022 14:30	<a href="#">WG1905586</a>
Selenium	U		0.764	2.00	1	08/05/2022 14:30	<a href="#">WG1905586</a>
Silver	U		0.127	1.00	1	08/05/2022 14:30	<a href="#">WG1905586</a>
Zinc	64.3		0.832	5.00	1	08/05/2022 14:30	<a href="#">WG1905586</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.676		0.0167	0.200	1	08/05/2022 00:17	<a href="#">WG1903564</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.41		0.100	1.00	5	08/05/2022 13:53	<a href="#">WG1905637</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0217	0.100	1	07/22/2022 06:25	<a href="#">WG1897815</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	114			77.0-120		07/22/2022 06:25	<a href="#">WG1897815</a>



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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	07/22/2022 09:46	<a href="#">WG1899168</a>
Toluene	U		0.00130	0.00500	1	07/22/2022 09:46	<a href="#">WG1899168</a>
Ethylbenzene	U		0.000737	0.00250	1	07/22/2022 09:46	<a href="#">WG1899168</a>
Xylenes, Total	U		0.000880	0.00650	1	07/22/2022 09:46	<a href="#">WG1899168</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/22/2022 09:46	<a href="#">WG1899168</a>
1,3,5-Trimethylbenzene	0.00213	J	0.00200	0.00500	1	07/22/2022 09:46	<a href="#">WG1899168</a>
(S) Toluene-d8	108			75.0-131		07/22/2022 09:46	<a href="#">WG1899168</a>
(S) 4-Bromofluorobenzene	103			67.0-138		07/22/2022 09:46	<a href="#">WG1899168</a>
(S) 1,2-Dichloroethane-d4	93.8			70.0-130		07/22/2022 09:46	<a href="#">WG1899168</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	27.1		1.61	4.00	1	07/26/2022 20:20	<a href="#">WG1900464</a>
C28-C36 Motor Oil Range	15.9		0.274	4.00	1	07/26/2022 20:20	<a href="#">WG1900464</a>
(S) o-Terphenyl	55.4			18.0-148		07/26/2022 20:20	<a href="#">WG1900464</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Acenaphthene	U		0.00209	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Acenaphthylene	U		0.00216	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Chrysene	U		0.00232	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Fluoranthene	U		0.00227	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Fluorene	U		0.00205	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Naphthalene	U		0.00408	0.0200	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Phenanthrene	U		0.00231	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
Pyrene	U		0.00200	0.00600	1	07/27/2022 01:32	<a href="#">WG1900466</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/27/2022 01:32	<a href="#">WG1900466</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/27/2022 01:32	<a href="#">WG1900466</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/27/2022 01:32	<a href="#">WG1900466</a>
(S) p-Terphenyl-d14	74.9			23.0-120		07/27/2022 01:32	<a href="#">WG1900466</a>
(S) Nitrobenzene-d5	69.7			14.0-149		07/27/2022 01:32	<a href="#">WG1900466</a>
(S) 2-Fluorobiphenyl	74.3			34.0-125		07/27/2022 01:32	<a href="#">WG1900466</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3825663-1 08/12/22 07:43

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

L1514822-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1514822-03 08/12/22 08:29 • (DUP) R3825663-7 08/12/22 08:34

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	1.15	1.17	1	1.95		20

L1516275-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1516275-03 08/12/22 09:31 • (DUP) R3825663-8 08/12/22 09:36

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

Laboratory Control Sample (LCS)

(LCS) R3825663-2 08/12/22 07:49

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.5	105	80.0-120	

L1514822-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1514822-01 08/12/22 07:55 • (MS) R3825663-3 08/12/22 08:03 • (MSD) R3825663-4 08/12/22 08:08

	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	1.16	20.8	20.6	98.2	97.1	1	75.0-125			1.04	20

L1514822-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1514822-01 08/12/22 07:55 • (MS) R3825663-6 08/12/22 08:18

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	643	1.16	798	124	50	75.0-125	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



L1516270-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1516270-02 07/20/22 14:50 • (DUP) R3817299-2 07/20/22 14:50

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.12	8.11	1	0.123		1

Sample Narrative:

OS: 8.12 at 24.8C

DUP: 8.11 at 24.9C



L1516270-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1516270-05 07/20/22 14:50 • (DUP) R3817299-3 07/20/22 14:50

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.73	8.75	1	0.229		1

Sample Narrative:

OS: 8.73 at 24.7C

DUP: 8.75 at 24.9C

Laboratory Control Sample (LCS)

(LCS) R3817299-1 07/20/22 14:50

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	su	su	%	%	
pH	10.0	9.98	99.8	99.0-101	

Sample Narrative:

LCS: 9.98 at 24.4C

Method Blank (MB)

(MB) R3821000-1 07/31/22 09:54

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

L1516250-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1516250-16 07/31/22 09:54 • (DUP) R3821000-3 07/31/22 09:54

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2250	2440	1	8.01		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1516291-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1516291-05 07/31/22 09:54 • (DUP) R3821000-4 07/31/22 09:54

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	238	245	1	2.98		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3821000-2 07/31/22 09:54

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	286	271	94.7	85.0-115	

Sample Narrative:

LCS: at 25C

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3820927-1 07/29/22 22:54

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

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

Laboratory Control Sample (LCS)

(LCS) R3820927-2 07/29/22 22:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	104	104	80.0-120	
Cadmium	100	99.1	99.1	80.0-120	
Copper	100	102	102	80.0-120	
Lead	100	99.8	99.8	80.0-120	
Nickel	100	99.8	99.8	80.0-120	
Selenium	100	100	100	80.0-120	
Silver	20.0	19.3	96.7	80.0-120	
Zinc	100	99.7	99.7	80.0-120	

7  
Gl

8  
Al

9  
Sc

L1516270-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1516270-02 07/29/22 22:59 • (MS) R3820927-5 07/29/22 23:07 • (MSD) R3820927-6 07/29/22 23:09

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	776	1020	1080	248	303	1	75.0-125	V	V	5.20	20
Cadmium	100	0.438	100	105	99.6	104	1	75.0-125			4.72	20
Copper	100	27.2	130	135	103	108	1	75.0-125			3.84	20
Lead	100	28.0	119	123	91.1	94.8	1	75.0-125			3.02	20
Nickel	100	17.2	113	118	95.4	101	1	75.0-125			4.64	20
Selenium	100	U	101	106	101	106	1	75.0-125			5.26	20
Silver	20.0	U	19.6	20.6	98.1	103	1	75.0-125			5.00	20
Zinc	100	101	182	191	81.2	90.2	1	75.0-125			4.82	20

Method Blank (MB)

(MB) R3819281-1 07/26/22 09:29

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

Laboratory Control Sample (LCS)

(LCS) R3819281-2 07/26/22 09:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	99.0	99.0	80.0-120	
Cadmium	100	94.4	94.4	80.0-120	
Copper	100	96.8	96.8	80.0-120	
Lead	100	94.7	94.7	80.0-120	
Nickel	100	95.1	95.1	80.0-120	
Selenium	100	94.7	94.7	80.0-120	
Silver	20.0	18.3	91.5	80.0-120	
Zinc	100	93.8	93.8	80.0-120	

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1516261-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1516261-06 07/26/22 09:35 • (MS) R3819281-4 07/26/22 09:43 • (MSD) R3819281-5 07/26/22 09:46

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	99.1	203	205	104	106	1	75.0-125			1.34	20
Cadmium	100	0.660	107	108	107	108	1	75.0-125			1.13	20
Copper	100	42.9	154	155	111	112	1	75.0-125			0.305	20
Lead	100	21.3	121	123	100	102	1	75.0-125			1.46	20
Nickel	100	26.4	127	129	100	102	1	75.0-125			1.51	20
Selenium	100	U	105	107	105	107	1	75.0-125			1.42	20
Silver	20.0	U	21.0	21.3	105	106	1	75.0-125			1.26	20
Zinc	100	100	199	201	99.0	101	1	75.0-125			1.17	20



Method Blank (MB)

(MB) R3823273-1 08/05/22 14:12

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

Laboratory Control Sample (LCS)

(LCS) R3823273-2 08/05/22 14:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	101	101	80.0-120	
Cadmium	100	96.6	96.6	80.0-120	
Copper	100	101	101	80.0-120	
Lead	100	97.1	97.1	80.0-120	
Nickel	100	98.9	98.9	80.0-120	
Selenium	100	99.6	99.6	80.0-120	
Silver	20.0	18.0	90.2	80.0-120	
Zinc	100	97.2	97.2	80.0-120	

L1521215-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1521215-01 08/05/22 14:17 • (MS) R3823273-5 08/05/22 14:25 • (MSD) R3823273-6 08/05/22 14:28

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	80.7	181	183	101	102	1	75.0-125			0.951	20
Cadmium	100	0.262	96.0	96.2	95.8	95.9	1	75.0-125			0.156	20
Copper	100	14.3	116	117	102	102	1	75.0-125			0.637	20
Lead	100	15.8	114	115	98.7	99.6	1	75.0-125			0.750	20
Nickel	100	13.0	114	115	101	102	1	75.0-125			0.423	20
Selenium	100	U	99.2	99.7	99.2	99.7	1	75.0-125			0.490	20
Silver	20.0	U	18.1	18.2	90.6	91.1	1	75.0-125			0.623	20
Zinc	100	51.6	145	144	93.1	92.2	1	75.0-125			0.643	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3822918-1 08/04/22 23:18

Analyte	MB Result mg/l	MB Qualifier	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) R3822918-2 08/04/22 23:20 • (LCSD) R3822918-3 08/04/22 23:23

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.04	1.01	104	101	80.0-120			2.88	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3820906-1 07/30/22 01:42

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) R3820906-2 07/30/22 01:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	92.6	92.6	80.0-120	

L1516270-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1516270-02 07/30/22 01:49 • (MS) R3820906-5 07/30/22 01:58 • (MSD) R3820906-6 07/30/22 02:02

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	5.25	97.4	92.6	92.2	87.4	5	75.0-125			5.05	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3819057-1 07/25/22 23:37

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) R3819057-2 07/25/22 23:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	87.1	87.1	80.0-120	

L1516261-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1516261-06 07/25/22 23:43 • (MS) R3819057-5 07/25/22 23:53 • (MSD) R3819057-6 07/25/22 23:56

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	5.66	95.2	99.6	89.6	93.9	5	75.0-125			4.50	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3823127-1 08/05/22 13:30

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

Laboratory Control Sample (LCS)

(LCS) R3823127-2 08/05/22 13:34

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Arsenic	100	85.9	85.9	80.0-120	

L1521215-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1521215-01 08/05/22 13:37 • (MS) R3823127-5 08/05/22 13:47 • (MSD) R3823127-6 08/05/22 13:50

	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	%	%		%			%	%
Arsenic	100	6.09	91.4	87.6	85.3	81.5	5	75.0-125			4.22	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3819762-2 07/21/22 21:07

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)	112			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3819762-1 07/21/22 19:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.27	114	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			112	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3819568-3 07/22/22 07:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	104			75.0-131
(S) 4-Bromofluorobenzene	102			67.0-138
(S) 1,2-Dichloroethane-d4	98.1			70.0-130

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

(LCS) R3819568-1 07/22/22 05:47 • (LCSD) R3819568-2 07/22/22 06:06

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	0.109	0.108	87.2	86.4	70.0-123			0.922	20
Toluene	0.125	0.110	0.113	88.0	90.4	75.0-121			2.69	20
Ethylbenzene	0.125	0.115	0.116	92.0	92.8	74.0-126			0.866	20
Xylenes, Total	0.375	0.341	0.337	90.9	89.9	72.0-127			1.18	20
1,2,4-Trimethylbenzene	0.125	0.123	0.126	98.4	101	70.0-126			2.41	20
1,3,5-Trimethylbenzene	0.125	0.115	0.118	92.0	94.4	73.0-127			2.58	20
(S) Toluene-d8				101	102	75.0-131				
(S) 4-Bromofluorobenzene				99.0	100	67.0-138				
(S) 1,2-Dichloroethane-d4				98.7	99.1	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3819598-3 07/22/22 08:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	108			75.0-131
(S) 4-Bromofluorobenzene	104			67.0-138
(S) 1,2-Dichloroethane-d4	89.4			70.0-130

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

(LCS) R3819598-1 07/22/22 07:14 • (LCSD) R3819598-2 07/22/22 07:33

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	0.121	0.137	96.8	110	70.0-123			12.4	20
Toluene	0.125	0.130	0.144	104	115	75.0-121			10.2	20
Ethylbenzene	0.125	0.131	0.143	105	114	74.0-126			8.76	20
Xylenes, Total	0.375	0.406	0.452	108	121	72.0-127			10.7	20
1,2,4-Trimethylbenzene	0.125	0.134	0.143	107	114	70.0-126			6.50	20
1,3,5-Trimethylbenzene	0.125	0.126	0.137	101	110	73.0-127			8.37	20
(S) Toluene-d8				104	105	75.0-131				
(S) 4-Bromofluorobenzene				105	105	67.0-138				
(S) 1,2-Dichloroethane-d4				97.9	98.6	70.0-130				

1  
Cp

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Method Blank (MB)

(MB) R3819157-1 07/26/22 04:06

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	64.4			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3819157-2 07/26/22 04:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	36.3	72.6	50.0-150	
(S) o-Terphenyl			86.3	18.0-148	

L1516296-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1516296-02 07/26/22 21:39 • (MS) R3819157-3 07/26/22 21:52 • (MSD) R3819157-4 07/26/22 22:05

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	47.0	25.8	40.7	44.5	31.7	38.3	1	50.0-150	J6	J6	8.92	20
(S) o-Terphenyl					57.0	66.0		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3819686-2 07/26/22 19:36

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) p-Terphenyl-d14	73.6			23.0-120
(S) Nitrobenzene-d5	63.2			14.0-149
(S) 2-Fluorobiphenyl	69.5			34.0-125

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3819686-1 07/26/22 19:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0594	74.3	50.0-126	
Acenaphthene	0.0800	0.0573	71.6	50.0-120	
Acenaphthylene	0.0800	0.0580	72.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0601	75.1	45.0-120	
Benzo(a)pyrene	0.0800	0.0610	76.3	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0582	72.8	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0594	74.3	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0558	69.8	49.0-125	
Chrysene	0.0800	0.0609	76.1	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0620	77.5	47.0-125	
Fluoranthene	0.0800	0.0614	76.8	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3819686-1 07/26/22 19:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0588	73.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0657	82.1	46.0-125	
Naphthalene	0.0800	0.0554	69.3	50.0-120	
Phenanthrene	0.0800	0.0577	72.1	47.0-120	
Pyrene	0.0800	0.0612	76.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0578	72.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0584	73.0	50.0-120	
2-Chloronaphthalene	0.0800	0.0557	69.6	50.0-120	
(S) p-Terphenyl-d14			77.1	23.0-120	
(S) Nitrobenzene-d5			67.5	14.0-149	
(S) 2-Fluorobiphenyl			72.7	34.0-125	

L1516104-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1516104-01 07/26/22 21:23 • (MS) R3819686-3 07/26/22 21:40 • (MSD) R3819686-4 07/26/22 21:58

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	0.0756	U	0.0448	0.0487	59.3	64.8	1	10.0-145			8.34	30
Acenaphthene	0.0756	U	0.0446	0.0487	59.0	64.8	1	14.0-127			8.79	27
Acenaphthylene	0.0756	U	0.0441	0.0476	58.3	63.3	1	21.0-124			7.63	25
Benzo(a)anthracene	0.0756	U	0.0444	0.0474	58.7	63.0	1	10.0-139			6.54	30
Benzo(a)pyrene	0.0756	U	0.0485	0.0517	64.2	68.8	1	10.0-141			6.39	31
Benzo(b)fluoranthene	0.0756	U	0.0458	0.0501	60.6	66.6	1	10.0-140			8.97	36
Benzo(g,h,i)perylene	0.0756	U	0.0480	0.0518	63.5	68.9	1	10.0-140			7.62	33
Benzo(k)fluoranthene	0.0756	U	0.0441	0.0468	58.3	62.2	1	10.0-137			5.94	31
Chrysene	0.0756	U	0.0476	0.0503	63.0	66.9	1	10.0-145			5.52	30
Dibenz(a,h)anthracene	0.0756	U	0.0475	0.0508	62.8	67.6	1	10.0-132			6.71	31
Fluoranthene	0.0756	U	0.0469	0.0513	62.0	68.2	1	10.0-153			8.96	33
Fluorene	0.0756	U	0.0460	0.0502	60.8	66.8	1	11.0-130			8.73	29
Indeno(1,2,3-cd)pyrene	0.0756	U	0.0486	0.0528	64.3	70.2	1	10.0-137			8.28	32
Naphthalene	0.0756	U	0.0403	0.0446	53.3	59.3	1	10.0-135			10.1	27
Phenanthrene	0.0756	U	0.0454	0.0489	60.1	65.0	1	10.0-144			7.42	31
Pyrene	0.0756	U	0.0499	0.0535	66.0	71.1	1	10.0-148			6.96	35
1-Methylnaphthalene	0.0756	U	0.0432	0.0480	57.1	63.8	1	10.0-142			10.5	28
2-Methylnaphthalene	0.0756	U	0.0437	0.0490	57.8	65.2	1	10.0-137			11.4	28
2-Chloronaphthalene	0.0756	U	0.0427	0.0472	56.5	62.8	1	29.0-120			10.0	24
(S) p-Terphenyl-d14					66.2	68.4		23.0-120				
(S) Nitrobenzene-d5					56.9	61.9		14.0-149				
(S) 2-Fluorobiphenyl					62.3	64.9		34.0-125				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

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

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

### Abbreviations and Definitions

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

### Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
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.
V	The sample concentration is too high to evaluate accurate spike recoveries.

<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

# 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.





of: \_\_\_\_\_

**Confluence Compliance Companies - CO**

Sample Delivery Group: L1517244  
Samples Received: 07/21/2022  
Project Number: FEDERAL 1-30  
Description: P&A

Report To: Chris McKisson  
403 ½ Rockwood Lane  
Grand Junction, CO 81507

Entire Report Reviewed By:



Chris Ward  
Project Manager

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**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

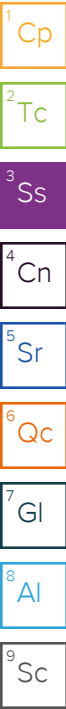
## CAP\_TRENCH\_END@6' L1517244-01 Solid

Collected by  
Jana Nilsen

Collected date/time  
07/19/22 08:58

Received date/time  
07/21/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902865	1	08/01/22 14:44	08/01/22 14:44	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1904736	1	08/10/22 23:49	08/12/22 10:23	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1899784	1	07/23/22 11:00	07/23/22 13:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901859	1	07/29/22 01:37	07/29/22 07:46	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1901308	1	08/03/22 16:43	08/05/22 17:12	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903661	1	08/01/22 11:32	08/04/22 21:14	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1901310	5	08/03/22 16:48	08/05/22 13:09	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1899210	1	07/21/22 17:43	07/23/22 04:04	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899607	1	07/21/22 17:43	07/22/22 20:37	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1901042	1	07/27/22 06:46	07/27/22 14:56	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1901018	1	07/26/22 18:32	07/27/22 14:19	DSH	Mt. Juliet, TN



## METER\_INLET@6' L1517244-02 Solid

Collected by  
Jana Nilsen

Collected date/time  
07/19/22 09:02

Received date/time  
07/21/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902865	1	08/01/22 14:47	08/01/22 14:47	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1904736	1	08/10/22 23:49	08/12/22 10:28	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1899784	1	07/23/22 11:00	07/23/22 13:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901859	1	07/29/22 01:37	07/29/22 07:46	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1901308	1	08/03/22 16:43	08/05/22 17:14	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903661	1	08/01/22 11:32	08/04/22 21:16	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1901310	5	08/03/22 16:48	08/05/22 13:13	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1899210	1	07/21/22 17:43	07/23/22 04:27	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899607	1	07/21/22 17:43	07/22/22 20:58	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1901042	1	07/27/22 06:46	07/27/22 15:10	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1901018	1	07/26/22 18:32	07/27/22 14:37	DSH	Mt. Juliet, TN

## METER\_OUTLET\_DEHY\_IN/OUTLET@6' L1517244-03 Solid

Collected by  
Jana Nilsen

Collected date/time  
07/19/22 09:10

Received date/time  
07/21/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902865	1	08/01/22 14:50	08/01/22 14:50	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1905133	1	08/03/22 17:00	08/04/22 03:21	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1899784	1	07/23/22 11:00	07/23/22 13:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901859	1	07/29/22 01:37	07/29/22 07:46	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1901308	1	08/03/22 16:43	08/05/22 17:23	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903661	1	08/01/22 11:32	08/04/22 21:19	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1901310	5	08/03/22 16:48	08/05/22 13:25	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1899210	1	07/21/22 17:43	07/23/22 04:50	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899607	1	07/21/22 17:43	07/22/22 21:19	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1901042	1	07/27/22 06:46	07/27/22 14:42	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1901018	1	07/26/22 18:32	07/27/22 14:55	DSH	Mt. Juliet, TN

## SEP\_INLET@6' L1517244-04 Solid

Collected by  
Jana Nilsen

Collected date/time  
07/19/22 09:18

Received date/time  
07/21/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902865	1	08/01/22 14:53	08/01/22 14:53	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1905133	1	08/03/22 17:00	08/04/22 03:26	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1899784	1	07/23/22 11:00	07/23/22 13:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901859	1	07/29/22 01:37	07/29/22 07:46	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1901308	1	08/03/22 16:43	08/05/22 17:25	KMG	Mt. Juliet, TN



# SAMPLE SUMMARY

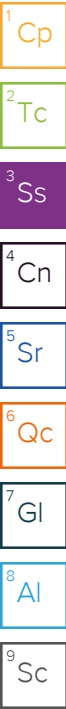
## SEP\_INLET@6' L1517244-04 Solid

Collected by  
Jana Nilsen

Collected date/time  
07/19/22 09:18

Received date/time  
07/21/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903661	1	08/01/22 11:32	08/04/22 21:22	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1901310	5	08/03/22 16:48	08/05/22 13:29	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1899210	1	07/21/22 17:43	07/23/22 05:13	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899607	1	07/21/22 17:43	07/22/22 21:40	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1901042	1	07/27/22 06:46	07/27/22 15:52	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1901018	1	07/26/22 18:32	07/27/22 15:13	DSH	Mt. Juliet, TN



## SEP\_OUTLET\_TO\_OIL@5' L1517244-05 Solid

Collected by  
Jana Nilsen

Collected date/time  
07/19/22 09:25

Received date/time  
07/21/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902871	1	08/02/22 20:05	08/02/22 20:05	KMG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1905133	1	08/03/22 17:00	08/04/22 04:02	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1899784	1	07/23/22 11:00	07/23/22 13:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901859	1	07/29/22 01:37	07/29/22 07:46	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1901316	1	08/01/22 17:43	08/03/22 06:19	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903661	1	08/01/22 11:32	08/04/22 21:24	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1901314	5	08/01/22 17:39	08/02/22 17:40	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1899210	1	07/21/22 17:43	07/23/22 05:35	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899607	1	07/21/22 17:43	07/22/22 22:01	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1901042	1	07/27/22 06:46	07/27/22 15:38	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1901020	1	07/26/22 21:54	07/28/22 02:37	DSH	Mt. Juliet, TN

## MID\_TRENCH\_WH\_PJ@4' L1517244-07 Solid

Collected by  
Jana Nilsen

Collected date/time  
07/19/22 09:44

Received date/time  
07/21/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902871	1	08/02/22 20:08	08/02/22 20:08	KMG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1905133	1	08/03/22 17:00	08/04/22 04:07	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1899784	1	07/23/22 11:00	07/23/22 13:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901882	1	07/31/22 00:52	07/31/22 09:05	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1901316	1	08/01/22 17:43	08/03/22 06:22	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903661	1	08/01/22 11:32	08/04/22 21:27	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1901314	5	08/01/22 17:39	08/02/22 17:43	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1899210	1	07/21/22 17:43	07/23/22 05:58	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899607	1	07/21/22 17:43	07/22/22 22:22	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1901042	1	07/27/22 06:46	07/27/22 16:06	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1901020	1	07/26/22 21:54	07/28/22 02:55	DSH	Mt. Juliet, TN

## WELL\_HEAD\_PUMP\_JACK@4' L1517244-08 Solid

Collected by  
Jana Nilsen

Collected date/time  
07/19/22 09:50

Received date/time  
07/21/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902871	1	08/02/22 20:11	08/02/22 20:11	KMG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1905133	1	08/03/22 17:00	08/04/22 04:13	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1901438	1	07/27/22 08:49	07/27/22 10:00	SDE	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901859	1	07/29/22 01:37	07/29/22 07:46	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1901316	1	08/01/22 17:43	08/03/22 06:24	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903661	1	08/01/22 11:32	08/04/22 21:30	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1901314	5	08/01/22 17:39	08/02/22 17:46	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1899210	1	07/21/22 17:43	07/23/22 06:21	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899607	1	07/21/22 17:43	07/22/22 22:44	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1901042	1	07/27/22 06:46	07/27/22 15:24	JAS	Mt. Juliet, TN



# SAMPLE SUMMARY

## WELL\_HEAD\_PUMP\_JACK@4' L1517244-08 Solid

Collected by  
Jana Nilsen

Collected date/time  
07/19/22 09:50

Received date/time  
07/21/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1901020	1	07/26/22 21:54	07/28/22 03:12	DSH	Mt. Juliet, TN

## N\_TRENCH@3' L1517244-09 Solid

Collected by  
Jana Nilsen

Collected date/time  
07/19/22 10:02

Received date/time  
07/21/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902871	1	08/02/22 20:14	08/02/22 20:14	KMG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1905133	1	08/03/22 17:00	08/04/22 04:18	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1899769	1	07/23/22 09:00	07/23/22 11:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901859	1	07/29/22 01:37	07/29/22 07:46	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1901316	1	08/01/22 17:43	08/03/22 06:06	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903661	1	08/01/22 11:32	08/04/22 21:33	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1901314	5	08/01/22 17:39	08/02/22 17:23	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1899210	1	07/21/22 17:43	07/23/22 08:39	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899607	1	07/21/22 17:43	07/22/22 23:05	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1901043	1	07/27/22 07:09	07/27/22 14:02	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1901020	1	07/26/22 21:54	07/28/22 04:06	DSH	Mt. Juliet, TN

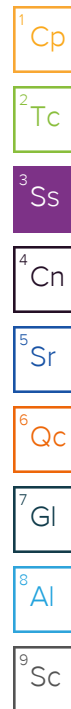
## MID\_N\_TRENCH@3' L1517244-10 Solid

Collected by  
Jana Nilsen

Collected date/time  
07/19/22 10:06

Received date/time  
07/21/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902871	1	08/02/22 20:17	08/02/22 20:17	KMG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1905133	1	08/03/22 17:00	08/04/22 04:23	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1899784	1	07/23/22 11:00	07/23/22 13:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901882	1	07/31/22 00:52	07/31/22 09:05	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1901316	1	08/01/22 17:43	08/03/22 06:33	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903661	1	08/01/22 11:32	08/04/22 21:36	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1901314	5	08/01/22 17:39	08/02/22 17:56	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1899210	1	07/21/22 17:43	07/23/22 09:02	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899607	1	07/21/22 17:43	07/22/22 23:26	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1901043	1	07/27/22 07:09	07/27/22 14:16	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1901020	1	07/26/22 21:54	07/28/22 04:24	DSH	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	16.5		1	08/01/2022 14:44	WG1902865

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	08/12/2022 10:23	<a href="#">WG1904736</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.50	<a href="#">T8</a>	1	07/23/2022 13:00	<a href="#">WG1899784</a>

## Sample Narrative:

L1517244-01 WG1899784: 8.5 at 24.8C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2740		10.0	1	07/29/2022 07:46	<a href="#">WG1901859</a>

## Sample Narrative:

L1517244-01 WG1901859: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	105		0.0852	0.500	1	08/05/2022 17:12	<a href="#">WG1901308</a>
Cadmium	0.372	<a href="#">J</a>	0.0471	0.500	1	08/05/2022 17:12	<a href="#">WG1901308</a>
Copper	24.6		0.400	2.00	1	08/05/2022 17:12	<a href="#">WG1901308</a>
Lead	15.6		0.208	0.500	1	08/05/2022 17:12	<a href="#">WG1901308</a>
Nickel	16.6		0.132	2.00	1	08/05/2022 17:12	<a href="#">WG1901308</a>
Selenium	U		0.764	2.00	1	08/05/2022 17:12	<a href="#">WG1901308</a>
Silver	U		0.127	1.00	1	08/05/2022 17:12	<a href="#">WG1901308</a>
Zinc	61.9		0.832	5.00	1	08/05/2022 17:12	<a href="#">WG1901308</a>

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

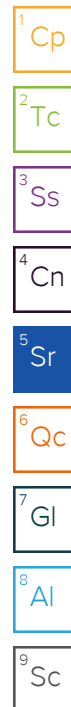
Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.503		0.0167	0.200	1	08/04/2022 21:14	<a href="#">WG1903661</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.48		0.100	1.00	5	08/05/2022 13:09	<a href="#">WG1901310</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0580	<a href="#">B J</a>	0.0217	0.100	1	07/23/2022 04:04	<a href="#">WG1899210</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	99.2			77.0-120		07/23/2022 04:04	<a href="#">WG1899210</a>



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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	07/22/2022 20:37	<a href="#">WG1899607</a>
Toluene	U		0.00130	0.00500	1	07/22/2022 20:37	<a href="#">WG1899607</a>
Ethylbenzene	U		0.000737	0.00250	1	07/22/2022 20:37	<a href="#">WG1899607</a>
Xylenes, Total	U		0.000880	0.00650	1	07/22/2022 20:37	<a href="#">WG1899607</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/22/2022 20:37	<a href="#">WG1899607</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	07/22/2022 20:37	<a href="#">WG1899607</a>
(S) Toluene-d8	107			75.0-131		07/22/2022 20:37	<a href="#">WG1899607</a>
(S) 4-Bromofluorobenzene	92.9			67.0-138		07/22/2022 20:37	<a href="#">WG1899607</a>
(S) 1,2-Dichloroethane-d4	87.6			70.0-130		07/22/2022 20:37	<a href="#">WG1899607</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.61	4.00	1	07/27/2022 14:56	<a href="#">WG1901042</a>
C28-C36 Motor Oil Range	3.05	<a href="#">B J</a>	0.274	4.00	1	07/27/2022 14:56	<a href="#">WG1901042</a>
(S) o-Terphenyl	67.0			18.0-148		07/27/2022 14:56	<a href="#">WG1901042</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Acenaphthene	U		0.00209	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Acenaphthylene	U		0.00216	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Chrysene	U		0.00232	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Fluoranthene	U		0.00227	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Fluorene	U		0.00205	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Naphthalene	0.00440	<a href="#">J</a>	0.00408	0.0200	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Phenanthrene	U		0.00231	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
Pyrene	U		0.00200	0.00600	1	07/27/2022 14:19	<a href="#">WG1901018</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/27/2022 14:19	<a href="#">WG1901018</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/27/2022 14:19	<a href="#">WG1901018</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/27/2022 14:19	<a href="#">WG1901018</a>
(S) p-Terphenyl-d14	79.4			23.0-120		07/27/2022 14:19	<a href="#">WG1901018</a>
(S) Nitrobenzene-d5	50.6			14.0-149		07/27/2022 14:19	<a href="#">WG1901018</a>
(S) 2-Fluorobiphenyl	66.3			34.0-125		07/27/2022 14:19	<a href="#">WG1901018</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	1.14		1	08/01/2022 14:47	WG1902865

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	08/12/2022 10:28	<a href="#">WG1904736</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.40	<a href="#">T8</a>	1	07/23/2022 13:00	<a href="#">WG1899784</a>

## Sample Narrative:

L1517244-02 WG1899784: 8.4 at 25.5C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	304		10.0	1	07/29/2022 07:46	<a href="#">WG1901859</a>

## Sample Narrative:

L1517244-02 WG1901859: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	123		0.0852	0.500	1	08/05/2022 17:14	<a href="#">WG1901308</a>
Cadmium	0.400	<a href="#">J</a>	0.0471	0.500	1	08/05/2022 17:14	<a href="#">WG1901308</a>
Copper	25.8		0.400	2.00	1	08/05/2022 17:14	<a href="#">WG1901308</a>
Lead	14.6		0.208	0.500	1	08/05/2022 17:14	<a href="#">WG1901308</a>
Nickel	18.5		0.132	2.00	1	08/05/2022 17:14	<a href="#">WG1901308</a>
Selenium	U		0.764	2.00	1	08/05/2022 17:14	<a href="#">WG1901308</a>
Silver	U		0.127	1.00	1	08/05/2022 17:14	<a href="#">WG1901308</a>
Zinc	67.6		0.832	5.00	1	08/05/2022 17:14	<a href="#">WG1901308</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.712		0.0167	0.200	1	08/04/2022 21:16	<a href="#">WG1903661</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.64		0.100	1.00	5	08/05/2022 13:13	<a href="#">WG1901310</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0608	<a href="#">B J</a>	0.0217	0.100	1	07/23/2022 04:27	<a href="#">WG1899210</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	99.2			77.0-120		07/23/2022 04:27	<a href="#">WG1899210</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	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	07/22/2022 20:58	<a href="#">WG1899607</a>
Toluene	U		0.00130	0.00500	1	07/22/2022 20:58	<a href="#">WG1899607</a>
Ethylbenzene	U		0.000737	0.00250	1	07/22/2022 20:58	<a href="#">WG1899607</a>
Xylenes, Total	U		0.000880	0.00650	1	07/22/2022 20:58	<a href="#">WG1899607</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/22/2022 20:58	<a href="#">WG1899607</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	07/22/2022 20:58	<a href="#">WG1899607</a>
(S) Toluene-d8	103			75.0-131		07/22/2022 20:58	<a href="#">WG1899607</a>
(S) 4-Bromofluorobenzene	96.7			67.0-138		07/22/2022 20:58	<a href="#">WG1899607</a>
(S) 1,2-Dichloroethane-d4	88.7			70.0-130		07/22/2022 20:58	<a href="#">WG1899607</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.61	4.00	1	07/27/2022 15:10	<a href="#">WG1901042</a>
C28-C36 Motor Oil Range	4.27		0.274	4.00	1	07/27/2022 15:10	<a href="#">WG1901042</a>
(S) o-Terphenyl	68.2			18.0-148		07/27/2022 15:10	<a href="#">WG1901042</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Acenaphthene	U		0.00209	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Acenaphthylene	U		0.00216	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Chrysene	U		0.00232	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Fluoranthene	U		0.00227	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Fluorene	U		0.00205	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Naphthalene	U		0.00408	0.0200	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Phenanthrene	U		0.00231	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
Pyrene	U		0.00200	0.00600	1	07/27/2022 14:37	<a href="#">WG1901018</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/27/2022 14:37	<a href="#">WG1901018</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/27/2022 14:37	<a href="#">WG1901018</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/27/2022 14:37	<a href="#">WG1901018</a>
(S) p-Terphenyl-d14	83.4			23.0-120		07/27/2022 14:37	<a href="#">WG1901018</a>
(S) Nitrobenzene-d5	50.6			14.0-149		07/27/2022 14:37	<a href="#">WG1901018</a>
(S) 2-Fluorobiphenyl	65.5			34.0-125		07/27/2022 14:37	<a href="#">WG1901018</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	16.0		1	08/01/2022 14:50	WG1902865

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.441	<a href="#">B J</a>	0.255	1.00	1	08/04/2022 03:21	<a href="#">WG1905133</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.11	<a href="#">T8</a>	1	07/23/2022 13:00	<a href="#">WG1899784</a>

## Sample Narrative:

L1517244-03 WG1899784: 9.11 at 25.3C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1000		10.0	1	07/29/2022 07:46	<a href="#">WG1901859</a>

## Sample Narrative:

L1517244-03 WG1901859: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	81.6		0.0852	0.500	1	08/05/2022 17:23	<a href="#">WG1901308</a>
Cadmium	0.397	<a href="#">J</a>	0.0471	0.500	1	08/05/2022 17:23	<a href="#">WG1901308</a>
Copper	25.8		0.400	2.00	1	08/05/2022 17:23	<a href="#">WG1901308</a>
Lead	13.9		0.208	0.500	1	08/05/2022 17:23	<a href="#">WG1901308</a>
Nickel	17.6		0.132	2.00	1	08/05/2022 17:23	<a href="#">WG1901308</a>
Selenium	U		0.764	2.00	1	08/05/2022 17:23	<a href="#">WG1901308</a>
Silver	U		0.127	1.00	1	08/05/2022 17:23	<a href="#">WG1901308</a>
Zinc	63.7		0.832	5.00	1	08/05/2022 17:23	<a href="#">WG1901308</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.848		0.0167	0.200	1	08/04/2022 21:19	<a href="#">WG1903661</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.71		0.100	1.00	5	08/05/2022 13:25	<a href="#">WG1901310</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0727	<a href="#">B J</a>	0.0217	0.100	1	07/23/2022 04:50	<a href="#">WG1899210</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	99.3			77.0-120		07/23/2022 04:50	<a href="#">WG1899210</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	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	07/22/2022 21:19	<a href="#">WG1899607</a>
Toluene	U		0.00130	0.00500	1	07/22/2022 21:19	<a href="#">WG1899607</a>
Ethylbenzene	U		0.000737	0.00250	1	07/22/2022 21:19	<a href="#">WG1899607</a>
Xylenes, Total	U		0.000880	0.00650	1	07/22/2022 21:19	<a href="#">WG1899607</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/22/2022 21:19	<a href="#">WG1899607</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	07/22/2022 21:19	<a href="#">WG1899607</a>
(S) Toluene-d8	109			75.0-131		07/22/2022 21:19	<a href="#">WG1899607</a>
(S) 4-Bromofluorobenzene	94.3			67.0-138		07/22/2022 21:19	<a href="#">WG1899607</a>
(S) 1,2-Dichloroethane-d4	89.1			70.0-130		07/22/2022 21:19	<a href="#">WG1899607</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.61	4.00	1	07/27/2022 14:42	<a href="#">WG1901042</a>
C28-C36 Motor Oil Range	1.40	<a href="#">B J</a>	0.274	4.00	1	07/27/2022 14:42	<a href="#">WG1901042</a>
(S) o-Terphenyl	49.1			18.0-148		07/27/2022 14:42	<a href="#">WG1901042</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Acenaphthene	U		0.00209	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Acenaphthylene	U		0.00216	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Chrysene	U		0.00232	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Fluoranthene	U		0.00227	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Fluorene	U		0.00205	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Naphthalene	U		0.00408	0.0200	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Phenanthrene	U		0.00231	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
Pyrene	U		0.00200	0.00600	1	07/27/2022 14:55	<a href="#">WG1901018</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/27/2022 14:55	<a href="#">WG1901018</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/27/2022 14:55	<a href="#">WG1901018</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/27/2022 14:55	<a href="#">WG1901018</a>
(S) p-Terphenyl-d14	79.9			23.0-120		07/27/2022 14:55	<a href="#">WG1901018</a>
(S) Nitrobenzene-d5	52.7			14.0-149		07/27/2022 14:55	<a href="#">WG1901018</a>
(S) 2-Fluorobiphenyl	63.5			34.0-125		07/27/2022 14:55	<a href="#">WG1901018</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	8.98		1	08/01/2022 14:53	WG1902865

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.361	<a href="#">B J J5 J6</a>	0.255	1.00	1	08/04/2022 03:26	<a href="#">WG1905133</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.59	<a href="#">T8</a>	1	07/23/2022 13:00	<a href="#">WG1899784</a>

## Sample Narrative:

L1517244-04 WG1899784: 8.59 at 25.1C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1280		10.0	1	07/29/2022 07:46	<a href="#">WG1901859</a>

## Sample Narrative:

L1517244-04 WG1901859: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	199		0.0852	0.500	1	08/05/2022 17:25	<a href="#">WG1901308</a>
Cadmium	0.294	<a href="#">J</a>	0.0471	0.500	1	08/05/2022 17:25	<a href="#">WG1901308</a>
Copper	27.3		0.400	2.00	1	08/05/2022 17:25	<a href="#">WG1901308</a>
Lead	25.1		0.208	0.500	1	08/05/2022 17:25	<a href="#">WG1901308</a>
Nickel	15.2		0.132	2.00	1	08/05/2022 17:25	<a href="#">WG1901308</a>
Selenium	U		0.764	2.00	1	08/05/2022 17:25	<a href="#">WG1901308</a>
Silver	U		0.127	1.00	1	08/05/2022 17:25	<a href="#">WG1901308</a>
Zinc	56.7		0.832	5.00	1	08/05/2022 17:25	<a href="#">WG1901308</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.794		0.0167	0.200	1	08/04/2022 21:22	<a href="#">WG1903661</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.33		0.100	1.00	5	08/05/2022 13:29	<a href="#">WG1901310</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0525	<a href="#">B J</a>	0.0217	0.100	1	07/23/2022 05:13	<a href="#">WG1899210</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	99.2			77.0-120		07/23/2022 05:13	<a href="#">WG1899210</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	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	07/22/2022 21:40	<a href="#">WG1899607</a>
Toluene	U		0.00130	0.00500	1	07/22/2022 21:40	<a href="#">WG1899607</a>
Ethylbenzene	U		0.000737	0.00250	1	07/22/2022 21:40	<a href="#">WG1899607</a>
Xylenes, Total	U		0.000880	0.00650	1	07/22/2022 21:40	<a href="#">WG1899607</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/22/2022 21:40	<a href="#">WG1899607</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	07/22/2022 21:40	<a href="#">WG1899607</a>
(S) Toluene-d8	102			75.0-131		07/22/2022 21:40	<a href="#">WG1899607</a>
(S) 4-Bromofluorobenzene	96.5			67.0-138		07/22/2022 21:40	<a href="#">WG1899607</a>
(S) 1,2-Dichloroethane-d4	91.5			70.0-130		07/22/2022 21:40	<a href="#">WG1899607</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	18.1		1.61	4.00	1	07/27/2022 15:52	<a href="#">WG1901042</a>
C28-C36 Motor Oil Range	28.0		0.274	4.00	1	07/27/2022 15:52	<a href="#">WG1901042</a>
(S) o-Terphenyl	65.3			18.0-148		07/27/2022 15:52	<a href="#">WG1901042</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Acenaphthene	U		0.00209	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Acenaphthylene	U		0.00216	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Chrysene	U		0.00232	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Fluoranthene	U		0.00227	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Fluorene	U		0.00205	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Naphthalene	U		0.00408	0.0200	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Phenanthrene	U		0.00231	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
Pyrene	U		0.00200	0.00600	1	07/27/2022 15:13	<a href="#">WG1901018</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/27/2022 15:13	<a href="#">WG1901018</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/27/2022 15:13	<a href="#">WG1901018</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/27/2022 15:13	<a href="#">WG1901018</a>
(S) p-Terphenyl-d14	88.1			23.0-120		07/27/2022 15:13	<a href="#">WG1901018</a>
(S) Nitrobenzene-d5	49.9			14.0-149		07/27/2022 15:13	<a href="#">WG1901018</a>
(S) 2-Fluorobiphenyl	63.6			34.0-125		07/27/2022 15:13	<a href="#">WG1901018</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	6.46		1	08/02/2022 20:05	WG1902871

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.425	<a href="#">B J</a>	0.255	1.00	1	08/04/2022 04:02	<a href="#">WG1905133</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.15	<a href="#">T8</a>	1	07/23/2022 13:00	<a href="#">WG1899784</a>

## Sample Narrative:

L1517244-05 WG1899784: 9.15 at 25C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	507		10.0	1	07/29/2022 07:46	<a href="#">WG1901859</a>

## Sample Narrative:

L1517244-05 WG1901859: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	2590		0.0852	0.500	1	08/03/2022 06:19	<a href="#">WG1901316</a>
Cadmium	0.362	<a href="#">J</a>	0.0471	0.500	1	08/03/2022 06:19	<a href="#">WG1901316</a>
Copper	32.0		0.400	2.00	1	08/03/2022 06:19	<a href="#">WG1901316</a>
Lead	15.5		0.208	0.500	1	08/03/2022 06:19	<a href="#">WG1901316</a>
Nickel	19.6		0.132	2.00	1	08/03/2022 06:19	<a href="#">WG1901316</a>
Selenium	U		0.764	2.00	1	08/03/2022 06:19	<a href="#">WG1901316</a>
Silver	U		0.127	1.00	1	08/03/2022 06:19	<a href="#">WG1901316</a>
Zinc	77.6		0.832	5.00	1	08/03/2022 06:19	<a href="#">WG1901316</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.949		0.0167	0.200	1	08/04/2022 21:24	<a href="#">WG1903661</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.65		0.100	1.00	5	08/02/2022 17:40	<a href="#">WG1901314</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.104	<a href="#">B</a>	0.0217	0.100	1	07/23/2022 05:35	<a href="#">WG1899210</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	99.2			77.0-120		07/23/2022 05:35	<a href="#">WG1899210</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	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	07/22/2022 22:01	<a href="#">WG1899607</a>
Toluene	U		0.00130	0.00500	1	07/22/2022 22:01	<a href="#">WG1899607</a>
Ethylbenzene	U		0.000737	0.00250	1	07/22/2022 22:01	<a href="#">WG1899607</a>
Xylenes, Total	U		0.000880	0.00650	1	07/22/2022 22:01	<a href="#">WG1899607</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/22/2022 22:01	<a href="#">WG1899607</a>
1,3,5-Trimethylbenzene	0.00388	<u>J</u>	0.00200	0.00500	1	07/22/2022 22:01	<a href="#">WG1899607</a>
(S) Toluene-d8	107			75.0-131		07/22/2022 22:01	<a href="#">WG1899607</a>
(S) 4-Bromofluorobenzene	91.1			67.0-138		07/22/2022 22:01	<a href="#">WG1899607</a>
(S) 1,2-Dichloroethane-d4	89.3			70.0-130		07/22/2022 22:01	<a href="#">WG1899607</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	35.3		1.61	4.00	1	07/27/2022 15:38	<a href="#">WG1901042</a>
C28-C36 Motor Oil Range	20.1		0.274	4.00	1	07/27/2022 15:38	<a href="#">WG1901042</a>
(S) o-Terphenyl	61.9			18.0-148		07/27/2022 15:38	<a href="#">WG1901042</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Acenaphthene	U		0.00209	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Acenaphthylene	U		0.00216	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Chrysene	U		0.00232	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Fluoranthene	U		0.00227	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Fluorene	U		0.00205	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Naphthalene	U		0.00408	0.0200	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Phenanthrene	U		0.00231	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
Pyrene	U		0.00200	0.00600	1	07/28/2022 02:37	<a href="#">WG1901020</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/28/2022 02:37	<a href="#">WG1901020</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/28/2022 02:37	<a href="#">WG1901020</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/28/2022 02:37	<a href="#">WG1901020</a>
(S) p-Terphenyl-d14	70.6			23.0-120		07/28/2022 02:37	<a href="#">WG1901020</a>
(S) Nitrobenzene-d5	57.6			14.0-149		07/28/2022 02:37	<a href="#">WG1901020</a>
(S) 2-Fluorobiphenyl	61.7			34.0-125		07/28/2022 02:37	<a href="#">WG1901020</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	60.7		1	08/02/2022 20:08	WG1902871

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.538	<a href="#">B J</a>	0.255	1.00	1	08/04/2022 04:07	<a href="#">WG1905133</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.86	<a href="#">T8</a>	1	07/23/2022 13:00	<a href="#">WG1899784</a>

## Sample Narrative:

L1517244-07 WG1899784: 8.86 at 25C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	8450		10.0	1	07/31/2022 09:05	<a href="#">WG1901882</a>

## Sample Narrative:

L1517244-07 WG1901882: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	589		0.0852	0.500	1	08/03/2022 06:22	<a href="#">WG1901316</a>
Cadmium	0.384	<a href="#">J</a>	0.0471	0.500	1	08/03/2022 06:22	<a href="#">WG1901316</a>
Copper	24.8		0.400	2.00	1	08/03/2022 06:22	<a href="#">WG1901316</a>
Lead	23.7		0.208	0.500	1	08/03/2022 06:22	<a href="#">WG1901316</a>
Nickel	16.3		0.132	2.00	1	08/03/2022 06:22	<a href="#">WG1901316</a>
Selenium	U		0.764	2.00	1	08/03/2022 06:22	<a href="#">WG1901316</a>
Silver	U		0.127	1.00	1	08/03/2022 06:22	<a href="#">WG1901316</a>
Zinc	84.2		0.832	5.00	1	08/03/2022 06:22	<a href="#">WG1901316</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.419		0.0167	0.200	1	08/04/2022 21:27	<a href="#">WG1903661</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.40		0.100	1.00	5	08/02/2022 17:43	<a href="#">WG1901314</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0265	<a href="#">B J</a>	0.0217	0.100	1	07/23/2022 05:58	<a href="#">WG1899210</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	99.6			77.0-120		07/23/2022 05:58	<a href="#">WG1899210</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	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	07/22/2022 22:22	<a href="#">WG1899607</a>
Toluene	U		0.00130	0.00500	1	07/22/2022 22:22	<a href="#">WG1899607</a>
Ethylbenzene	U		0.000737	0.00250	1	07/22/2022 22:22	<a href="#">WG1899607</a>
Xylenes, Total	U		0.000880	0.00650	1	07/22/2022 22:22	<a href="#">WG1899607</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/22/2022 22:22	<a href="#">WG1899607</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	07/22/2022 22:22	<a href="#">WG1899607</a>
(S) Toluene-d8	103			75.0-131		07/22/2022 22:22	<a href="#">WG1899607</a>
(S) 4-Bromofluorobenzene	96.1			67.0-138		07/22/2022 22:22	<a href="#">WG1899607</a>
(S) 1,2-Dichloroethane-d4	92.0			70.0-130		07/22/2022 22:22	<a href="#">WG1899607</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	112		1.61	4.00	1	07/27/2022 16:06	<a href="#">WG1901042</a>
C28-C36 Motor Oil Range	30.6		0.274	4.00	1	07/27/2022 16:06	<a href="#">WG1901042</a>
(S) o-Terphenyl	56.1			18.0-148		07/27/2022 16:06	<a href="#">WG1901042</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Acenaphthene	U		0.00209	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Acenaphthylene	U		0.00216	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Chrysene	U		0.00232	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Fluoranthene	U		0.00227	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Fluorene	U		0.00205	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Naphthalene	U		0.00408	0.0200	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Phenanthrene	0.0208		0.00231	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
Pyrene	0.00204	U	0.00200	0.00600	1	07/28/2022 02:55	<a href="#">WG1901020</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/28/2022 02:55	<a href="#">WG1901020</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/28/2022 02:55	<a href="#">WG1901020</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/28/2022 02:55	<a href="#">WG1901020</a>
(S) p-Terphenyl-d14	61.5			23.0-120		07/28/2022 02:55	<a href="#">WG1901020</a>
(S) Nitrobenzene-d5	48.9			14.0-149		07/28/2022 02:55	<a href="#">WG1901020</a>
(S) 2-Fluorobiphenyl	49.9			34.0-125		07/28/2022 02:55	<a href="#">WG1901020</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	36.5		1	08/02/2022 20:11	WG1902871

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	1.35	B	0.255	1.00	1	08/04/2022 04:13	WG1905133

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.03	T8	1	07/27/2022 10:00	WG1901438

## Sample Narrative:

L1517244-08 WG1901438: 8.03 at 23.7C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	9220		10.0	1	07/29/2022 07:46	WG1901859

## Sample Narrative:

L1517244-08 WG1901859: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	302		0.0852	0.500	1	08/03/2022 06:24	WG1901316
Cadmium	0.456	J	0.0471	0.500	1	08/03/2022 06:24	WG1901316
Copper	28.7		0.400	2.00	1	08/03/2022 06:24	WG1901316
Lead	19.6		0.208	0.500	1	08/03/2022 06:24	WG1901316
Nickel	16.2		0.132	2.00	1	08/03/2022 06:24	WG1901316
Selenium	U		0.764	2.00	1	08/03/2022 06:24	WG1901316
Silver	U		0.127	1.00	1	08/03/2022 06:24	WG1901316
Zinc	72.2		0.832	5.00	1	08/03/2022 06:24	WG1901316

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.935		0.0167	0.200	1	08/04/2022 21:30	WG1903661

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.95		0.100	1.00	5	08/02/2022 17:46	WG1901314

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.428	B	0.0217	0.100	1	07/23/2022 06:21	WG1899210
(S) a,a,a-Trifluorotoluene(FID)	97.2			77.0-120		07/23/2022 06:21	WG1899210

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	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.000500	U	0.000467	0.00100	1	07/22/2022 22:44	<a href="#">WG1899607</a>
Toluene	U		0.00130	0.00500	1	07/22/2022 22:44	<a href="#">WG1899607</a>
Ethylbenzene	U		0.000737	0.00250	1	07/22/2022 22:44	<a href="#">WG1899607</a>
Xylenes, Total	0.00721		0.000880	0.00650	1	07/22/2022 22:44	<a href="#">WG1899607</a>
1,2,4-Trimethylbenzene	0.00660		0.00158	0.00500	1	07/22/2022 22:44	<a href="#">WG1899607</a>
1,3,5-Trimethylbenzene	0.00480	U	0.00200	0.00500	1	07/22/2022 22:44	<a href="#">WG1899607</a>
(S) Toluene-d8	107			75.0-131		07/22/2022 22:44	<a href="#">WG1899607</a>
(S) 4-Bromofluorobenzene	92.3			67.0-138		07/22/2022 22:44	<a href="#">WG1899607</a>
(S) 1,2-Dichloroethane-d4	89.9			70.0-130		07/22/2022 22:44	<a href="#">WG1899607</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	24.9		1.61	4.00	1	07/27/2022 15:24	<a href="#">WG1901042</a>
C28-C36 Motor Oil Range	21.5		0.274	4.00	1	07/27/2022 15:24	<a href="#">WG1901042</a>
(S) o-Terphenyl	61.6			18.0-148		07/27/2022 15:24	<a href="#">WG1901042</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Acenaphthene	U		0.00209	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Acenaphthylene	U		0.00216	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Chrysene	U		0.00232	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Fluoranthene	U		0.00227	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Fluorene	0.00510	U	0.00205	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Naphthalene	U		0.00408	0.0200	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Phenanthrene	0.00947		0.00231	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
Pyrene	U		0.00200	0.00600	1	07/28/2022 03:12	<a href="#">WG1901020</a>
1-Methylnaphthalene	0.0109	U	0.00449	0.0200	1	07/28/2022 03:12	<a href="#">WG1901020</a>
2-Methylnaphthalene	0.00942	U	0.00427	0.0200	1	07/28/2022 03:12	<a href="#">WG1901020</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/28/2022 03:12	<a href="#">WG1901020</a>
(S) p-Terphenyl-d14	64.9			23.0-120		07/28/2022 03:12	<a href="#">WG1901020</a>
(S) Nitrobenzene-d5	74.6			14.0-149		07/28/2022 03:12	<a href="#">WG1901020</a>
(S) 2-Fluorobiphenyl	63.7			34.0-125		07/28/2022 03:12	<a href="#">WG1901020</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	42.5		1	08/02/2022 20:14	WG1902871

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.435	<a href="#">B J</a>	0.255	1.00	1	08/04/2022 04:18	<a href="#">WG1905133</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.15	<a href="#">T8</a>	1	07/23/2022 11:00	<a href="#">WG1899769</a>

## Sample Narrative:

L1517244-09 WG1899769: 9.15 at 24.6C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	3200		10.0	1	07/29/2022 07:46	<a href="#">WG1901859</a>

## Sample Narrative:

L1517244-09 WG1901859: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	2520	<a href="#">O1 V</a>	0.0852	0.500	1	08/03/2022 06:06	<a href="#">WG1901316</a>
Cadmium	0.382	<a href="#">J</a>	0.0471	0.500	1	08/03/2022 06:06	<a href="#">WG1901316</a>
Copper	26.1		0.400	2.00	1	08/03/2022 06:06	<a href="#">WG1901316</a>
Lead	30.0		0.208	0.500	1	08/03/2022 06:06	<a href="#">WG1901316</a>
Nickel	15.4		0.132	2.00	1	08/03/2022 06:06	<a href="#">WG1901316</a>
Selenium	U		0.764	2.00	1	08/03/2022 06:06	<a href="#">WG1901316</a>
Silver	U		0.127	1.00	1	08/03/2022 06:06	<a href="#">WG1901316</a>
Zinc	64.5		0.832	5.00	1	08/03/2022 06:06	<a href="#">WG1901316</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.942		0.0167	0.200	1	08/04/2022 21:33	<a href="#">WG1903661</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.01		0.100	1.00	5	08/02/2022 17:23	<a href="#">WG1901314</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0553	<a href="#">B J</a>	0.0217	0.100	1	07/23/2022 08:39	<a href="#">WG1899210</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	99.6			77.0-120		07/23/2022 08:39	<a href="#">WG1899210</a>



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

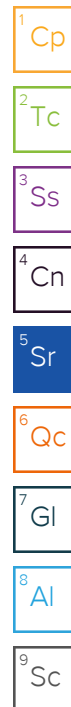
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	07/22/2022 23:05	<a href="#">WG1899607</a>
Toluene	U		0.00130	0.00500	1	07/22/2022 23:05	<a href="#">WG1899607</a>
Ethylbenzene	U		0.000737	0.00250	1	07/22/2022 23:05	<a href="#">WG1899607</a>
Xylenes, Total	U		0.000880	0.00650	1	07/22/2022 23:05	<a href="#">WG1899607</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/22/2022 23:05	<a href="#">WG1899607</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	07/22/2022 23:05	<a href="#">WG1899607</a>
(S) Toluene-d8	109			75.0-131		07/22/2022 23:05	<a href="#">WG1899607</a>
(S) 4-Bromofluorobenzene	96.1			67.0-138		07/22/2022 23:05	<a href="#">WG1899607</a>
(S) 1,2-Dichloroethane-d4	88.6			70.0-130		07/22/2022 23:05	<a href="#">WG1899607</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.61	4.00	1	07/27/2022 14:02	<a href="#">WG1901043</a>
C28-C36 Motor Oil Range	3.30	J	0.274	4.00	1	07/27/2022 14:02	<a href="#">WG1901043</a>
(S) o-Terphenyl	42.3			18.0-148		07/27/2022 14:02	<a href="#">WG1901043</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Acenaphthene	U		0.00209	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Acenaphthylene	U		0.00216	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Chrysene	U		0.00232	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Fluoranthene	U		0.00227	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Fluorene	U		0.00205	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Naphthalene	U		0.00408	0.0200	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Phenanthrene	U		0.00231	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
Pyrene	U		0.00200	0.00600	1	07/28/2022 04:06	<a href="#">WG1901020</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/28/2022 04:06	<a href="#">WG1901020</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/28/2022 04:06	<a href="#">WG1901020</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/28/2022 04:06	<a href="#">WG1901020</a>
(S) p-Terphenyl-d14	63.3			23.0-120		07/28/2022 04:06	<a href="#">WG1901020</a>
(S) Nitrobenzene-d5	53.6			14.0-149		07/28/2022 04:06	<a href="#">WG1901020</a>
(S) 2-Fluorobiphenyl	53.2			34.0-125		07/28/2022 04:06	<a href="#">WG1901020</a>



## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	6.11		1	08/02/2022 20:17	WG1902871

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.854	<a href="#">B J</a>	0.255	1.00	1	08/04/2022 04:23	<a href="#">WG1905133</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.42	<a href="#">T8</a>	1	07/23/2022 13:00	<a href="#">WG1899784</a>

## Sample Narrative:

L1517244-10 WG1899784: 8.42 at 25C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1120		10.0	1	07/31/2022 09:05	<a href="#">WG1901882</a>

## Sample Narrative:

L1517244-10 WG1901882: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	196		0.0852	0.500	1	08/03/2022 06:33	<a href="#">WG1901316</a>
Cadmium	0.597		0.0471	0.500	1	08/03/2022 06:33	<a href="#">WG1901316</a>
Copper	34.3		0.400	2.00	1	08/03/2022 06:33	<a href="#">WG1901316</a>
Lead	20.3		0.208	0.500	1	08/03/2022 06:33	<a href="#">WG1901316</a>
Nickel	19.5		0.132	2.00	1	08/03/2022 06:33	<a href="#">WG1901316</a>
Selenium	U		0.764	2.00	1	08/03/2022 06:33	<a href="#">WG1901316</a>
Silver	U		0.127	1.00	1	08/03/2022 06:33	<a href="#">WG1901316</a>
Zinc	74.4		0.832	5.00	1	08/03/2022 06:33	<a href="#">WG1901316</a>

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

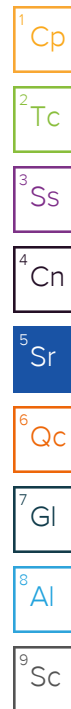
Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.586		0.0167	0.200	1	08/04/2022 21:36	<a href="#">WG1903661</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.05		0.100	1.00	5	08/02/2022 17:56	<a href="#">WG1901314</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0402	<a href="#">B J</a>	0.0217	0.100	1	07/23/2022 09:02	<a href="#">WG1899210</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	99.7			77.0-120		07/23/2022 09:02	<a href="#">WG1899210</a>



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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	07/22/2022 23:26	<a href="#">WG1899607</a>
Toluene	U		0.00130	0.00500	1	07/22/2022 23:26	<a href="#">WG1899607</a>
Ethylbenzene	U		0.000737	0.00250	1	07/22/2022 23:26	<a href="#">WG1899607</a>
Xylenes, Total	U		0.000880	0.00650	1	07/22/2022 23:26	<a href="#">WG1899607</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/22/2022 23:26	<a href="#">WG1899607</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	07/22/2022 23:26	<a href="#">WG1899607</a>
(S) Toluene-d8	110			75.0-131		07/22/2022 23:26	<a href="#">WG1899607</a>
(S) 4-Bromofluorobenzene	98.8			67.0-138		07/22/2022 23:26	<a href="#">WG1899607</a>
(S) 1,2-Dichloroethane-d4	86.1			70.0-130		07/22/2022 23:26	<a href="#">WG1899607</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.61	4.00	1	07/27/2022 14:16	<a href="#">WG1901043</a>
C28-C36 Motor Oil Range	4.59		0.274	4.00	1	07/27/2022 14:16	<a href="#">WG1901043</a>
(S) o-Terphenyl	52.2			18.0-148		07/27/2022 14:16	<a href="#">WG1901043</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Acenaphthene	U		0.00209	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Acenaphthylene	U		0.00216	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Chrysene	U		0.00232	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Fluoranthene	U		0.00227	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Fluorene	U		0.00205	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Naphthalene	U		0.00408	0.0200	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Phenanthrene	U		0.00231	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
Pyrene	U		0.00200	0.00600	1	07/28/2022 04:24	<a href="#">WG1901020</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/28/2022 04:24	<a href="#">WG1901020</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/28/2022 04:24	<a href="#">WG1901020</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/28/2022 04:24	<a href="#">WG1901020</a>
(S) p-Terphenyl-d14	54.8			23.0-120		07/28/2022 04:24	<a href="#">WG1901020</a>
(S) Nitrobenzene-d5	55.5			14.0-149		07/28/2022 04:24	<a href="#">WG1901020</a>
(S) 2-Fluorobiphenyl	57.1			34.0-125		07/28/2022 04:24	<a href="#">WG1901020</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3825663-1 08/12/22 07:43

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

L1514822-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1514822-03 08/12/22 08:29 • (DUP) R3825663-7 08/12/22 08:34

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	1.15	1.17	1	1.95		20

L1516275-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1516275-03 08/12/22 09:31 • (DUP) R3825663-8 08/12/22 09:36

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

Laboratory Control Sample (LCS)

(LCS) R3825663-2 08/12/22 07:49

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.5	105	80.0-120	

L1514822-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1514822-01 08/12/22 07:55 • (MS) R3825663-3 08/12/22 08:03 • (MSD) R3825663-4 08/12/22 08:08

	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	1.16	20.8	20.6	98.2	97.1	1	75.0-125			1.04	20

L1514822-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1514822-01 08/12/22 07:55 • (MS) R3825663-6 08/12/22 08:18

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	643	1.16	798	124	50	75.0-125	

<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) R3822634-1 08/04/22 02:52

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Hexavalent Chromium	0.271	J	0.255	1.00

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1515310-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1515310-01 08/04/22 03:10 • (DUP) R3822634-3 08/04/22 03:16

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	0.477	0.474	1	0.517	J	20

L1517741-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1517741-01 08/04/22 04:33 • (DUP) R3822634-8 08/04/22 04:39

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	1.21	1.20	1	0.612		20

Laboratory Control Sample (LCS)

(LCS) R3822634-2 08/04/22 02:57

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.7	107	80.0-120	

L1517244-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1517244-04 08/04/22 03:26 • (MS) R3822634-4 08/04/22 03:31 • (MSD) R3822634-5 08/04/22 03:36

	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	0.361	33.0	31.1	163	154	1	75.0-125	J5	J5	6.04	20

L1517244-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1517244-04 08/04/22 03:26 • (MS) R3822634-7 08/04/22 03:57

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	641	0.361	104	16.2	50	75.0-125	J6

L1517284-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1517284-03 07/23/22 11:00 • (DUP) R3818433-2 07/23/22 11:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.52	7.49	1	0.400		1

Sample Narrative:

OS: 7.52 at 24.7C

DUP: 7.49 at 24.8C



L1517801-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1517801-03 07/23/22 11:00 • (DUP) R3818433-3 07/23/22 11:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.89	7.91	1	0.253		1

Sample Narrative:

OS: 7.89 at 24.4C

DUP: 7.91 at 24.4C

Laboratory Control Sample (LCS)

(LCS) R3818433-1 07/23/22 11:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	su	su	%	%	
pH	10.0	9.92	99.2	99.0-101	

Sample Narrative:

LCS: 9.92 at 24C

L1517244-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1517244-01 07/23/22 13:00 • (DUP) R3818468-2 07/23/22 13:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.50	8.53	1	0.352		1

Sample Narrative:

OS: 8.5 at 24.8C

DUP: 8.53 at 25.2C

L1517725-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1517725-02 07/23/22 13:00 • (DUP) R3818468-3 07/23/22 13:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.61	8.60	1	0.116		1

Sample Narrative:

OS: 8.61 at 25.2C

DUP: 8.6 at 25.4C

Laboratory Control Sample (LCS)

(LCS) R3818468-1 07/23/22 13:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	su	su	%	%	
pH	10.0	9.92	99.2	99.0-101	

Sample Narrative:

LCS: 9.92 at 24.1C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1517824-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1517824-01 07/27/22 10:00 • (DUP) R3819661-2 07/27/22 10:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	pH	su		%		%
pH	8.66	8.63	1	0.347		1

Sample Narrative:

OS: 8.66 at 23.5C

DUP: 8.63 at 23.5C

L1518221-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1518221-02 07/27/22 10:00 • (DUP) R3819661-3 07/27/22 10:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	pH	su		%		%
pH	8.96	8.96	1	0.000		1

Sample Narrative:

OS: 8.96 at 23.6C

DUP: 8.96 at 23.6C

Laboratory Control Sample (LCS)

(LCS) R3819661-1 07/27/22 10:00

	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 23.9C

<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) R3820470-1 07/29/22 07:46

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

L1516783-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1516783-02 07/29/22 07:46 • (DUP) R3820470-3 07/29/22 07:46

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	3020	2970	1	1.70		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1517244-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1517244-08 07/29/22 07:46 • (DUP) R3820470-4 07/29/22 07:46

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	9220	9140	1	0.871		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3820470-2 07/29/22 07:46

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	286	286	99.9	85.0-115	

Sample Narrative:

LCS: at 25C





Method Blank (MB)

(MB) R3820998-1 07/31/22 09:05

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

L1516407-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1516407-06 07/31/22 09:05 • (DUP) R3820998-3 07/31/22 09:05

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	11700	13000	1	10.9		20

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

L1517252-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1517252-01 07/31/22 09:05 • (DUP) R3820998-4 07/31/22 09:05

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	5070	5360	1	5.56		20

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

Laboratory Control Sample (LCS)

(LCS) R3820998-2 07/31/22 09:05

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	286	281	98.1	85.0-115	

Sample Narrative:  
LCS: at 25C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3823275-1 08/05/22 16:15

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

Laboratory Control Sample (LCS)

(LCS) R3823275-2 08/05/22 16:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	98.9	98.9	80.0-120	
Cadmium	100	94.7	94.7	80.0-120	
Copper	100	97.4	97.4	80.0-120	
Lead	100	95.0	95.0	80.0-120	
Nickel	100	96.3	96.3	80.0-120	
Selenium	100	98.2	98.2	80.0-120	
Silver	20.0	17.9	89.3	80.0-120	
Zinc	100	94.9	94.9	80.0-120	

L1517897-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1517897-01 08/05/22 16:20 • (MS) R3823275-5 08/05/22 16:29 • (MSD) R3823275-6 08/05/22 16:32

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	350	1290	249	943	0.000	1	75.0-125	J5	J3 J6	135	20
Cadmium	100	0.820	106	97.9	105	97.0	1	75.0-125			7.81	20
Copper	100	12.9	122	113	110	100	1	75.0-125			7.86	20
Lead	100	24.6	127	114	102	89.3	1	75.0-125			10.6	20
Nickel	100	16.9	125	113	108	96.4	1	75.0-125			10.1	20
Selenium	100	U	108	101	108	101	1	75.0-125			6.78	20
Silver	20.0	U	21.2	19.3	106	96.6	1	75.0-125			9.12	20
Zinc	100	169	288	253	119	84.0	1	75.0-125			13.0	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3822087-1 08/03/22 06:01

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

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

Laboratory Control Sample (LCS)

(LCS) R3822087-2 08/03/22 06:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	97.1	97.1	80.0-120	
Cadmium	100	93.4	93.4	80.0-120	
Copper	100	95.4	95.4	80.0-120	
Lead	100	92.0	92.0	80.0-120	
Nickel	100	92.5	92.5	80.0-120	
Selenium	100	94.0	94.0	80.0-120	
Silver	20.0	17.9	89.7	80.0-120	
Zinc	100	91.4	91.4	80.0-120	

L1517244-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1517244-09 08/03/22 06:06 • (MS) R3822087-5 08/03/22 06:14 • (MSD) R3822087-6 08/03/22 06:16

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	2520	2180	2670	0.000	150	1	75.0-125	V	V	20.0	20
Cadmium	100	0.382	92.2	93.5	91.8	93.2	1	75.0-125			1.48	20
Copper	100	26.1	122	125	95.9	98.9	1	75.0-125			2.41	20
Lead	100	30.0	109	116	79.5	85.5	1	75.0-125			5.34	20
Nickel	100	15.4	103	105	87.7	89.8	1	75.0-125			2.02	20
Selenium	100	U	92.3	92.9	92.3	92.9	1	75.0-125			0.607	20
Silver	20.0	U	17.7	18.1	88.4	90.5	1	75.0-125			2.35	20
Zinc	100	64.5	145	151	80.2	86.3	1	75.0-125			4.10	20

Method Blank (MB)

(MB) R3822916-1 08/04/22 20:39

Analyte	MB Result mg/l	MB Qualifier	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) R3822916-2 08/04/22 20:41 • (LCSD) R3822916-3 08/04/22 20:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.05	1.03	105	103	80.0-120			1.89	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) R3823121-1 08/05/22 12:02

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) R3823121-2 08/05/22 12:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	89.8	89.8	80.0-120	

L1517897-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1517897-01 08/05/22 12:09 • (MS) R3823121-5 08/05/22 12:18 • (MSD) R3823121-6 08/05/22 12:22

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	18.2	112	102	94.0	83.8	5	75.0-125			9.47	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3821900-1 08/02/22 17:17

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Laboratory Control Sample (LCS)

(LCS) R3821900-2 08/02/22 17:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	88.6	88.6	80.0-120	

<sup>4</sup>Cn

<sup>5</sup>Sr

L1517244-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1517244-09 08/02/22 17:23 • (MS) R3821900-5 08/02/22 17:33 • (MSD) R3821900-6 08/02/22 17:36

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 %
Arsenic	100	4.01	84.0	90.3	79.9	86.3	5	75.0-125			7.28	20

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



Method Blank (MB)

(MB) R3820157-2 07/22/22 20:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0515	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	100			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3820157-1 07/22/22 19:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.04	91.6	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			106	77.0-120	

L1516840-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1516840-19 07/22/22 21:50 • (MS) R3820157-3 07/23/22 10:56 • (MSD) R3820157-4 07/23/22 12:21

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 %
TPH (GC/FID) Low Fraction	5.50	U	3.24	3.08	58.9	56.0	1	10.0-151			5.06	28
(S) a,a,a-Trifluorotoluene(FID)					99.6	99.1		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3818444-3 07/22/22 18:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	106			75.0-131
(S) 4-Bromofluorobenzene	95.9			67.0-138
(S) 1,2-Dichloroethane-d4	89.4			70.0-130

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

(LCS) R3818444-1 07/22/22 16:44 • (LCSD) R3818444-2 07/22/22 17:05

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	0.124	0.130	99.2	104	70.0-123			4.72	20
Toluene	0.125	0.125	0.125	100	100	75.0-121			0.000	20
Ethylbenzene	0.125	0.123	0.129	98.4	103	74.0-126			4.76	20
Xylenes, Total	0.375	0.384	0.400	102	107	72.0-127			4.08	20
1,2,4-Trimethylbenzene	0.125	0.134	0.138	107	110	70.0-126			2.94	20
1,3,5-Trimethylbenzene	0.125	0.129	0.136	103	109	73.0-127			5.28	20
(S) Toluene-d8				102	101	75.0-131				
(S) 4-Bromofluorobenzene				98.4	94.4	67.0-138				
(S) 1,2-Dichloroethane-d4				102	101	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3819801-1 07/27/22 13:42

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	0.366	⌵	0.274	4.00
(S) o-Terphenyl	83.6			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3819801-2 07/27/22 13:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	33.7	67.4	50.0-150	
(S) o-Terphenyl			69.7	18.0-148	

L1517071-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1517071-02 07/27/22 18:56 • (MS) R3820048-2 07/27/22 17:17 • (MSD) R3820048-1 07/27/22 17:03

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	49.4	8.98	36.4	43.6	55.5	70.1	1	50.0-150			18.0	20
(S) o-Terphenyl					65.8	72.9		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3819736-1 07/27/22 12:30

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	64.4			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3819736-2 07/27/22 12:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	35.3	70.6	50.0-150	
(S) o-Terphenyl			88.3	18.0-148	

L1517291-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1517291-04 07/27/22 17:33 • (MS) R3819736-3 07/27/22 17:47 • (MSD) R3819736-4 07/27/22 18:00

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	49.8	358	U	U	0.000	0.000	20	50.0-150	V	V	0.000	20
(S) o-Terphenyl					0.000	0.000		18.0-148	J7	J7		

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3819696-2 07/27/22 08:39

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) p-Terphenyl-d14	56.8			23.0-120
(S) Nitrobenzene-d5	38.0			14.0-149
(S) 2-Fluorobiphenyl	45.9			34.0-125

Laboratory Control Sample (LCS)

(LCS) R3819696-1 07/27/22 08:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0522	65.3	50.0-126	
Acenaphthene	0.0800	0.0485	60.6	50.0-120	
Acenaphthylene	0.0800	0.0500	62.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0545	68.1	45.0-120	
Benzo(a)pyrene	0.0800	0.0535	66.9	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0481	60.1	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0490	61.3	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0480	60.0	49.0-125	
Chrysene	0.0800	0.0529	66.1	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0525	65.6	47.0-125	
Fluoranthene	0.0800	0.0547	68.4	49.0-129	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3819696-1 07/27/22 08:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0524	65.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0538	67.3	46.0-125	
Naphthalene	0.0800	0.0445	55.6	50.0-120	
Phenanthrene	0.0800	0.0509	63.6	47.0-120	
Pyrene	0.0800	0.0549	68.6	43.0-123	
1-Methylnaphthalene	0.0800	0.0474	59.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0485	60.6	50.0-120	
2-Chloronaphthalene	0.0800	0.0451	56.4	50.0-120	
(S) p-Terphenyl-d14			78.3	23.0-120	
(S) Nitrobenzene-d5			59.5	14.0-149	
(S) 2-Fluorobiphenyl			67.1	34.0-125	

L1515904-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1515904-14 07/27/22 09:15 • (MS) R3819696-3 07/27/22 09:33 • (MSD) R3819696-4 07/27/22 09:51

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	0.0788	U	0.0488	0.0442	61.9	56.1	1	10.0-145			9.89	30
Acenaphthene	0.0788	U	0.0471	0.0403	59.8	51.1	1	14.0-127			15.6	27
Acenaphthylene	0.0788	U	0.0481	0.0411	61.0	52.2	1	21.0-124			15.7	25
Benzo(a)anthracene	0.0788	U	0.0521	0.0472	66.1	59.9	1	10.0-139			9.87	30
Benzo(a)pyrene	0.0788	U	0.0549	0.0519	69.7	65.9	1	10.0-141			5.62	31
Benzo(b)fluoranthene	0.0788	U	0.0502	0.0460	63.7	58.4	1	10.0-140			8.73	36
Benzo(g,h,i)perylene	0.0788	U	0.0515	0.0500	65.4	63.5	1	10.0-140			2.96	33
Benzo(k)fluoranthene	0.0788	U	0.0492	0.0465	62.4	59.0	1	10.0-137			5.64	31
Chrysene	0.0788	U	0.0547	0.0507	69.4	64.3	1	10.0-145			7.59	30
Dibenz(a,h)anthracene	0.0788	U	0.0534	0.0514	67.8	65.2	1	10.0-132			3.82	31
Fluoranthene	0.0788	U	0.0539	0.0466	68.4	59.1	1	10.0-153			14.5	33
Fluorene	0.0788	U	0.0503	0.0431	63.8	54.7	1	11.0-130			15.4	29
Indeno(1,2,3-cd)pyrene	0.0788	U	0.0545	0.0509	69.2	64.6	1	10.0-137			6.83	32
Naphthalene	0.0788	U	0.0430	0.0389	54.6	49.4	1	10.0-135			10.0	27
Phenanthrene	0.0788	U	0.0508	0.0437	64.5	55.5	1	10.0-144			15.0	31
Pyrene	0.0788	U	0.0563	0.0497	71.4	63.1	1	10.0-148			12.5	35
1-Methylnaphthalene	0.0788	U	0.0456	0.0399	57.9	50.6	1	10.0-142			13.3	28
2-Methylnaphthalene	0.0788	U	0.0460	0.0401	58.4	50.9	1	10.0-137			13.7	28
2-Chloronaphthalene	0.0788	U	0.0438	0.0386	55.5	48.9	1	29.0-120			12.6	24
(S) p-Terphenyl-d14					83.4	73.1		23.0-120				
(S) Nitrobenzene-d5					75.9	73.8		14.0-149				
(S) 2-Fluorobiphenyl					78.6	71.7		34.0-125				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3821029-2 07/28/22 02:19

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) p-Terphenyl-d14	63.2			23.0-120
(S) Nitrobenzene-d5	57.3			14.0-149
(S) 2-Fluorobiphenyl	60.0			34.0-125

<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) R3821029-1 07/28/22 02:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0651	81.4	50.0-126	
Acenaphthene	0.0800	0.0632	79.0	50.0-120	
Acenaphthylene	0.0800	0.0658	82.3	50.0-120	
Benzo(a)anthracene	0.0800	0.0672	84.0	45.0-120	
Benzo(a)pyrene	0.0800	0.0662	82.8	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0595	74.4	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0608	76.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0582	72.8	49.0-125	
Chrysene	0.0800	0.0664	83.0	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0644	80.5	47.0-125	
Fluoranthene	0.0800	0.0669	83.6	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3821029-1 07/28/22 02:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0658	82.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0677	84.6	46.0-125	
Naphthalene	0.0800	0.0616	77.0	50.0-120	
Phenanthrene	0.0800	0.0616	77.0	47.0-120	
Pyrene	0.0800	0.0643	80.4	43.0-123	
1-Methylnaphthalene	0.0800	0.0641	80.1	51.0-121	
2-Methylnaphthalene	0.0800	0.0660	82.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0611	76.4	50.0-120	
(S) p-Terphenyl-d14			81.8	23.0-120	
(S) Nitrobenzene-d5			78.7	14.0-149	
(S) 2-Fluorobiphenyl			79.1	34.0-125	

L1517244-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1517244-08 07/28/22 03:12 • (MS) R3821029-3 07/28/22 03:30 • (MSD) R3821029-4 07/28/22 03:48

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	0.0792	U	0.0566	0.0533	71.5	67.3	1	10.0-145			6.01	30
Acenaphthene	0.0792	U	0.0535	0.0517	67.6	65.3	1	14.0-127			3.42	27
Acenaphthylene	0.0792	U	0.0556	0.0532	70.2	67.2	1	21.0-124			4.41	25
Benzo(a)anthracene	0.0792	U	0.0565	0.0533	71.3	67.3	1	10.0-139			5.83	30
Benzo(a)pyrene	0.0792	U	0.0573	0.0541	72.3	68.3	1	10.0-141			5.75	31
Benzo(b)fluoranthene	0.0792	U	0.0495	0.0472	62.5	59.6	1	10.0-140			4.76	36
Benzo(g,h,i)perylene	0.0792	U	0.0517	0.0493	65.3	62.2	1	10.0-140			4.75	33
Benzo(k)fluoranthene	0.0792	U	0.0479	0.0462	60.5	58.3	1	10.0-137			3.61	31
Chrysene	0.0792	U	0.0559	0.0530	70.6	66.9	1	10.0-145			5.33	30
Dibenz(a,h)anthracene	0.0792	U	0.0531	0.0506	67.0	63.9	1	10.0-132			4.82	31
Fluoranthene	0.0792	U	0.0578	0.0552	73.0	69.7	1	10.0-153			4.60	33
Fluorene	0.0792	0.00510	0.0570	0.0560	65.5	64.3	1	11.0-130			1.77	29
Indeno(1,2,3-cd)pyrene	0.0792	U	0.0574	0.0543	72.5	68.6	1	10.0-137			5.55	32
Naphthalene	0.0792	U	0.0529	0.0506	66.8	63.9	1	10.0-135			4.44	27
Phenanthrene	0.0792	0.00947	0.0553	0.0539	57.9	56.1	1	10.0-144			2.56	31
Pyrene	0.0792	U	0.0558	0.0525	70.5	66.3	1	10.0-148			6.09	35
1-Methylnaphthalene	0.0792	0.0109	0.0607	0.0599	62.9	61.9	1	10.0-142			1.33	28
2-Methylnaphthalene	0.0792	0.00942	0.0597	0.0593	63.5	63.0	1	10.0-137			0.672	28
2-Chloronaphthalene	0.0792	U	0.0514	0.0497	64.9	62.8	1	29.0-120			3.36	24
(S) p-Terphenyl-d14					64.4	64.6		23.0-120				
(S) Nitrobenzene-d5					68.8	61.0		14.0-149				
(S) 2-Fluorobiphenyl					65.9	63.0		34.0-125				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

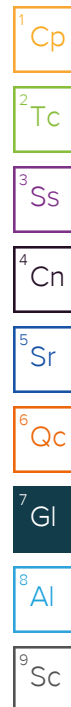
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

### Abbreviations and Definitions

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

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.



# ACCREDITATIONS & LOCATIONS

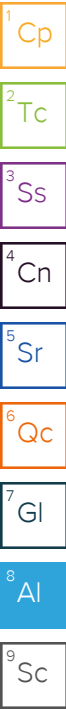
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

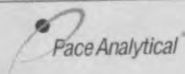
Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</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.





# CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Confluence Compliance Companies	Billing Information: Info on file
Address: Info on file	
Report To: Chris McKisson	Email To: Info on file
Copy To: remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: P&A	State:    County/City:    Time Zone Collected: /    [ ] PT [ ] MT [ ] CT [ ] ET

Phone:	Site/Facility ID #: Federal 1-30	Compliance Monitoring? [ ] Yes    [X] No
Email:		
Collected By (print): Jana Nilsen	Purchase Order #:	DW PWS ID #:
	Quote #:	DW Location Code:
Collected By (signature):	Turnaround Date Required:	Immediately Packed on Ice: [X] Yes    [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [X] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes    [ ] No  Analysis: _____

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
Sample Prefix: 20220719-FED_1-30_FL									
CAP_TRENCH_END@6'	SS	G	7/19/2022	0858				3	G
METER_INLET@6'	SS	G	7/19/2022	0902				3	G
METER_OUTLET_DEHY_IN/OUTLET@	SS	G	7/19/2022	0910				3	G
SEP_INLET@6'	SS	G	7/19/2022	0918				3	G
SEP_OUTLET_TO_OIL@5'	SS	G	7/19/2022	0925				3	G
SEP_OUTLET_GAS@2'	SS	G	7/19/2022	0935				3	G
MID_TRENCH_WH_PJ@4'	SS	G	7/19/2022	0944				3	G
WELL_HEAD_PUMP_JACK@4'	SS	G	7/19/2022	0950				3	G
N_TRENCH@3'	SS	G	7/19/2022	1002				3	G
MID_N_TRENCH@3'	SS	G	7/19/2022	1006				3	G

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used:    Wet    Blue    Dry    None

Packing Material Used:

Radchem sample(s) screened (<500 cpm):    Y    N    NA

SHORT HOLDS PRESENT (<72 hours):    Y    N    N/A

Lab Tracking #:

Samples received via:

FEDEX    UPS    Client    Courier    Pace Courier

Lab Project Manager:

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_\_\_\_

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:  
Custody Seals Present/Intact: Y N NA  
Custody Signatures Present: Y N NA  
Collector Signature Present: Y N NA  
Bottles Intact: Y N NA  
Correct Bottles: Y N NA  
Sufficient Volume: Y N NA  
Samples Received on Ice: Y N NA  
VOA - Headspace Acceptable: Y N NA  
USDA Regulated Soils: Y N NA  
Samples in Holding Time: Y N NA  
Residual Chlorine Present: Y N NA  
Cl Strips: \_\_\_\_\_  
Sample pH Acceptable: Y N NA  
pH Strips: \_\_\_\_\_  
Sulfide Present: Y N NA  
Lead Acetate Strips: \_\_\_\_\_

LAB USE ONLY:

Lab Sample # / Comments:

L1517244

41  
42  
43  
44  
45  
46  
47  
48  
49  
50

Relinquished by/Company: (Signature)

Date/Time:

07/20/22 1700

Received by/Company: (Signature)

Date/Time:

E226

Relinquished by/Company: (Signature)

Date/Time:

Received by/Company: (Signature)

Date/Time:

Accumulate:  
Template:  
Prelogin:

Trip Blank Received: Y N NA  
HCL MeOH TSP Other

Relinquished by/Company: (Signature)

Date/Time:

Received by/Company: (Signature)

Date/Time:

PM:  
PB:

Non Conformance(s):    Page: \_\_\_\_\_  
YES / NO    of: \_\_\_\_\_



A	LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID#: _____ Cooler 1 Temp Upon Receipt: 18°C Cooler 1 Therm Corr. Factor: ____°C Cooler 1 Corrected Temp: ____°C Comments: <i>Before 8.4 2007</i>
9	
r	
ONLY	Trip Blank Received: Y N NA HCL MeOH TSP Other
	Non Conformance(s): _____ YES / NO
	Page: _____ of: _____





07/21-L1517244-NCF CONCOMGJCO

R5

Time estimate: oh Time spent: oh Grouping date: 26 July 2022

## Members

 Cole Medley (responsible)  Chris WardDue on ~~25 July 2022~~ 5:00 PM for target ~~Done~~ (Was done by Cole Medley at 26 July 2022 9:29 AM)

- ☐ Parameter(s) past holding time
- ☒ Temperature not in range
- ☐ Improper container type
- ☐ pH not in range
- ☐ Insufficient sample volume
- ☐ Sample is biphasic
- ☐ Vials received with headspace
- ☐ Broken container
- ☐ Sufficient sample remains
- ☐ If broken container: Insufficient packing material around container
- ☐ If broken container: Insufficient packing material inside cooler
- ☐ If broken container: Improper handling by carrier: \_\_\_\_\_
- ☐ If broken container: Sample was frozen
- ☐ If broken container: Container lid not intact
- ☐ Client informed by Call
- ☒ Client informed by Email
- ☐ Client informed by Voicemail
- ☒ Date/Time: 7/21/22@1329 \_\_\_\_\_
- ☒ PM initials: CMW \_\_\_\_\_
- ☒ Client Contact: Chris McKisson \_\_\_\_\_

## Comments

Cole Medley 21 July 2022 1:28 PM

OOT @ 18.4 Deg C; Ice Melted.

Cole Medley  
Any Word? 26 July 2022 7:59 AMChris Ward  
Client notified, please proceed 26 July 2022 9:28 AMCole Medley  
Done. 26 July 2022 9:29 AM

## Confluence Compliance Companies - CO

Sample Delivery Group: L1494266  
Samples Received: 05/14/2022  
Project Number: FEDERAL 1-30  
Description: P & A  
Site: FEDERAL 1-30  
Report To: Chris McKisson  
403 ½ Rockwood Lane  
Grand Junction, CO 81507

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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# SAMPLE SUMMARY

## 20220513-FED\_1-30-BGN (1205) L1494266-01 Solid

Collected by  
Alex Slorby

Collected date/time  
05/13/22 12:05

Received date/time  
05/14/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1866951	1	05/23/22 18:44	05/23/22 18:44	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1867789	1	05/23/22 03:24	05/23/22 11:59	SCM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1866926	1	05/20/22 13:20	05/20/22 13:25	EPW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1867394	1	05/21/22 09:52	05/22/22 12:27	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1867053	1	05/22/22 17:28	05/23/22 00:00	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1866967	1	05/22/22 17:20	05/24/22 11:40	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1867058	5	05/22/22 17:31	05/22/22 20:46	LD	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

## 20220513-FED\_1-30-BGN (1215) L1494266-02 Solid

Collected by  
Alex Slorby

Collected date/time  
05/13/22 12:15

Received date/time  
05/14/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1866951	1	05/23/22 18:46	05/23/22 18:46	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1867789	1	05/23/22 03:24	05/23/22 12:04	SCM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1866926	1	05/20/22 13:20	05/20/22 13:25	EPW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1867394	1	05/21/22 09:52	05/22/22 12:27	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1867053	1	05/22/22 17:28	05/23/22 00:14	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1866967	1	05/22/22 17:20	05/24/22 11:49	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1867058	5	05/22/22 17:31	05/22/22 21:03	LD	Mt. Juliet, TN

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

## 20220513-FED\_1-30-BGN (1220) L1494266-03 Solid

Collected by  
Alex Slorby

Collected date/time  
05/13/22 12:20

Received date/time  
05/14/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1866951	1	05/23/22 18:49	05/23/22 18:49	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1867789	1	05/23/22 03:24	05/23/22 12:15	SCM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1866926	1	05/20/22 13:20	05/20/22 13:25	EPW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1867394	1	05/21/22 09:52	05/22/22 12:27	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1867053	1	05/22/22 17:28	05/23/22 00:17	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1866967	1	05/22/22 17:20	05/24/22 11:52	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1867058	5	05/22/22 17:31	05/22/22 21:06	LD	Mt. Juliet, TN

## 20220513-FED\_1-30-BGN (1235) L1494266-04 Solid

Collected by  
Alex Slorby

Collected date/time  
05/13/22 12:35

Received date/time  
05/14/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1866951	1	05/24/22 13:49	05/24/22 13:49	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1867789	1	05/23/22 03:24	05/23/22 12:20	SCM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1866926	1	05/20/22 13:20	05/20/22 13:25	EPW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1867394	1	05/21/22 09:52	05/22/22 12:27	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1867053	1	05/22/22 17:28	05/23/22 00:19	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1866967	1	05/22/22 17:20	05/24/22 11:55	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1867058	5	05/22/22 17:31	05/22/22 21:10	LD	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

<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

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.378		1	05/23/2022 18:44	WG1866951

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/23/2022 11:59	<a href="#">WG1867789</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.13	<a href="#">T8</a>	1	05/20/2022 13:25	<a href="#">WG1866926</a>

## Sample Narrative:

L1494266-01 WG1866926: 8.13 at 22.9C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	120		10.0	1	05/22/2022 12:27	<a href="#">WG1867394</a>

## Sample Narrative:

L1494266-01 WG1867394: at 25C

## Metals (ICP) by Method 6010B

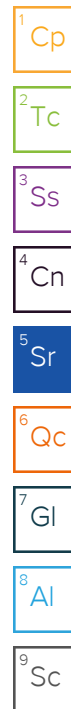
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	28.2		0.0852	0.500	1	05/23/2022 00:00	<a href="#">WG1867053</a>
Cadmium	0.582		0.0471	0.500	1	05/23/2022 00:00	<a href="#">WG1867053</a>
Copper	41.3		0.400	2.00	1	05/23/2022 00:00	<a href="#">WG1867053</a>
Lead	20.5	<a href="#">O1</a>	0.208	0.500	1	05/23/2022 00:00	<a href="#">WG1867053</a>
Nickel	24.1	<a href="#">O1</a>	0.132	2.00	1	05/23/2022 00:00	<a href="#">WG1867053</a>
Selenium	U	<a href="#">J3 J6</a>	0.764	2.00	1	05/23/2022 00:00	<a href="#">WG1867053</a>
Silver	U	<a href="#">O1</a>	0.127	1.00	1	05/23/2022 00:00	<a href="#">WG1867053</a>
Zinc	91.6	<a href="#">J6</a>	0.832	5.00	1	05/23/2022 00:00	<a href="#">WG1867053</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.316		0.0167	0.200	1	05/24/2022 11:40	<a href="#">WG1866967</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.47	<a href="#">O1</a>	0.100	1.00	5	05/22/2022 20:46	<a href="#">WG1867058</a>





## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.38		1	05/23/2022 18:46	WG1866951

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.414	<a href="#">J P1</a>	0.255	1.00	1	05/23/2022 12:04	<a href="#">WG1867789</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.25	<a href="#">T8</a>	1	05/20/2022 13:25	<a href="#">WG1866926</a>

## Sample Narrative:

L1494266-02 WG1866926: 8.25 at 22.8C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	59.2		10.0	1	05/22/2022 12:27	<a href="#">WG1867394</a>

## Sample Narrative:

L1494266-02 WG1867394: at 25C

## Metals (ICP) by Method 6010B

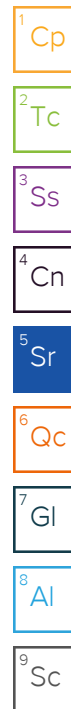
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	18.2		0.0852	0.500	1	05/23/2022 00:14	<a href="#">WG1867053</a>
Cadmium	0.131	<a href="#">J</a>	0.0471	0.500	1	05/23/2022 00:14	<a href="#">WG1867053</a>
Copper	46.9		0.400	2.00	1	05/23/2022 00:14	<a href="#">WG1867053</a>
Lead	21.2		0.208	0.500	1	05/23/2022 00:14	<a href="#">WG1867053</a>
Nickel	13.1		0.132	2.00	1	05/23/2022 00:14	<a href="#">WG1867053</a>
Selenium	U		0.764	2.00	1	05/23/2022 00:14	<a href="#">WG1867053</a>
Silver	U		0.127	1.00	1	05/23/2022 00:14	<a href="#">WG1867053</a>
Zinc	56.3		0.832	5.00	1	05/23/2022 00:14	<a href="#">WG1867053</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.502		0.0167	0.200	1	05/24/2022 11:49	<a href="#">WG1866967</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	0.843	<a href="#">J</a>	0.100	1.00	5	05/22/2022 21:03	<a href="#">WG1867058</a>



## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.306		1	05/23/2022 18:49	WG1866951

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.344	J	0.255	1.00	1	05/23/2022 12:15	<a href="#">WG1867789</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.52	T8	1	05/20/2022 13:25	<a href="#">WG1866926</a>

## Sample Narrative:

L1494266-03 WG1866926: 8.52 at 22.9C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	136		10.0	1	05/22/2022 12:27	<a href="#">WG1867394</a>

## Sample Narrative:

L1494266-03 WG1867394: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	38.1		0.0852	0.500	1	05/23/2022 00:17	<a href="#">WG1867053</a>
Cadmium	0.344	J	0.0471	0.500	1	05/23/2022 00:17	<a href="#">WG1867053</a>
Copper	33.6		0.400	2.00	1	05/23/2022 00:17	<a href="#">WG1867053</a>
Lead	18.2		0.208	0.500	1	05/23/2022 00:17	<a href="#">WG1867053</a>
Nickel	18.0		0.132	2.00	1	05/23/2022 00:17	<a href="#">WG1867053</a>
Selenium	U		0.764	2.00	1	05/23/2022 00:17	<a href="#">WG1867053</a>
Silver	U		0.127	1.00	1	05/23/2022 00:17	<a href="#">WG1867053</a>
Zinc	74.3		0.832	5.00	1	05/23/2022 00:17	<a href="#">WG1867053</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.283		0.0167	0.200	1	05/24/2022 11:52	<a href="#">WG1866967</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.52		0.100	1.00	5	05/22/2022 21:06	<a href="#">WG1867058</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	2030		1	05/24/2022 13:49	WG1866951

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.298	J	0.255	1.00	1	05/23/2022 12:20	WG1867789

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	10.1	T8	1	05/20/2022 13:25	WG1866926

Sample Narrative:

L1494266-04 WG1866926: 10.1 at 22.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	20200		10.0	1	05/22/2022 12:27	WG1867394

Sample Narrative:

L1494266-04 WG1867394: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	36.1		0.0852	0.500	1	05/23/2022 00:19	WG1867053
Cadmium	0.292	J	0.0471	0.500	1	05/23/2022 00:19	WG1867053
Copper	23.0		0.400	2.00	1	05/23/2022 00:19	WG1867053
Lead	12.5		0.208	0.500	1	05/23/2022 00:19	WG1867053
Nickel	12.9		0.132	2.00	1	05/23/2022 00:19	WG1867053
Selenium	U		0.764	2.00	1	05/23/2022 00:19	WG1867053
Silver	U		0.127	1.00	1	05/23/2022 00:19	WG1867053
Zinc	54.6		0.832	5.00	1	05/23/2022 00:19	WG1867053

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	6.29		0.0167	0.200	1	05/24/2022 11:55	WG1866967

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.76		0.100	1.00	5	05/22/2022 21:10	WG1867058

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3795014-1 05/23/22 10:44

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

L1494266-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1494266-02 05/23/22 12:04 • (DUP) R3795014-3 05/23/22 12:10

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	0.414	0.306	1	30.0	J P1	20

L1495823-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1495823-02 05/23/22 13:22 • (DUP) R3795014-8 05/23/22 13:27

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

Laboratory Control Sample (LCS)

(LCS) R3795014-2 05/23/22 10:52

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	9.56	95.6	80.0-120	

L1495416-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1495416-01 05/23/22 12:36 • (MS) R3795014-4 05/23/22 12:51 • (MSD) R3795014-5 05/23/22 12:56

	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	0.444	15.4	17.4	74.9	85.0	1	75.0-125	J6		12.3	20

L1495416-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1495416-01 05/23/22 12:36 • (MS) R3795014-6 05/23/22 13:02

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	685	0.444	617	90.0	50	75.0-125	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1494261-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1494261-21 05/20/22 13:25 • (DUP) R3794440-2 05/20/22 13:25

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	pH	su		%		%
pH	8.83	8.82	1	0.113		1

Sample Narrative:

OS: 8.83 at 23.4C

DUP: 8.82 at 23.6C

<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

L1494266-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1494266-01 05/20/22 13:25 • (DUP) R3794440-3 05/20/22 13:25

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.13	8.09	1	0.493		1

Sample Narrative:

OS: 8.13 at 22.9C

DUP: 8.09 at 23C

Laboratory Control Sample (LCS)

(LCS) R3794440-1 05/20/22 13:25

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	su	su	%	%	
pH	10.0	9.93	99.3	99.0-101	

Sample Narrative:

LCS: 9.93 at 23.3C

Method Blank (MB)

(MB) R3794617-1 05/22/22 12:27

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

L1494261-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1494261-21 05/22/22 12:27 • (DUP) R3794617-3 05/22/22 12:27

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	3470	3810	1	9.34		20

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

L1494266-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1494266-01 05/22/22 12:27 • (DUP) R3794617-4 05/22/22 12:27

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	120	111	1	8.33		20

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

Laboratory Control Sample (LCS)

(LCS) R3794617-2 05/22/22 12:27

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	279	104	85.0-115	

Sample Narrative:  
LCS: at 25C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3794756-1 05/22/22 23:54

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

Laboratory Control Sample (LCS)

(LCS) R3794756-2 05/22/22 23:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	84.2	84.2	80.0-120	
Cadmium	100	80.9	80.9	80.0-120	
Copper	100	81.9	81.9	80.0-120	
Lead	100	81.4	81.4	80.0-120	
Nickel	100	82.3	82.3	80.0-120	
Selenium	100	81.7	81.7	80.0-120	
Silver	20.0	16.1	80.7	80.0-120	
Zinc	100	81.0	81.0	80.0-120	

L1494266-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1494266-01 05/23/22 00:00 • (MS) R3794756-5 05/23/22 00:08 • (MSD) R3794756-6 05/23/22 00:11

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	28.2	113	116	84.8	87.4	1	75.0-125			2.28	20
Cadmium	100	0.582	87.6	86.3	87.0	85.7	1	75.0-125			1.50	20
Copper	100	41.3	124	134	82.7	92.6	1	75.0-125			7.69	20
Lead	100	20.5	111	112	90.2	91.0	1	75.0-125			0.792	20
Nickel	100	24.1	116	117	91.4	93.3	1	75.0-125			1.66	20
Selenium	100	U	67.0	82.2	67.0	82.2	1	75.0-125	J6	J3	20.3	20
Silver	20.0	U	17.6	17.3	88.0	86.4	1	75.0-125			1.85	20
Zinc	100	91.6	159	177	67.5	85.8	1	75.0-125	J6		10.9	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3795575-1 05/24/22 11:15

Analyte	MB Result mg/l	MB Qualifier	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) R3795575-2 05/24/22 11:17 • (LCSD) R3795575-3 05/24/22 11:20

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.02	1.01	102	101	80.0-120			0.513	20

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

Method Blank (MB)

(MB) R3794688-1 05/22/22 20:40

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) R3794688-2 05/22/22 20:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	80.1	80.1	80.0-120	

L1494266-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1494266-01 05/22/22 20:46 • (MS) R3794688-5 05/22/22 20:56 • (MSD) R3794688-6 05/22/22 21:00

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	1.47	85.1	82.7	83.7	81.3	5	75.0-125			2.85	20

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

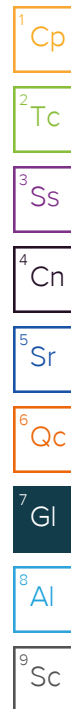
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

## Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	Sample(s) received past/too close to holding time expiration.



# ACCREDITATIONS & LOCATIONS

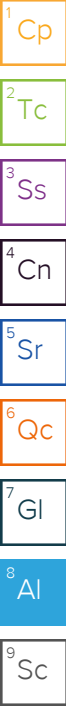
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.







**Confluence Compliance Companies - CO**

Sample Delivery Group: L1516275  
Samples Received: 07/19/2022  
Project Number:  
Description: Federal 1-30 Backgrounds  
Site: FEDERAL 1-30  
Report To: Chris McKisson  
403 ½ Rockwood Lane  
Grand Junction, CO 81507

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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# SAMPLE SUMMARY

220713-FED\_1-30BG(0930)@1' L1516275-01 Solid

Collected by  
Andrew Smith

Collected date/time  
07/13/22 09:30

Received date/time  
07/19/22 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902326	1	08/01/22 17:56	08/01/22 17:56	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1904736	1	08/10/22 23:49	08/12/22 09:21	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1899278	1	07/22/22 08:00	07/22/22 10:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901909	1	07/31/22 07:01	07/31/22 09:54	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1905586	1	08/04/22 14:06	08/05/22 14:33	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903564	1	07/31/22 17:02	08/05/22 00:20	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1905637	5	08/04/22 13:53	08/05/22 13:57	JPD	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

220713-FED\_1-30BG(0935)@0.5' L1516275-02 Solid

Collected by  
Andrew Smith

Collected date/time  
07/13/22 09:35

Received date/time  
07/19/22 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902326	1	08/01/22 17:59	08/01/22 17:59	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1904736	1	08/10/22 23:49	08/12/22 09:26	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1899278	1	07/22/22 08:00	07/22/22 10:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901909	1	07/31/22 07:01	07/31/22 09:54	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1905586	1	08/04/22 14:06	08/05/22 14:36	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903564	1	07/31/22 17:02	08/05/22 00:23	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1905637	5	08/04/22 13:53	08/05/22 14:00	JPD	Mt. Juliet, TN

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

220713-FED\_1-30BG(0945)@0.5' L1516275-03 Solid

Collected by  
Andrew Smith

Collected date/time  
07/13/22 09:45

Received date/time  
07/19/22 10:15

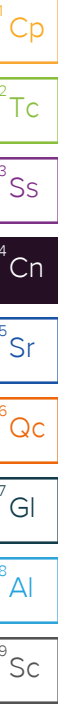
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1902326	1	08/01/22 18:01	08/01/22 18:01	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1904736	1	08/10/22 23:49	08/12/22 09:31	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1899278	1	07/22/22 08:00	07/22/22 10:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1901909	1	07/31/22 07:01	07/31/22 09:54	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1905586	1	08/04/22 14:06	08/05/22 14:44	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1903564	1	07/31/22 17:02	08/05/22 00:26	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1905637	5	08/04/22 13:53	08/05/22 14:10	JPD	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	55.3		1	08/01/2022 17:56	WG1902326

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	08/12/2022 09:21	<a href="#">WG1904736</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.57	<a href="#">T8</a>	1	07/22/2022 10:00	<a href="#">WG1899278</a>

## Sample Narrative:

L1516275-01 WG1899278: 9.57 at 24.6C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1630		10.0	1	07/31/2022 09:54	<a href="#">WG1901909</a>

## Sample Narrative:

L1516275-01 WG1901909: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	44.6		0.0852	0.500	1	08/05/2022 14:33	<a href="#">WG1905586</a>
Cadmium	0.281	<a href="#">J</a>	0.0471	0.500	1	08/05/2022 14:33	<a href="#">WG1905586</a>
Copper	10.0		0.400	2.00	1	08/05/2022 14:33	<a href="#">WG1905586</a>
Lead	7.66		0.208	0.500	1	08/05/2022 14:33	<a href="#">WG1905586</a>
Nickel	7.28		0.132	2.00	1	08/05/2022 14:33	<a href="#">WG1905586</a>
Selenium	U		0.764	2.00	1	08/05/2022 14:33	<a href="#">WG1905586</a>
Silver	U		0.127	1.00	1	08/05/2022 14:33	<a href="#">WG1905586</a>
Zinc	29.0		0.832	5.00	1	08/05/2022 14:33	<a href="#">WG1905586</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.32		0.0167	0.200	1	08/05/2022 00:20	<a href="#">WG1903564</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.83		0.100	1.00	5	08/05/2022 13:57	<a href="#">WG1905637</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	308		1	08/01/2022 17:59	WG1902326

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	08/12/2022 09:26	<a href="#">WG1904736</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.84	<a href="#">T8</a>	1	07/22/2022 10:00	<a href="#">WG1899278</a>

## Sample Narrative:

L1516275-02 WG1899278: 9.84 at 24.3C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	6460		10.0	1	07/31/2022 09:54	<a href="#">WG1901909</a>

## Sample Narrative:

L1516275-02 WG1901909: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	34.9		0.0852	0.500	1	08/05/2022 14:36	<a href="#">WG1905586</a>
Cadmium	0.210	<a href="#">J</a>	0.0471	0.500	1	08/05/2022 14:36	<a href="#">WG1905586</a>
Copper	7.56		0.400	2.00	1	08/05/2022 14:36	<a href="#">WG1905586</a>
Lead	5.95		0.208	0.500	1	08/05/2022 14:36	<a href="#">WG1905586</a>
Nickel	5.97		0.132	2.00	1	08/05/2022 14:36	<a href="#">WG1905586</a>
Selenium	U		0.764	2.00	1	08/05/2022 14:36	<a href="#">WG1905586</a>
Silver	U		0.127	1.00	1	08/05/2022 14:36	<a href="#">WG1905586</a>
Zinc	24.3		0.832	5.00	1	08/05/2022 14:36	<a href="#">WG1905586</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	2.36		0.0167	0.200	1	08/05/2022 00:23	<a href="#">WG1903564</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.68		0.100	1.00	5	08/05/2022 14:00	<a href="#">WG1905637</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	306		1	08/01/2022 18:01	WG1902326

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	08/12/2022 09:31	<a href="#">WG1904736</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	10.3	<a href="#">T8</a>	1	07/22/2022 10:00	<a href="#">WG1899278</a>

## Sample Narrative:

L1516275-03 WG1899278: 10.25 at 24.2C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	8600		10.0	1	07/31/2022 09:54	<a href="#">WG1901909</a>

## Sample Narrative:

L1516275-03 WG1901909: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	95.6		0.0852	0.500	1	08/05/2022 14:44	<a href="#">WG1905586</a>
Cadmium	0.172	<a href="#">J</a>	0.0471	0.500	1	08/05/2022 14:44	<a href="#">WG1905586</a>
Copper	8.71		0.400	2.00	1	08/05/2022 14:44	<a href="#">WG1905586</a>
Lead	6.62		0.208	0.500	1	08/05/2022 14:44	<a href="#">WG1905586</a>
Nickel	5.91		0.132	2.00	1	08/05/2022 14:44	<a href="#">WG1905586</a>
Selenium	U		0.764	2.00	1	08/05/2022 14:44	<a href="#">WG1905586</a>
Silver	U		0.127	1.00	1	08/05/2022 14:44	<a href="#">WG1905586</a>
Zinc	24.8		0.832	5.00	1	08/05/2022 14:44	<a href="#">WG1905586</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.89		0.0167	0.200	1	08/05/2022 00:26	<a href="#">WG1903564</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.72		0.100	1.00	5	08/05/2022 14:10	<a href="#">WG1905637</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3825663-1 08/12/22 07:43

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

L1514822-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1514822-03 08/12/22 08:29 • (DUP) R3825663-7 08/12/22 08:34

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	1.15	1.17	1	1.95		20

L1516275-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1516275-03 08/12/22 09:31 • (DUP) R3825663-8 08/12/22 09:36

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

Laboratory Control Sample (LCS)

(LCS) R3825663-2 08/12/22 07:49

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.5	105	80.0-120	

L1514822-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1514822-01 08/12/22 07:55 • (MS) R3825663-3 08/12/22 08:03 • (MSD) R3825663-4 08/12/22 08:08

	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	1.16	20.8	20.6	98.2	97.1	1	75.0-125			1.04	20

L1514822-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1514822-01 08/12/22 07:55 • (MS) R3825663-6 08/12/22 08:18

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	643	1.16	798	124	50	75.0-125	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1516296-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1516296-01 07/22/22 10:00 • (DUP) R3818103-2 07/22/22 10:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.57	8.53	1	0.468		1

Sample Narrative:

OS: 8.57 at 24.4C

DUP: 8.53 at 24.2C

<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

L1516557-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1516557-01 07/22/22 10:00 • (DUP) R3818103-3 07/22/22 10:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.01	7.02	1	0.143		1

Sample Narrative:

OS: 7.01 at 24.2C

DUP: 7.02 at 24.3C

Laboratory Control Sample (LCS)

(LCS) R3818103-1 07/22/22 10:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	su	su	%	%	
pH	10.0	9.90	99.0	99.0-101	

Sample Narrative:

LCS: 9.9 at 23.5C

Method Blank (MB)

(MB) R3821000-1 07/31/22 09:54

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

L1516250-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1516250-16 07/31/22 09:54 • (DUP) R3821000-3 07/31/22 09:54

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2250	2440	1	8.01		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1516291-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1516291-05 07/31/22 09:54 • (DUP) R3821000-4 07/31/22 09:54

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	238	245	1	2.98		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3821000-2 07/31/22 09:54

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	286	271	94.7	85.0-115	

Sample Narrative:

LCS: at 25C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3823273-1 08/05/22 14:12

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

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

Laboratory Control Sample (LCS)

(LCS) R3823273-2 08/05/22 14:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	101	101	80.0-120	
Cadmium	100	96.6	96.6	80.0-120	
Copper	100	101	101	80.0-120	
Lead	100	97.1	97.1	80.0-120	
Nickel	100	98.9	98.9	80.0-120	
Selenium	100	99.6	99.6	80.0-120	
Silver	20.0	18.0	90.2	80.0-120	
Zinc	100	97.2	97.2	80.0-120	

7  
Gl

8  
Al

9  
Sc

L1521215-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1521215-01 08/05/22 14:17 • (MS) R3823273-5 08/05/22 14:25 • (MSD) R3823273-6 08/05/22 14:28

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	80.7	181	183	101	102	1	75.0-125			0.951	20
Cadmium	100	0.262	96.0	96.2	95.8	95.9	1	75.0-125			0.156	20
Copper	100	14.3	116	117	102	102	1	75.0-125			0.637	20
Lead	100	15.8	114	115	98.7	99.6	1	75.0-125			0.750	20
Nickel	100	13.0	114	115	101	102	1	75.0-125			0.423	20
Selenium	100	U	99.2	99.7	99.2	99.7	1	75.0-125			0.490	20
Silver	20.0	U	18.1	18.2	90.6	91.1	1	75.0-125			0.623	20
Zinc	100	51.6	145	144	93.1	92.2	1	75.0-125			0.643	20

Method Blank (MB)

(MB) R3822918-1 08/04/22 23:18

Analyte	MB Result mg/l	MB Qualifier	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) R3822918-2 08/04/22 23:20 • (LCSD) R3822918-3 08/04/22 23:23

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.04	1.01	104	101	80.0-120			2.88	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



Method Blank (MB)

(MB) R3823127-1 08/05/22 13:30

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) R3823127-2 08/05/22 13:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	85.9	85.9	80.0-120	

L1521215-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1521215-01 08/05/22 13:37 • (MS) R3823127-5 08/05/22 13:47 • (MSD) R3823127-6 08/05/22 13:50

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	6.09	91.4	87.6	85.3	81.5	5	75.0-125			4.22	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

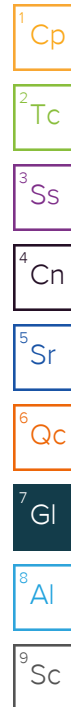
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

### Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
T8	Sample(s) received past/too close to holding time expiration.



# ACCREDITATIONS & LOCATIONS

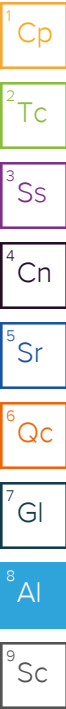
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.







07/19-L1516275-NCF CONCOMGJCO

R5

Time estimate: oh      Time spent: oh      Grouping date: 19 July 2022

Members

-  Cole Medley (responsible)  Chris Ward

~~Due on 22 July 2022 5:00 PM for target~~ Done (Was done by Cole Medley at 19 July 2022 3:39 PM)

- ☒ Login Clarification needed
- ☐ Chain of custody is incomplete
- ☐ Please specify Metals requested
- ☐ Please specify TCLP requested
- ☐ Received additional samples not listed on COC
- ☐ Sample IDs on containers do not match IDs on COC
- ☐ Client did not "X" analysis
- ☐ Chain of Custody is missing
- ☐ If no COC; Received by: \_\_\_\_\_
- ☐ If no COC; Date/Time: \_\_\_\_\_
- ☐ If no COC; Temp./Cont. Rec./pH: \_\_\_\_\_
- ☐ If no COC; Carrier: \_\_\_\_\_
- ☐ If no COC; Tracking #: \_\_\_\_\_
- ☐ Client informed by call
- ☒ Client informed by Email
- ☐ Client informed by Voicemail
- ☒ Date/Time: 7/19/22@1534 \_\_\_\_\_
- ☒ PM initials: CMW \_\_\_\_\_
- ☒ Client Contact: Andy Smith \_\_\_\_\_

Comments

Cole Medley

19 July 2022 2:24 PM

Times listed on containers don't match COC.

IDs:

220713-FED\_1-30BG(0930)@1' 07/13/22 0930(COC)= 0900 (Container)

Logged per COC.

220713-FED\_1-30BG(0935)@0.5' 07/13/22 0935(COC)= 0905 (Container)

Logged per COC.

220713-FED\_1-30BG(0945)@0.5' 07/13/22 0945(COC)= 0910 (Container)

Logged per COC.

Chris Ward

19 July 2022 3:36 PM

Please log per COC



*Cole Medley*

Done.

*19 July 2022 3:38 PM*