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## Report of Work Completed – Pit Closure

<b>ECMC Facility Name (ID)</b>	PRF / C-1W (269711)
<b>Operator Location Name</b>	Pinyon Ridge Federal C-1W Pit
<b>Remediation Project Number</b>	26721
<b>Legal Description</b>	NESE Sec. 21 T3N-R97W
<b>Coordinates (Lat/Long)</b>	40.212534 / -108.276615
<b>County</b>	Rio Blanco County, Colorado

Mr. Hamilton,

Confluence Compliance Companies, LLC (Confluence) prepared this Report of Work Completed (ROWC) for Anschutz Exploration Corporation (Anschutz) to document the findings of site investigation conducted to close the pit at the Pinyon Ridge Federal C-1W well pad (Location). The Location is 22.7 miles northwest of Meeker, Colorado in Rio Blanco County as illustrated in the attached Topographic Location Map. Additional information on the Location and associated remediation project is provided in the title block above and in the attached topographic location map and site diagrams. The ROWC provides a brief background on the remediation project, methods used to complete the drilling assessment, results of the assessment, and recommendations for how to proceed with this information.

### Background

On December 20, 2022, Anschutz submitted Energy & Carbon Conservation Management Commission (ECMC) Form 27 Document 403265956 to initiate closure of the freshwater storage pit on site in accordance with ECMC Rule 913.c.(1). The form was approved by ECMC on January 11, 2023.

On July 13, 2023, Confluence provided initial sampling support to characterize the sidewalls of the freshwater storage pit. Six characterization soil samples were collected from the sidewalls of the freshwater storage pit from depths ranging from 3 to 7 feet below ground surface (bgs). Analytical results of the characterization soil samples exceed ECMC Table 915-1 Residential Soil Screening Levels (RSSLs) for electrical conductivity (EC), sodium adsorption ratio (SAR), pH, arsenic, and hexavalent chromium.

On October 3, 2023, Confluence returned to the Location to collect a produced water characterization sample from the tank battery on site. The produced water sample was submitted for analysis of pH and Table 915-1 metals. Analytical results of the produced water characterization sample are below laboratory detection limits for arsenic and indicate a pH value of 6.46.

On March 12, 2024, ECMC approved Form 27s Document 403613390 and the associated request to establish alternative allowable limits for EC, SAR, and hexavalent chromium of 8.510 millimhos per centimeter (mmhos/cm), 18.8, and 0.453 milligrams per kilogram (mg/kg), respectively.

## Methodology

On February 28, 2024, Confluence returned to the Location to delineate elevated levels of SAR horizontally to the north, west, and south. Four soil borings (SB01 – SB04) were advanced to total depths ranging from 9 to 12 feet bgs. Two soil samples were collected from each boring except for SB02, from which three soil samples were collected. Soil samples were characterized using visual and olfactory observations and were field screened for volatile organic compounds using a photoionization detector (PID).

All collected soil samples were placed in laboratory provided containers, immediately placed on ice, and shipped for laboratory analysis under a completed chain-of-custody form to Pace Analytical Services (Pace). Samples were analyzed for ECMC Table 915-1 soil constituents of concern. Sample locations are illustrated in the attached Site Diagrams.

## Results

These results summarize findings from the site investigation. For organizational and presentation purposes, the results summary is divided between general observations of lithology and hydrogeology for the entire Location and site investigation activities. Collected spatial data are depicted in the attached Site Diagrams. Laboratory analytical reports are attached and summarized in the Laboratory Results Summary Tables.

### Lithology and Hydrogeology

Lithology at the Location is characterized by clay loam with interbedded mudstone lenses. Groundwater is expected to flow northeast towards Open Gulch and ultimately to the White River, located 4.7 miles south of the Location. During the course of site investigation at the Location related to Remediation Project 23348, multiple soil borings were advanced to refusal around the Location with a maximum depth of 25 feet bgs, and groundwater was not encountered during the course of site investigation. For this reason, depth to groundwater at the Location is greater than 25 feet bgs, beneath a mudstone layer that acts as a lithologic confining layer.

### Characterization Soil Borings

Field screening indicated PID measurements ranging from 0.2 to 0.8 parts per million (ppm). Analytical results of the soil samples exceed Table 915-1 RSSLs for EC, SAR, pH, arsenic, and hexavalent chromium. EC exceeds allowable limits at 9.150 and 9.280 mmhos/cm, SAR exceedances range from 11.6 to 38.7, and pH exceedances range from 8.37 to 9.23. Arsenic exceedances range from 3.12 to 16.1 mg/kg. Hexavalent chromium values all fall within the established alternative allowable limit of 0.453 mg/kg.

## Analysis and Recommendations

Although levels of pH and arsenic exceeding Table 915-1 RSSLs remain in the investigation area, produced water characterization data indicates these constituents are not present at significant levels in produced water from the Location. Analytical results of produced water characterization indicate levels of arsenic below laboratory detection limits and a near-neutral pH value of 6.46. ECMC records indicate the well on the pad is an injection well used for disposal that has not produced any fluids to the pit. However, the site-specific produced water sample remains indicative of which elevated inorganic constituents may be attributed to oil and gas operations at the Location.



Based on this information, it is reasonable to conclude that elevated levels of arsenic and pH are not attributed to oil and gas operations at the Location. Per ECMC Rule 915.e.(2).C, Confluence recommends that Anschutz requests to remove pH and arsenic as constituents of concern.

Assuming the operator knowledge is accepted, all constituents of concern are within Table 915-1 RSSLs or proposed alternative allowable limits except for EC and SAR. SAR exceedances remain undelineated to the north, west, south, and southeast of the pit, and EC exceedances remain undelineated to the west and north of the pit. Confluence recommends additional site investigation to characterize the base of the pit and to delineate the horizontal extent SAR and EC exceedances.

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 us.

Regards,



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### Attachments

- Topographic Location Map
- Site Diagram – Site Investigation
- Site Diagram – Supporting Samples
- Analytical Results Summary Table – Soil
- Analytical Results Summary Table – Produced Water
- Boring Logs
- Laboratory Reports





## Topographic Location Map

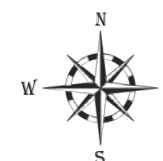
**Anschutz Exploration Corp**

Pinyon Ridge Federal C-1W Pit  
(PRF / C-1W)

ECMC Location ID: 315979

Rio Blanco County

NESE Sec. 21 T3N-R97W



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

Created by: Chris McKisson on 05/23/2022.

Pinyon Ridge Federal C-1W





## Site Diagram Site Investigation

**Anschutz Exploration Corporation**

PRF / C-1W

(Pinyon Ridge Federal C-1W Pit)


ECMC Location ID: 269711

Rio Blanco County

NESE Sec. 21 T3N-R97W



### Legend

 Soil Sample

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: Miranda Beard on 03/14/2024.

20240228-PinyonRidge-SB04

230713-PR\_C-1W-PIT\_N@5-7

230713-PR\_C-1W-PIT\_NE@3-7

230713-PR\_C-1W-PIT\_NW@5-7

20240228-PinyonRidge-SB03

230713-PR\_C-1W-PIT\_SE@5-7

20240228-PinyonRidge-SB02

230713-PR\_C-1W-PIT\_SW@4-5

230713-PR\_C-1W-PIT\_S@5-7

20240228-PinyonRidge-SB01



## Site Diagram Supporting Samples

**Anschutz Exploration Corporation**

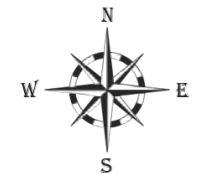
PRF / C-1W

(Pinyon Ridge Federal C-1W Pit)



ECMC Location ID: 269711

Rio Blanco County

NESE Sec. 21 T3N-R97W



### Legend

-  Background Soil Sample
-  Produced Water Sample

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: Miranda Beard on 03/14/2024.

20220908-PR\_FED\_C-1W-BG(1440)@1'

20220908-PR\_FED\_C-1W-BG(1450)@1'

20220908-PR\_FED\_C-1W-BG(1455)@1'

SB18

SB14

231003\_PinyonRidge\_PW

SB20

SB19

20220908-PR\_FED\_C-1W-BG(1515)@1'

20220908-PR\_FED\_C-1W-BG(1525)@1'



Laboratory Results Summary Table - Soil  
Pinyon Ridge Pit Closure

ECMC Soil Screening Levels						Organic Compounds (mg/kg [ppm])																											
ECMC Table 915-1 Residential -->					NA	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) <small>(Vault/Sump, Separator, Tank Battery, Dump Line, Pit, Cuttings, Background, etc.)</small>	Depth - Z (feet) <b>(NEGATIVE VALUE)</b> <small>below ground surface (bgs)</small>	Sample ID	PID (ppm)	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	Dibenz(A,H)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-CD)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Pyrene				
2/28/2024	Pit	-7	240228-PINYONRIDGE-SB01@6-7	0.8	5.10	0.0791	2.03	2.99	<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				
2/28/2024	Pit	-9.5	240228-PINYONRIDGE-SB01@9-9.5	0.6	1.25	0.0931	<4.00	1.16	<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				
2/28/2024	Pit	-12	240228-PINYONRIDGE-SB02@11.5-12	0.2	1.92	0.0321	<4.00	1.89	<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				
2/28/2024	Pit	-5	240228-PINYONRIDGE-SB02@4-5	0.8	5.45	0.0293	2.26	3.16	<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				
2/28/2024	Pit	-8.5	240228-PINYONRIDGE-SB02@8-8.5	0.6	1.57	0.0269	<4.00	1.54	<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				
2/28/2024	Pit	-5	240228-PINYONRIDGE-SB03@4.5-5	0.8	1.66	<0.100	<4.00	1.66	<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				
2/28/2024	Pit	-9	240228-PINYONRIDGE-SB03@9	0.5	3.65	<0.100	2.07	1.58	<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				
2/28/2024	Pit	-6	240228-PINYONRIDGE-SB04@5-6	0.4	9.70	<0.100	3.60	6.10	<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				
2/28/2024	Pit	-9	240228-PINYONRIDGE-SB04@9	0.6	6.18	<0.100	2.28	3.90	<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				
7/13/2023	Pit	-7	20230713-PR_C-1W-PIT_N@5-7	1.5	0.0230	0.0230	<4.00	<4.00	<0.00100	0.00258	<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	0.00250	<0.00600	<0.0200	<0.0200	<0.0200	0.00282				
7/13/2023	Pit	-7	20230713-PR_C-1W-PIT_NE@3-7	0.1	3.73	0.0286	2.76	0.940	<0.00100	0.00280	<0.00250	0.00109	<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				
7/13/2023	Pit	-7	20230713-PR_C-1W-PIT_NW@5-7	1.4	0.492	0.0332	<4.00	0.459	<0.00100	0.00290	<0.00250	0.00195	<0.00500	<0.00500	0.00334	0.00575	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	0.00358	0.00569	<0.00600	<0.0200	<0.0200	<0.0200	0.00228				
7/13/2023	Pit	-7	20230713-PR_C-1W-PIT_S@5-7	21.4	15.61	0.172	9.59	5.85	<0.00100	0.00143	<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				
7/13/2023	Pit	-7	20230713-PR_C-1W-PIT_SE@5-7	287.5	11.16	0.247	8.83	2.08	<0.00100	0.00558	<0.00250	0.0172	0.00738	0.00648	0.00317	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	0.00520	<0.00600	0.0234	0.0610	0.101	<0.00600			
7/13/2023	Pit	-5	20230713-PR_C-1W-PIT_SW@4-5	1.8	6.44	0.0577	2.20	4.18	<0.00100	0.00287	<0.00250	0.00270	<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				
7/13/2023	Background	-15	230713-PR_C-1W_SB18@12-15	0.6	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				
7/13/2023	Background	-4	230713-PR_C-1W_SB18@4-8	1.5	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				
7/13/2023	Background	-12	230713-PR_C-1W_SB18@8-12	1.3	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				
7/13/2023	Background	-15	230713-PR_C-1W_SB19@12-15	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	NA				
7/13/2023	Background	-8	230713-PR_C-1W_SB19@4-8	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	NA				
7/13/2023	Background	-12	230713-PR_C-1W_SB19@8-12	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	NA				
7/13/2023	Background	-8	230713-PR_C-1W_SB20@4-8	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	NA				
7/13/2023	Background	-10	230713-PR_C-1W_SB20@8-10	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	NA				
7/12/2023	Background	-14	230712-PR_C-1W_SB14@12-14	0.4	10.44	0.0680	4.01	6.36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
7/12/2023	Background	-14	230712-PR_C-1W_SB14@12-14	0.4	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				
7/12/2023	Background	-18	230712-PR_C-1W_SB14@14-18	0.0	4.18	0.0604	1.85	2.27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
7/12/2023	Background	-18	230712-PR_C-1W_SB14@14-18	0.0	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				
7/12/2023	Background	-8	230712-PR_C-1W_SB14@5-8	1.0	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				
7/12/2023	Background	-12	230712-PR_C-1W_SB14@8-12	0.0	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				
9/28/2022	Background	-1	20220928-PR_FED_C-1W-BG(1440) @ 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	NA				
9/28/2022	Background	-1	20220928-PR_FED_C-1W-BG(1520) @ 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	NA				
9/28/2022	Background	-1	20220928-PR_FED_C-1W-BG(1450) @ 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	NA				
9/28/2022	Background	-1	20220928-PR_FED_C-1W-BG(1455) @ 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	NA				
9/28/2022	Background	-1	20220928-PR_FED_C-1W-BG(1515) @ 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	NA				


Laboratory Results Summary Table - Soil  
Pinyon Ridge Pit Closure

ECMC Soil Screening Levels				Soil Suitability for Reclamation				Metals (mg/kg [ppm])									
ECMC Table 915-1 Residential -->				4	6	6-8.3	2	0.68	15000	71	0.3	3100	400	1500	390	390	23000
Sample Date	Solid/Soil Source (Equipment) (Vault/Sump, Separator, Tank Battery, Dump Line, Pit, Cuttings, Background, etc.)	Depth - Z (feet) (NEGATIVE VALUE) below ground surface (bgs)	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	Nickel	Selenium	Silver	Zinc
2/28/2024	Pit	-7	240228-PINYONRIDGE-SB01@6-7	1.510	22.3	8.93	0.381	13.6	101	0.450	0.348	28.8	16.2	20.5	1.03	<0.500	77.9
2/28/2024	Pit	-9.5	240228-PINYONRIDGE-SB01@9-9.5	3.220	22.4	8.72	0.347	10.6	135	0.345	0.343	25.1	15.2	18.6	0.874	<0.500	73.2
2/28/2024	Pit	-12	240228-PINYONRIDGE-SB02@11.5-12	2.760	27.8	8.47	0.396	6.23	76.3	0.334	<1.00	26.4	13.5	19.6	0.660	0.123	69.7
2/28/2024	Pit	-5	240228-PINYONRIDGE-SB02@4-5	9.150	11.6	7.78	0.844	14.0	129	0.331	0.333	23.7	13.8	14.2	1.27	0.0962	61.8
2/28/2024	Pit	-8.5	240228-PINYONRIDGE-SB02@8-8.5	3.850	24.4	8.37	0.467	16.1	111	0.279	0.314	28.2	15.5	13.3	0.970	0.114	68.2
2/28/2024	Pit	-5	240228-PINYONRIDGE-SB03@4.5-5	3.580	16.9	8.47	0.598	7.19	125	0.777	<1.00	41.2	25.2	52.1	0.579	0.226	169
2/28/2024	Pit	-9	240228-PINYONRIDGE-SB03@9	1.530	38.7	9.23	0.326	3.12	147	<1.00	<1.00	45.1	13.7	26.2	0.480	<0.500	72.8
2/28/2024	Pit	-6	240228-PINYONRIDGE-SB04@5-6	9.280	14.8	7.88	0.778	11.2	79.6	0.142	<1.00	16.5	14.9	13.8	1.40	<0.500	65.2
2/28/2024	Pit	-9	240228-PINYONRIDGE-SB04@9	2.000	35.7	9.08	0.478	9.68	121	1.03	0.293	36.2	29.0	43.0	0.809	<0.500	126
7/13/2023	Pit	-7	20230713-PR_C-1W-PIT_N@5-7	3.730	45.3	8.25	0.354	3.44	29.6	0.621	<1.00	15.8	19.0	25.6	1.25	<0.500	133
7/13/2023	Pit	-7	20230713-PR_C-1W-PIT_NE@3-7	2.040	18.0	5.15	0.728	18.8	42.1	<1.00	0.429	29.7	10.6	2.77	1.59	0.0994	52.3
7/13/2023	Pit	-7	20230713-PR_C-1W-PIT_NW@5-7	4.720	32.5	8.68	0.513	0.797	34.7	0.666	<1.00	28.9	27.4	11.6	0.650	0.189	56.4
7/13/2023	Pit	-7	20230713-PR_C-1W-PIT_S@5-7	2.270	29.1	8.80	0.558	5.07	44.9	1.06	<1.00	22.1	16.4	24.7	0.796	0.0912	130
7/13/2023	Pit	-7	20230713-PR_C-1W-PIT_SE@5-7	1.840	34.4	6.89	0.184	4.00	25.4	<1.00	<1.00	9.14	10.6	2.81	0.827	<0.500	42.5
7/13/2023	Pit	-5	20230713-PR_C-1W-PIT_SW@4-5	2.350	18.6	8.46	0.401	6.10	68.6	0.248	<1.00	19.7	9.75	16.5	0.646	<0.500	57.4
7/13/2023	Background	-15	230713-PR_C-1W_SB18@12-15	2.740	18.8	8.79	0.46	14.2	37.1	<1.00	0.309	13.0	8.86	3.89	1.810	<0.500	52.4
7/13/2023	Background	-4	230713-PR_C-1W_SB18@4-8	6.820	12.5	8.16	1.17	7.12	122	0.248	0.303	16.5	9.45	11.7	1.69	<0.500	44.7
7/13/2023	Background	-12	230713-PR_C-1W_SB18@8-12	8.510	8.15	7.97	0.808	14.3	142	0.651	0.453	19.6	12.3	11.5	0.996	0.109	50.3
7/13/2023	Background	-15	230713-PR_C-1W_SB19@12-15	4.160	1.87	7.65	0.802	6.15	52.1	0.273	0.268	16.9	9.12	15.1	0.504	0.0912	49.2
7/13/2023	Background	-8	230713-PR_C-1W_SB19@4-8	1.380	5.46	8.03	0.515	4.90	117	0.284	0.289	20.6	10.6	14.7	0.612	0.0987	53.2
7/13/2023	Background	-12	230713-PR_C-1W_SB19@8-12	4.560	3.07	7.84	0.936	4.75	149	0.488	<1.00	13.5	9.06	12.1	0.669	<0.500	40.1
7/13/2023	Background	-8	230713-PR_C-1W_SB20@4-8	1.850	17.0	8.58	0.693	7.52	62.3	0.396	<1.00	26.8	12.5	18.3	0.813	0.110	65.7
7/13/2023	Background	-10	230713-PR_C-1W_SB20@8-10	2.490	9.94	8.09	0.726	13.9	129	0.425	<1.00	28.0	16.2	17.3	1.14	0.116	72.7
7/12/2023	Background	-14	230712-PR_C-1W_SB14@12-14	NA	9.18	8.11	NA	7.02	NA	NA	NA	NA	NA	NA	NA	NA	NA
7/12/2023	Background	-14	230712-PR_C-1W_SB14@12-14	1.030	NA	8.09	0.462	7.05	213	0.452	<1.00	17.8	11.3	15.4	0.733	0.112	53.5
7/12/2023	Background	-18	230712-PR_C-1W_SB14@14-18	NA	10.1	8.20	NA	11.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
7/12/2023	Background	-18	230712-PR_C-1W_SB14@14-18	1.220	NA	8.19	0.418	12.4	69.0	0.461	0.319	31.4	15.8	19.9	0.952	0.177	73.7
7/12/2023	Background	-8	230712-PR_C-1W_SB14@5-8	0.284	4.72	9.00	0.437	8.34	79.0	0.453	<1.00	16.4	10.3	13.1	0.604	<0.500	46.6
7/12/2023	Background	-12	230712-PR_C-1W_SB14@8-12	1.980	11.2	8.35	0.700	6.82	92.3	0.350	0.335	21.6	13.0	17.8	0.670	0.0916	68.7
9/28/2022	Background	-1	20220928-PR_FED_C-1W-BG (1440) @ 1'	NA	0.0894	8.19	NA	8.16	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/28/2022	Background	-1	20220928-PR_FED_C-1W-BG (1520) @ 1'	NA	0.0772	8.37	NA	5.32	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/28/2022	Background	-1	20220928-PR_FED_C-1W-BG(1450) @ 1'	NA	0.108	8.33	NA	3.10	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/28/2022	Background	-1	20220928-PR_FED_C-1W-BG(1455) @ 1'	NA	4.26	8.75	NA	8.05	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/28/2022	Background	-1	20220928-PR_FED_C-1W-BG(1515) @ 1'	NA	0.0659	8.29	NA	4.01	NA	NA	NA	NA	NA	NA	NA	NA	NA




ECMC Allowable Concentration (915-Groundwater)			ECMC Standard Not Applicable											
			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sample Date	Depth - Z (feet) below ground surface (bgs)	Sample ID	Arsenic, dissolved	Barium, dissolved	Boron	Cadmium, dissolved	Chromium (VI)	Copper, dissolved	Lead, dissolved	Nickel	pH	Selenium, dissolved	Silver, dissolved	Zinc
10/3/23	NA	231003_PINYONRIDGE_PW	<0.00500	72.9	26.5	<0.00500	<0.000500	0.0621	0.00440	<0.0100	6.46	<0.0100	<0.00500	<0.100




Project Name: Pinyon Ridge Fed C-1W Pit Delineation						
Location: Pinyon Ridge Fed C-1W						
Lat/Long: 40.212389, -108.276494				Project Number: 269711		
Boring Number: SB01		Scope: Delineation			Geologist: Alex Slorby	
Date: 2/28/2024	Start Time: 0945	Finish Time: 1005	DTW: N/A	Drilling Equipment: Hand Auger		
Drilling Method: Hand Auger			Drilling Contractor: N/A		Driller: Anschutz Crew (D. Pochecho and G. Gardiner)	
Depth (ft)	Time	Recovery %	Standard Penetration Test Results 6-Inches	USCS Symbol	Material Description	PID Reading (ppm)
6-7	0945	N/A	N/A	SC	Brown sandy clay. No odor or stain.	0.8
9-9.5	1005	N/A	N/A	SC	Brown sandy clay. No odor or stain.	0.6
Total Depth of Boring: 9.5 feet bgs			Samples Collected: 6-7 and 9-9.5		Comments: Refusal was met at the terminus depths of all borings.	




Project Name: Pinyon Ridge Fed C-1W Pit Delineation						
Location: Pinyon Ridge Fed C-1W						
Lat/Long: 40.212476, -108.276707				Project Number: 269711		
Boring Number: SB02		Scope: Delineation			Geologist: Alex Slorby	
Date: 2/28/2024	Start Time: 1015	Finish Time: 1120	DTW: N/A	Drilling Equipment: Hand Auger		
Drilling Method: Hand Auger			Drilling Contractor: N/A		Driller: Anschutz Crew (D. Pochecho and G. Gardiner)	
Depth (ft)	Time	Recovery %	Standard Penetration Test Results 6-Inches	USCS Symbol	Material Description	PID Reading (ppm)
4-5	1015	N/A	N/A	SC	Brown sandy clay. No odor or stain.	0.8
8-8.5	1040	N/A	N/A	SC	Loose brown sandy clay. No odor or stain.	0.6
11.5-12	1120	N/A	N/A	SC	Brown sandy clay. No odor or stain.	0.2
Total Depth of Boring: 12 feet bgs			Samples Collected: 4-5, 8-8.5, 11.5-12		Comments: Refusal was met at the terminus depths of all borings.	



Project Name: Pinyon Ridge Fed C-1W Pit Delineation						
Location: Pinyon Ridge Fed C-1W						
Lat/Long: 40.212561, -108.276771				Project Number: 269711		
Boring Number: SB03		Scope: Delineation			Geologist: Alex Slorby	
Date: 2/28/2024	Start Time: 1020	Finish Time: 1150	DTW: N/A	Drilling Equipment: Hand Auger		
Drilling Method: Hand Auger			Drilling Contractor: N/A		Driller: Anschutz Crew (D. Pochecho and G. Gardiner)	
Depth (ft)	Time	Recovery %	Standard Penetration Test Results 6-Inches	USCS Symbol	Material Description	PID Reading (ppm)
4.5-5	1020	N/A	N/A	SC	Brown sandy clay. No odor or stain.	0.8
9	1150	N/A	N/A	SC	Very loose brown sandy clay. No odor or stain.	0.5
Total Depth of Boring: 9 feet bgs			Samples Collected: 4.5-5 and 9		Comments: Refusal was met at the terminus depths of all borings.	



Project Name: Pinyon Ridge Fed C-1W Pit Delineation						
Location: Pinyon Ridge Fed C-1W						
Lat/Long: 40.212769, -108.276751				Project Number: 269711		
Boring Number: SB04		Scope: Delineation			Geologist: Alex Slorby	
Date: 2/28/2024	Start Time: 1055	Finish Time: 1205	DTW: N/A	Drilling Equipment: Hand Auger		
Drilling Method: Hand Auger			Drilling Contractor: N/A		Driller: Anschutz Crew (D. Pochecho and G. Gardiner)	
Depth (ft)	Time	Recovery %	Standard Penetration Test Results 6-Inches	USCS Symbol	Material Description	PID Reading (ppm)
5-6	1055	N/A	N/A	SC	Brown sandy clay. No odor or stain.	0.4
9	1205	N/A	N/A	SC	Brown sandy clay. No odor or stain.	0.6
Total Depth of Boring: 9 feet bgs			Samples Collected: 5-6 and 9		Comments: Refusal was met at the terminus depths of all borings.	

## Anschutz Exploration Corporation

Sample Delivery Group: L1710945  
Samples Received: 03/01/2024  
Project Number: PINYON RIDGE FED C-1  
Description: Pinyon Ridge Fed C-1W Pit Closure  
Site: PINYON RIDGE FED C-1W  
Report To: Schuyler Hamilton  
211 W. 5th St.  
Rifle, CO 81650

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)



# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	<b>1</b>
<b>Tc: Table of Contents</b>	<b>2</b>
<b>Ss: Sample Summary</b>	<b>3</b>
<b>Cn: Case Narrative</b>	<b>4</b>
<b>Sr: Sample Results</b>	<b>5</b>
240228-PINYONRIDGE-SB02@4-5 L1710945-01	<b>5</b>
240228-PINYONRIDGE-SB02@8-8.5 L1710945-02	<b>7</b>
240228-PINYONRIDGE-SB02@11.5-12 L1710945-03	<b>9</b>
<b>Qc: Quality Control Summary</b>	<b>11</b>
Wet Chemistry by Method 7199	<b>11</b>
Wet Chemistry by Method 9045D	<b>12</b>
Wet Chemistry by Method 9050AMod	<b>13</b>
Metals (ICP) by Method 6010B-NE493 Ch 2	<b>14</b>
Metals (ICPMS) by Method 6020	<b>16</b>
Volatile Organic Compounds (GC) by Method 8015D/GRO	<b>17</b>
Volatile Organic Compounds (GC/MS) by Method 8260B	<b>18</b>
Semi-Volatile Organic Compounds (GC) by Method 8015M	<b>20</b>
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	<b>21</b>
<b>Gl: Glossary of Terms</b>	<b>23</b>
<b>Al: Accreditations &amp; Locations</b>	<b>24</b>



# SAMPLE SUMMARY

## 240228-PINYONRIDGE-SB02@4-5 L1710945-01 Solid

Collected by  
Alex Slorby

Collected date/time  
02/28/24 10:15

Received date/time  
03/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2239774	1	03/08/24 11:50	03/08/24 11:50	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2238796	1	03/05/24 03:22	03/05/24 12:24	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2238588	1	03/03/24 10:05	03/05/24 17:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2239058	1	03/04/24 10:51	03/04/24 15:26	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2239776	1	03/07/24 08:59	03/07/24 12:05	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2239551	5	03/05/24 12:56	03/05/24 18:34	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2240412	1	03/05/24 18:55	03/06/24 02:47	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2240585	1	03/05/24 18:55	03/06/24 11:49	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2238298	1	03/04/24 15:38	03/04/24 20:56	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2238302	1	03/04/24 08:01	03/04/24 21:04	LS	Mt. Juliet, TN



## 240228-PINYONRIDGE-SB02@8-8.5 L1710945-02 Solid

Collected by  
Alex Slorby

Collected date/time  
02/28/24 10:40

Received date/time  
03/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2239770	1	03/07/24 09:51	03/07/24 09:51	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2238796	1	03/05/24 03:22	03/05/24 12:30	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2238588	1	03/03/24 10:05	03/05/24 17:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2239058	1	03/04/24 10:51	03/04/24 15:26	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2239773	1	03/06/24 08:21	03/06/24 12:13	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2239551	5	03/05/24 12:56	03/05/24 18:37	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2240412	1	03/05/24 18:55	03/06/24 03:09	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2240585	1	03/05/24 18:55	03/06/24 12:09	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2238298	1	03/04/24 15:38	03/04/24 20:30	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2238302	1	03/04/24 08:01	03/04/24 21:22	LS	Mt. Juliet, TN

## 240228-PINYONRIDGE-SB02@11.5-12 L1710945-03 Solid

Collected by  
Alex Slorby

Collected date/time  
02/28/24 11:20

Received date/time  
03/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2239770	1	03/07/24 09:52	03/07/24 09:52	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2238796	1	03/05/24 03:22	03/05/24 12:36	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2238588	1	03/03/24 10:05	03/05/24 17:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2239058	1	03/04/24 10:51	03/04/24 15:26	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2239773	1	03/06/24 08:21	03/06/24 12:16	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2239551	5	03/05/24 12:56	03/05/24 18:40	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2240412	1	03/05/24 18:55	03/06/24 03:32	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2240693	1	03/05/24 18:55	03/06/24 12:04	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2238298	1	03/04/24 15:38	03/04/24 20:17	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2238302	1	03/04/24 08:01	03/04/24 21:40	LS	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	11.6		1	03/08/2024 11:50	WG2239774

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.333	J	0.255	1.00	1	03/05/2024 12:24	WG2238796

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.78	T8	1	03/05/2024 17:00	WG2238588

Sample Narrative:

L1710945-01 WG2238588: 7.78 at 20.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	9150		10.0	1	03/04/2024 15:26	WG2239058

Sample Narrative:

L1710945-01 WG2239058: at 25C

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	0.844		0.0167	0.200	1	03/07/2024 12:05	WG2239776

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	14.0		0.100	1.00	5	03/05/2024 18:34	WG2239551
Barium	129		0.152	2.50	5	03/05/2024 18:34	WG2239551
Cadmium	0.331	J	0.0855	1.00	5	03/05/2024 18:34	WG2239551
Copper	23.7		0.132	5.00	5	03/05/2024 18:34	WG2239551
Lead	13.8		0.0990	2.00	5	03/05/2024 18:34	WG2239551
Nickel	14.2		0.197	2.50	5	03/05/2024 18:34	WG2239551
Selenium	1.27	J	0.180	2.50	5	03/05/2024 18:34	WG2239551
Silver	0.0962	J	0.0865	0.500	5	03/05/2024 18:34	WG2239551
Zinc	61.8		0.740	25.0	5	03/05/2024 18:34	WG2239551

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	0.0293	J	0.0217	0.100	1	03/06/2024 02:47	WG2240412
(S) a,a,a-Trifluorotoluene(FID)	92.6			77.0-120		03/06/2024 02:47	WG2240412

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al



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	03/06/2024 11:49	<a href="#">WG2240585</a>
Toluene	U		0.00130	0.00500	1	03/06/2024 11:49	<a href="#">WG2240585</a>
Ethylbenzene	U		0.000737	0.00250	1	03/06/2024 11:49	<a href="#">WG2240585</a>
Xylenes, Total	U		0.000880	0.00650	1	03/06/2024 11:49	<a href="#">WG2240585</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	03/06/2024 11:49	<a href="#">WG2240585</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	03/06/2024 11:49	<a href="#">WG2240585</a>
(S) Toluene-d8	114			75.0-131		03/06/2024 11:49	<a href="#">WG2240585</a>
(S) 4-Bromofluorobenzene	98.3			67.0-138		03/06/2024 11:49	<a href="#">WG2240585</a>
(S) 1,2-Dichloroethane-d4	83.8			70.0-130		03/06/2024 11:49	<a href="#">WG2240585</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	2.26	J	1.61	4.00	1	03/04/2024 20:56	<a href="#">WG2238298</a>
C28-C36 Motor Oil Range	3.16	B J	0.274	4.00	1	03/04/2024 20:56	<a href="#">WG2238298</a>
(S) o-Terphenyl	39.7			18.0-148		03/04/2024 20:56	<a href="#">WG2238298</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
Acenaphthene	U		0.00209	0.00600	1	03/04/2024 21:04	<a href="#">WG2238302</a>
Anthracene	U		0.00230	0.00600	1	03/04/2024 21:04	<a href="#">WG2238302</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	03/04/2024 21:04	<a href="#">WG2238302</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	03/04/2024 21:04	<a href="#">WG2238302</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	03/04/2024 21:04	<a href="#">WG2238302</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	03/04/2024 21:04	<a href="#">WG2238302</a>
Chrysene	U		0.00232	0.00600	1	03/04/2024 21:04	<a href="#">WG2238302</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	03/04/2024 21:04	<a href="#">WG2238302</a>
Fluoranthene	U		0.00227	0.00600	1	03/04/2024 21:04	<a href="#">WG2238302</a>
Fluorene	U		0.00205	0.00600	1	03/04/2024 21:04	<a href="#">WG2238302</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	03/04/2024 21:04	<a href="#">WG2238302</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	03/04/2024 21:04	<a href="#">WG2238302</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	03/04/2024 21:04	<a href="#">WG2238302</a>
Naphthalene	U		0.00408	0.0200	1	03/04/2024 21:04	<a href="#">WG2238302</a>
Pyrene	U		0.00200	0.00600	1	03/04/2024 21:04	<a href="#">WG2238302</a>
(S) p-Terphenyl-d14	62.8			23.0-120		03/04/2024 21:04	<a href="#">WG2238302</a>
(S) Nitrobenzene-d5	93.8			14.0-149		03/04/2024 21:04	<a href="#">WG2238302</a>
(S) 2-Fluorobiphenyl	51.0			34.0-125		03/04/2024 21:04	<a href="#">WG2238302</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	24.4		1	03/07/2024 09:51	WG2239770

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.314	J	0.255	1.00	1	03/05/2024 12:30	WG2238796

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.37	T8	1	03/05/2024 17:00	WG2238588

Sample Narrative:

L1710945-02 WG2238588: 8.37 at 20.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	3850		10.0	1	03/04/2024 15:26	WG2239058

Sample Narrative:

L1710945-02 WG2239058: at 25C

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	0.467		0.0167	0.200	1	03/06/2024 12:13	WG2239773

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	16.1		0.100	1.00	5	03/05/2024 18:37	WG2239551
Barium	111		0.152	2.50	5	03/05/2024 18:37	WG2239551
Cadmium	0.279	J	0.0855	1.00	5	03/05/2024 18:37	WG2239551
Copper	28.2		0.132	5.00	5	03/05/2024 18:37	WG2239551
Lead	15.5		0.0990	2.00	5	03/05/2024 18:37	WG2239551
Nickel	13.3		0.197	2.50	5	03/05/2024 18:37	WG2239551
Selenium	0.970	J	0.180	2.50	5	03/05/2024 18:37	WG2239551
Silver	0.114	J	0.0865	0.500	5	03/05/2024 18:37	WG2239551
Zinc	68.2		0.740	25.0	5	03/05/2024 18:37	WG2239551

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	0.0269	J	0.0217	0.100	1	03/06/2024 03:09	WG2240412
(S) a,a,a-Trifluorotoluene(FID)	92.4			77.0-120		03/06/2024 03:09	WG2240412

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al



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	03/06/2024 12:09	<a href="#">WG2240585</a>
Toluene	U		0.00130	0.00500	1	03/06/2024 12:09	<a href="#">WG2240585</a>
Ethylbenzene	U		0.000737	0.00250	1	03/06/2024 12:09	<a href="#">WG2240585</a>
Xylenes, Total	U		0.000880	0.00650	1	03/06/2024 12:09	<a href="#">WG2240585</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	03/06/2024 12:09	<a href="#">WG2240585</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	03/06/2024 12:09	<a href="#">WG2240585</a>
(S) Toluene-d8	117			75.0-131		03/06/2024 12:09	<a href="#">WG2240585</a>
(S) 4-Bromofluorobenzene	98.3			67.0-138		03/06/2024 12:09	<a href="#">WG2240585</a>
(S) 1,2-Dichloroethane-d4	82.2			70.0-130		03/06/2024 12:09	<a href="#">WG2240585</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	03/04/2024 20:30	<a href="#">WG2238298</a>
C28-C36 Motor Oil Range	1.54	<a href="#">B J</a>	0.274	4.00	1	03/04/2024 20:30	<a href="#">WG2238298</a>
(S) o-Terphenyl	31.6			18.0-148		03/04/2024 20:30	<a href="#">WG2238298</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
Acenaphthene	U		0.00209	0.00600	1	03/04/2024 21:22	<a href="#">WG2238302</a>
Anthracene	U		0.00230	0.00600	1	03/04/2024 21:22	<a href="#">WG2238302</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	03/04/2024 21:22	<a href="#">WG2238302</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	03/04/2024 21:22	<a href="#">WG2238302</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	03/04/2024 21:22	<a href="#">WG2238302</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	03/04/2024 21:22	<a href="#">WG2238302</a>
Chrysene	U		0.00232	0.00600	1	03/04/2024 21:22	<a href="#">WG2238302</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	03/04/2024 21:22	<a href="#">WG2238302</a>
Fluoranthene	U		0.00227	0.00600	1	03/04/2024 21:22	<a href="#">WG2238302</a>
Fluorene	U		0.00205	0.00600	1	03/04/2024 21:22	<a href="#">WG2238302</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	03/04/2024 21:22	<a href="#">WG2238302</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	03/04/2024 21:22	<a href="#">WG2238302</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	03/04/2024 21:22	<a href="#">WG2238302</a>
Naphthalene	U		0.00408	0.0200	1	03/04/2024 21:22	<a href="#">WG2238302</a>
Pyrene	U		0.00200	0.00600	1	03/04/2024 21:22	<a href="#">WG2238302</a>
(S) p-Terphenyl-d14	68.3			23.0-120		03/04/2024 21:22	<a href="#">WG2238302</a>
(S) Nitrobenzene-d5	89.3			14.0-149		03/04/2024 21:22	<a href="#">WG2238302</a>
(S) 2-Fluorobiphenyl	51.7			34.0-125		03/04/2024 21:22	<a href="#">WG2238302</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	27.8		1	03/07/2024 09:52	WG2239770

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

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	03/05/2024 12:36	<a href="#">WG2238796</a>

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.47	<a href="#">T8</a>	1	03/05/2024 17:00	<a href="#">WG2238588</a>

Sample Narrative:  
L1710945-03 WG2238588: 8.47 at 20.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2760		10.0	1	03/04/2024 15:26	<a href="#">WG2239058</a>

Sample Narrative:  
L1710945-03 WG2239058: at 25C

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	0.396		0.0167	0.200	1	03/06/2024 12:16	<a href="#">WG2239773</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.23		0.100	1.00	5	03/05/2024 18:40	<a href="#">WG2239551</a>
Barium	76.3		0.152	2.50	5	03/05/2024 18:40	<a href="#">WG2239551</a>
Cadmium	0.334	<a href="#">J</a>	0.0855	1.00	5	03/05/2024 18:40	<a href="#">WG2239551</a>
Copper	26.4		0.132	5.00	5	03/05/2024 18:40	<a href="#">WG2239551</a>
Lead	13.5		0.0990	2.00	5	03/05/2024 18:40	<a href="#">WG2239551</a>
Nickel	19.6		0.197	2.50	5	03/05/2024 18:40	<a href="#">WG2239551</a>
Selenium	0.660	<a href="#">J</a>	0.180	2.50	5	03/05/2024 18:40	<a href="#">WG2239551</a>
Silver	0.123	<a href="#">J</a>	0.0865	0.500	5	03/05/2024 18:40	<a href="#">WG2239551</a>
Zinc	69.7		0.740	25.0	5	03/05/2024 18:40	<a href="#">WG2239551</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	0.0321	<a href="#">J</a>	0.0217	0.100	1	03/06/2024 03:32	<a href="#">WG2240412</a>
(S) a,a,a-Trifluorotoluene(FID)	92.3			77.0-120		03/06/2024 03:32	<a href="#">WG2240412</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	03/06/2024 12:04	<a href="#">WG2240693</a>
Toluene	U		0.00130	0.00500	1	03/06/2024 12:04	<a href="#">WG2240693</a>
Ethylbenzene	U		0.000737	0.00250	1	03/06/2024 12:04	<a href="#">WG2240693</a>
Xylenes, Total	U		0.000880	0.00650	1	03/06/2024 12:04	<a href="#">WG2240693</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	03/06/2024 12:04	<a href="#">WG2240693</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	03/06/2024 12:04	<a href="#">WG2240693</a>
(S) Toluene-d8	104			75.0-131		03/06/2024 12:04	<a href="#">WG2240693</a>
(S) 4-Bromofluorobenzene	98.4			67.0-138		03/06/2024 12:04	<a href="#">WG2240693</a>
(S) 1,2-Dichloroethane-d4	91.2			70.0-130		03/06/2024 12:04	<a href="#">WG2240693</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	03/04/2024 20:17	<a href="#">WG2238298</a>
C28-C36 Motor Oil Range	1.89	<a href="#">B J</a>	0.274	4.00	1	03/04/2024 20:17	<a href="#">WG2238298</a>
(S) o-Terphenyl	42.9			18.0-148		03/04/2024 20:17	<a href="#">WG2238298</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
Acenaphthene	U		0.00209	0.00600	1	03/04/2024 21:40	<a href="#">WG2238302</a>
Anthracene	U		0.00230	0.00600	1	03/04/2024 21:40	<a href="#">WG2238302</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	03/04/2024 21:40	<a href="#">WG2238302</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	03/04/2024 21:40	<a href="#">WG2238302</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	03/04/2024 21:40	<a href="#">WG2238302</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	03/04/2024 21:40	<a href="#">WG2238302</a>
Chrysene	U		0.00232	0.00600	1	03/04/2024 21:40	<a href="#">WG2238302</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	03/04/2024 21:40	<a href="#">WG2238302</a>
Fluoranthene	U		0.00227	0.00600	1	03/04/2024 21:40	<a href="#">WG2238302</a>
Fluorene	U		0.00205	0.00600	1	03/04/2024 21:40	<a href="#">WG2238302</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	03/04/2024 21:40	<a href="#">WG2238302</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	03/04/2024 21:40	<a href="#">WG2238302</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	03/04/2024 21:40	<a href="#">WG2238302</a>
Naphthalene	U		0.00408	0.0200	1	03/04/2024 21:40	<a href="#">WG2238302</a>
Pyrene	U		0.00200	0.00600	1	03/04/2024 21:40	<a href="#">WG2238302</a>
(S) p-Terphenyl-d14	80.0			23.0-120		03/04/2024 21:40	<a href="#">WG2238302</a>
(S) Nitrobenzene-d5	88.7			14.0-149		03/04/2024 21:40	<a href="#">WG2238302</a>
(S) 2-Fluorobiphenyl	75.8			34.0-125		03/04/2024 21:40	<a href="#">WG2238302</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

Method Blank (MB)

(MB) R4041783-1 03/05/24 12:09

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

L1711235-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1711235-01 03/05/24 12:42 • (DUP) R4041783-3 03/05/24 12:48

	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

L1711289-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1711289-02 03/05/24 15:23 • (DUP) R4041783-14 03/05/24 15:29

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	U	U	10	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4041783-2 03/05/24 12:17

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.2	102	80.0-120	

L1711236-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1711236-01 03/05/24 13:07 • (MS) R4041783-4 03/05/24 13:25 • (MSD) R4041783-5 03/05/24 13:32

	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	20.6	17.8	103	89.2	1	75.0-125			14.2	20

L1711236-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1711236-01 03/05/24 13:07 • (MS) R4041783-6 03/05/24 13:38

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	641	U	786	123	50	75.0-125	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

L1710945-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1710945-03 03/05/24 17:00 • (DUP) R4041836-2 03/05/24 17:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.47	8.50	1	0.354		1

Sample Narrative:

OS: 8.47 at 20.3C

DUP: 8.5 at 20.3C

<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

L1711235-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1711235-03 03/05/24 17:00 • (DUP) R4041836-3 03/05/24 17:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.27	8.26	1	0.121		1

Sample Narrative:

OS: 8.27 at 19.8C

DUP: 8.26 at 19.8C

Laboratory Control Sample (LCS)

(LCS) R4041836-1 03/05/24 17:00

	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: 10.02 at 18.4C



Method Blank (MB)

(MB) R4041256-1 03/04/24 15:26

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

L1710945-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1710945-03 03/04/24 15:26 • (DUP) R4041256-3 03/04/24 15:26

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2760	2800	1	1.47		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1710947-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1710947-01 03/04/24 15:26 • (DUP) R4041256-4 03/04/24 15:26

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	9280	9230	1	0.540		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4041256-2 03/04/24 15:26

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	327	330	101	85.0-115	

Sample Narrative:

LCS: at 25C

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

Method Blank (MB)

(MB) R4042235-1 03/06/24 11:59

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) R4042235-2 03/06/24 12:02 • (LCSD) R4042235-3 03/06/24 12:04

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	1.07	1.10	107	110	80.0-120			2.71	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

Method Blank (MB)

(MB) R4042767-1 03/07/24 11:56

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) R4042767-2 03/07/24 11:59 • (LCSD) R4042767-3 03/07/24 12:02

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	1.05	106	105	80.0-120			0.836	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al



Method Blank (MB)

(MB) R4041852-1 03/05/24 18:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	0.178	U	0.152	2.50
Cadmium	U		0.0855	1.00
Copper	0.202	U	0.133	5.00
Lead	0.387	U	0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	0.908	U	0.740	25.0

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

Laboratory Control Sample (LCS)

(LCS) R4041852-2 03/05/24 18:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	101	101	80.0-120	
Barium	100	95.9	95.9	80.0-120	
Cadmium	100	108	108	80.0-120	
Copper	100	101	101	80.0-120	
Lead	100	96.7	96.7	80.0-120	
Nickel	100	106	106	80.0-120	
Selenium	100	103	103	80.0-120	
Silver	20.0	20.1	101	80.0-120	
Zinc	100	101	101	80.0-120	

L1710784-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710784-01 03/05/24 18:18 • (MS) R4041852-5 03/05/24 18:28 • (MSD) R4041852-6 03/05/24 18:31

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	21.9	148	183	126	161	5	75.0-125	J5	J3 J5	21.4	20
Barium	100	2.94	98.9	109	96.0	106	5	75.0-125			9.59	20
Cadmium	100	U	103	110	103	110	5	75.0-125			6.76	20
Copper	100	1.36	97.2	105	95.8	104	5	75.0-125			7.88	20
Lead	100	0.213	91.3	98.2	91.1	98.0	5	75.0-125			7.34	20
Nickel	100	U	98.7	106	98.7	106	5	75.0-125			6.73	20
Selenium	100	U	99.2	107	99.2	107	5	75.0-125			7.85	20
Silver	20.0	U	19.7	21.0	98.5	105	5	75.0-125			6.56	20
Zinc	100	U	94.3	101	94.3	101	5	75.0-125			6.52	20

Method Blank (MB)

(MB) R4042675-2 03/06/24 00:50

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)	96.9			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4042675-1 03/05/24 23:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	5.26	105	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			104	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

Method Blank (MB)

(MB) R4042680-2 03/06/24 09:13

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	0.00178	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	109			75.0-131
(S) 4-Bromofluorobenzene	95.4			67.0-138
(S) 1,2-Dichloroethane-d4	84.7			70.0-130

Laboratory Control Sample (LCS)

(LCS) R4042680-1 03/06/24 05:46

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.119	95.2	70.0-123	
Toluene	0.125	0.134	107	75.0-121	
Ethylbenzene	0.125	0.128	102	74.0-126	
Xylenes, Total	0.375	0.406	108	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.135	108	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.124	99.2	73.0-127	
(S) Toluene-d8			107	75.0-131	
(S) 4-Bromofluorobenzene			102	67.0-138	
(S) 1,2-Dichloroethane-d4			92.9	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al



Method Blank (MB)

(MB) R4042666-3 03/06/24 10:34

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	103			75.0-131
(S) 4-Bromofluorobenzene	96.0			67.0-138
(S) 1,2-Dichloroethane-d4	91.8			70.0-130

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

(LCS) R4042666-1 03/06/24 08:59 • (LCSD) R4042666-2 03/06/24 09:18

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	0.120	92.0	96.0	70.0-123			4.26	20
Toluene	0.125	0.120	0.128	96.0	102	75.0-121			6.45	20
Ethylbenzene	0.125	0.118	0.128	94.4	102	74.0-126			8.13	20
Xylenes, Total	0.375	0.359	0.382	95.7	102	72.0-127			6.21	20
1,2,4-Trimethylbenzene	0.125	0.126	0.135	101	108	70.0-126			6.90	20
1,3,5-Trimethylbenzene	0.125	0.128	0.139	102	111	73.0-127			8.24	20
(S) Toluene-d8				98.6	101	75.0-131				
(S) 4-Bromofluorobenzene				95.8	97.1	67.0-138				
(S) 1,2-Dichloroethane-d4				97.6	95.3	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

Method Blank (MB)

(MB) R4041485-1 03/04/24 19:51

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	0.496	⬇	0.274	4.00
(S) o-Terphenyl	64.7			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4041485-2 03/04/24 20:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	46.0	92.0	50.0-150	
(S) o-Terphenyl			79.0	18.0-148	

L1710958-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710958-06 03/05/24 00:38 • (MS) R4041485-3 03/05/24 00:51 • (MSD) R4041485-4 03/05/24 01:04

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	49.5	6.95	37.8	37.6	62.3	61.9	1	50.0-150			0.531	20
(S) o-Terphenyl					35.8	39.2		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

Method Blank (MB)

(MB) R4041684-2 03/04/24 20:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	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
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	85.0			23.0-120
(S) Nitrobenzene-d5	95.3			14.0-149
(S) 2-Fluorobiphenyl	80.0			34.0-125

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

Laboratory Control Sample (LCS)

(LCS) R4041684-1 03/04/24 20:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0679	84.9	50.0-120	
Anthracene	0.0800	0.0739	92.4	50.0-126	
Benzo(a)anthracene	0.0800	0.0760	95.0	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0654	81.8	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0599	74.9	49.0-125	
Benzo(a)pyrene	0.0800	0.0623	77.9	42.0-120	
Chrysene	0.0800	0.0706	88.3	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0723	90.4	47.0-125	
Fluoranthene	0.0800	0.0733	91.6	49.0-129	
Fluorene	0.0800	0.0716	89.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0737	92.1	46.0-125	
1-Methylnaphthalene	0.0800	0.0746	93.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0733	91.6	50.0-120	
Naphthalene	0.0800	0.0728	91.0	50.0-120	
Pyrene	0.0800	0.0689	86.1	43.0-123	



Laboratory Control Sample (LCS)

(LCS) R4041684-1 03/04/24 20:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			89.3	23.0-120	
(S) Nitrobenzene-d5			111	14.0-149	
(S) 2-Fluorobiphenyl			86.7	34.0-125	

L1710946-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710946-02 03/04/24 22:16 • (MS) R4041684-3 03/04/24 22:34 • (MSD) R4041684-4 03/04/24 22:52

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 %
Acenaphthene	0.0776	U	0.0587	0.0580	75.6	75.1	1	14.0-127			1.20	27
Anthracene	0.0776	U	0.0599	0.0608	77.2	78.8	1	10.0-145			1.49	30
Benzo(a)anthracene	0.0776	U	0.0632	0.0632	81.4	81.9	1	10.0-139			0.000	30
Benzo(b)fluoranthene	0.0776	U	0.0594	0.0599	76.5	77.6	1	10.0-140			0.838	36
Benzo(k)fluoranthene	0.0776	U	0.0537	0.0535	69.2	69.3	1	10.0-137			0.373	31
Benzo(a)pyrene	0.0776	U	0.0562	0.0565	72.4	73.2	1	10.0-141			0.532	31
Chrysene	0.0776	U	0.0610	0.0608	78.6	78.8	1	10.0-145			0.328	30
Dibenz(a,h)anthracene	0.0776	U	0.0605	0.0602	78.0	78.0	1	10.0-132			0.497	31
Fluoranthene	0.0776	U	0.0617	0.0622	79.5	80.6	1	10.0-153			0.807	33
Fluorene	0.0776	U	0.0609	0.0608	78.5	78.8	1	11.0-130			0.164	29
Indeno(1,2,3-cd)pyrene	0.0776	U	0.0617	0.0615	79.5	79.7	1	10.0-137			0.325	32
1-Methylnaphthalene	0.0776	U	0.0641	0.0637	82.6	82.5	1	10.0-142			0.626	28
2-Methylnaphthalene	0.0776	U	0.0632	0.0628	81.4	81.3	1	10.0-137			0.635	28
Naphthalene	0.0776	U	0.0630	0.0622	81.2	80.6	1	10.0-135			1.28	27
Pyrene	0.0776	U	0.0601	0.0604	77.4	78.2	1	10.0-148			0.498	35
(S) p-Terphenyl-d14					80.3	80.7		23.0-120				
(S) Nitrobenzene-d5					92.3	93.9		14.0-149				
(S) 2-Fluorobiphenyl					79.1	78.0		34.0-125				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

# 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
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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.
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.





**Anschutz Exploration Corporation**

Sample Delivery Group: L1710946  
Samples Received: 03/01/2024  
Project Number: PINYON RIDGE FED C-1  
Description: Pinyon Ridge Fed C-1W Pit Closure  
Site: PINYON RIDGE FED C-1W  
Report To: Schuyler Hamilton  
211 W. 5th St.  
Rifle, CO 81650

Entire Report Reviewed By:



Chris Ward  
Project Manager

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# TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
240228-PINYONRIDGE-SB03@4.5-5 L1710946-01	5
240228-PINYONRIDGE-SB03@9 L1710946-02	7
Qc: Quality Control Summary	9
Wet Chemistry by Method 7199	9
Wet Chemistry by Method 9045D	11
Wet Chemistry by Method 9050AMod	12
Metals (ICP) by Method 6010B-NE493 Ch 2	13
Metals (ICPMS) by Method 6020	14
Volatile Organic Compounds (GC) by Method 8015D/GRO	16
Volatile Organic Compounds (GC/MS) by Method 8260B	17
Semi-Volatile Organic Compounds (GC) by Method 8015M	18
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	19
Gl: Glossary of Terms	21
Al: Accreditations & Locations	22
Sc: Sample Chain of Custody	23



# SAMPLE SUMMARY

240228-PINYONRIDGE-SB03@4.5-5 L1710946-01 Solid

Collected by  
Alex Slorby

Collected date/time  
02/28/24 10:20

Received date/time  
03/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2239770	1	03/07/24 09:54	03/07/24 09:54	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2237435	1	03/03/24 22:57	03/04/24 19:45	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2238210	1	03/02/24 09:45	03/02/24 14:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2239058	1	03/04/24 10:51	03/04/24 15:26	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2239773	1	03/06/24 08:21	03/06/24 12:19	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2238232	5	03/03/24 09:17	03/04/24 02:24	SJM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2238232	5	03/03/24 09:17	03/04/24 21:12	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2240412	1	03/05/24 18:35	03/06/24 03:55	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2240693	1	03/05/24 18:35	03/06/24 12:23	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2238298	1	03/04/24 15:38	03/04/24 21:35	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2238302	1	03/04/24 08:01	03/04/24 21:58	LS	Mt. Juliet, TN

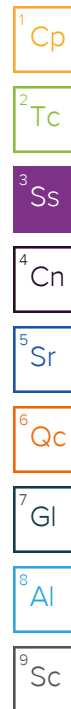
240228-PINYONRIDGE-SB03@9 L1710946-02 Solid

Collected by  
Alex Slorby

Collected date/time  
02/28/24 11:50

Received date/time  
03/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2239770	1	03/07/24 09:56	03/07/24 09:56	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2237435	1	03/03/24 22:57	03/04/24 19:52	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2238210	1	03/02/24 09:45	03/02/24 14:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2239058	1	03/04/24 10:51	03/04/24 15:26	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2239773	5	03/06/24 08:21	03/06/24 12:22	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2238232	5	03/03/24 09:17	03/04/24 03:15	SJM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2238232	5	03/03/24 09:17	03/04/24 21:15	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2240412	1	03/05/24 18:35	03/06/24 04:18	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2240693	1	03/05/24 18:35	03/06/24 12:42	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2238298	1	03/04/24 15:38	03/04/24 20:44	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2238302	1	03/04/24 08:01	03/04/24 22:16	LS	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	16.9		1	03/07/2024 09:54	WG2239770

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	03/04/2024 19:45	<a href="#">WG2237435</a>

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.47	<a href="#">T8</a>	1	03/02/2024 14:10	<a href="#">WG2238210</a>

Sample Narrative:

L1710946-01 WG2238210: 8.47 at 19.6C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	3580		10.0	1	03/04/2024 15:26	<a href="#">WG2239058</a>

Sample Narrative:

L1710946-01 WG2239058: at 25C

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	0.598		0.0167	0.200	1	03/06/2024 12:19	<a href="#">WG2239773</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	7.19		0.100	1.00	5	03/04/2024 21:12	<a href="#">WG2238232</a>
Barium	125		0.152	2.50	5	03/04/2024 02:24	<a href="#">WG2238232</a>
Cadmium	0.777	<a href="#">J</a>	0.0855	1.00	5	03/04/2024 02:24	<a href="#">WG2238232</a>
Copper	41.2		0.132	5.00	5	03/04/2024 21:12	<a href="#">WG2238232</a>
Lead	25.2		0.0990	2.00	5	03/04/2024 21:12	<a href="#">WG2238232</a>
Nickel	52.1		0.197	2.50	5	03/04/2024 21:12	<a href="#">WG2238232</a>
Selenium	0.579	<a href="#">J</a>	0.180	2.50	5	03/04/2024 02:24	<a href="#">WG2238232</a>
Silver	0.226	<a href="#">J</a>	0.0865	0.500	5	03/04/2024 21:12	<a href="#">WG2238232</a>
Zinc	169		0.740	25.0	5	03/04/2024 21:12	<a href="#">WG2238232</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	03/06/2024 03:55	<a href="#">WG2240412</a>
(S) a,a,a-Trifluorotoluene(FID)	93.1			77.0-120		03/06/2024 03:55	<a href="#">WG2240412</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	03/06/2024 12:23	<a href="#">WG2240693</a>
Toluene	U		0.00130	0.00500	1	03/06/2024 12:23	<a href="#">WG2240693</a>
Ethylbenzene	U		0.000737	0.00250	1	03/06/2024 12:23	<a href="#">WG2240693</a>
Xylenes, Total	U		0.000880	0.00650	1	03/06/2024 12:23	<a href="#">WG2240693</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	03/06/2024 12:23	<a href="#">WG2240693</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	03/06/2024 12:23	<a href="#">WG2240693</a>
(S) Toluene-d8	105			75.0-131		03/06/2024 12:23	<a href="#">WG2240693</a>
(S) 4-Bromofluorobenzene	98.3			67.0-138		03/06/2024 12:23	<a href="#">WG2240693</a>
(S) 1,2-Dichloroethane-d4	90.3			70.0-130		03/06/2024 12:23	<a href="#">WG2240693</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	03/04/2024 21:35	<a href="#">WG2238298</a>
C28-C36 Motor Oil Range	1.66	<a href="#">B J</a>	0.274	4.00	1	03/04/2024 21:35	<a href="#">WG2238298</a>
(S) o-Terphenyl	48.5			18.0-148		03/04/2024 21:35	<a href="#">WG2238298</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
Acenaphthene	U		0.00209	0.00600	1	03/04/2024 21:58	<a href="#">WG2238302</a>
Anthracene	U		0.00230	0.00600	1	03/04/2024 21:58	<a href="#">WG2238302</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	03/04/2024 21:58	<a href="#">WG2238302</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	03/04/2024 21:58	<a href="#">WG2238302</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	03/04/2024 21:58	<a href="#">WG2238302</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	03/04/2024 21:58	<a href="#">WG2238302</a>
Chrysene	U		0.00232	0.00600	1	03/04/2024 21:58	<a href="#">WG2238302</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	03/04/2024 21:58	<a href="#">WG2238302</a>
Fluoranthene	U		0.00227	0.00600	1	03/04/2024 21:58	<a href="#">WG2238302</a>
Fluorene	U		0.00205	0.00600	1	03/04/2024 21:58	<a href="#">WG2238302</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	03/04/2024 21:58	<a href="#">WG2238302</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	03/04/2024 21:58	<a href="#">WG2238302</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	03/04/2024 21:58	<a href="#">WG2238302</a>
Naphthalene	U		0.00408	0.0200	1	03/04/2024 21:58	<a href="#">WG2238302</a>
Pyrene	U		0.00200	0.00600	1	03/04/2024 21:58	<a href="#">WG2238302</a>
(S) p-Terphenyl-d14	82.2			23.0-120		03/04/2024 21:58	<a href="#">WG2238302</a>
(S) Nitrobenzene-d5	92.2			14.0-149		03/04/2024 21:58	<a href="#">WG2238302</a>
(S) 2-Fluorobiphenyl	77.2			34.0-125		03/04/2024 21:58	<a href="#">WG2238302</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	38.7		1	03/07/2024 09:56	WG2239770

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	03/04/2024 19:52	<a href="#">WG2237435</a>

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.23	<a href="#">T8</a>	1	03/02/2024 14:10	<a href="#">WG2238210</a>

Sample Narrative:  
L1710946-02 WG2238210: 9.23 at 19.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1530		10.0	1	03/04/2024 15:26	<a href="#">WG2239058</a>

Sample Narrative:  
L1710946-02 WG2239058: at 25C

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	0.326	<a href="#">J</a>	0.0835	1.00	5	03/06/2024 12:22	<a href="#">WG2239773</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.12		0.100	1.00	5	03/04/2024 21:15	<a href="#">WG2238232</a>
Barium	147		0.152	2.50	5	03/04/2024 03:15	<a href="#">WG2238232</a>
Cadmium	U		0.0855	1.00	5	03/04/2024 03:15	<a href="#">WG2238232</a>
Copper	45.1		0.132	5.00	5	03/04/2024 03:15	<a href="#">WG2238232</a>
Lead	13.7		0.0990	2.00	5	03/04/2024 21:15	<a href="#">WG2238232</a>
Nickel	26.2		0.197	2.50	5	03/04/2024 21:15	<a href="#">WG2238232</a>
Selenium	0.480	<a href="#">J</a>	0.180	2.50	5	03/04/2024 03:15	<a href="#">WG2238232</a>
Silver	U		0.0865	0.500	5	03/04/2024 03:15	<a href="#">WG2238232</a>
Zinc	72.8		0.740	25.0	5	03/04/2024 21:15	<a href="#">WG2238232</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	03/06/2024 04:18	<a href="#">WG2240412</a>
(S) a,a,a-Trifluorotoluene(FID)	92.9			77.0-120		03/06/2024 04:18	<a href="#">WG2240412</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	03/06/2024 12:42	<a href="#">WG2240693</a>
Toluene	U		0.00130	0.00500	1	03/06/2024 12:42	<a href="#">WG2240693</a>
Ethylbenzene	U		0.000737	0.00250	1	03/06/2024 12:42	<a href="#">WG2240693</a>
Xylenes, Total	U		0.000880	0.00650	1	03/06/2024 12:42	<a href="#">WG2240693</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	03/06/2024 12:42	<a href="#">WG2240693</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	03/06/2024 12:42	<a href="#">WG2240693</a>
(S) Toluene-d8	104			75.0-131		03/06/2024 12:42	<a href="#">WG2240693</a>
(S) 4-Bromofluorobenzene	98.3			67.0-138		03/06/2024 12:42	<a href="#">WG2240693</a>
(S) 1,2-Dichloroethane-d4	89.9			70.0-130		03/06/2024 12:42	<a href="#">WG2240693</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	2.07	J	1.61	4.00	1	03/04/2024 20:44	<a href="#">WG2238298</a>
C28-C36 Motor Oil Range	1.58	B J	0.274	4.00	1	03/04/2024 20:44	<a href="#">WG2238298</a>
(S) o-Terphenyl	49.4			18.0-148		03/04/2024 20:44	<a href="#">WG2238298</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
Acenaphthene	U		0.00209	0.00600	1	03/04/2024 22:16	<a href="#">WG2238302</a>
Anthracene	U		0.00230	0.00600	1	03/04/2024 22:16	<a href="#">WG2238302</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	03/04/2024 22:16	<a href="#">WG2238302</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	03/04/2024 22:16	<a href="#">WG2238302</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	03/04/2024 22:16	<a href="#">WG2238302</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	03/04/2024 22:16	<a href="#">WG2238302</a>
Chrysene	U		0.00232	0.00600	1	03/04/2024 22:16	<a href="#">WG2238302</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	03/04/2024 22:16	<a href="#">WG2238302</a>
Fluoranthene	U		0.00227	0.00600	1	03/04/2024 22:16	<a href="#">WG2238302</a>
Fluorene	U		0.00205	0.00600	1	03/04/2024 22:16	<a href="#">WG2238302</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	03/04/2024 22:16	<a href="#">WG2238302</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	03/04/2024 22:16	<a href="#">WG2238302</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	03/04/2024 22:16	<a href="#">WG2238302</a>
Naphthalene	U		0.00408	0.0200	1	03/04/2024 22:16	<a href="#">WG2238302</a>
Pyrene	U		0.00200	0.00600	1	03/04/2024 22:16	<a href="#">WG2238302</a>
(S) p-Terphenyl-d14	82.3			23.0-120		03/04/2024 22:16	<a href="#">WG2238302</a>
(S) Nitrobenzene-d5	86.4			14.0-149		03/04/2024 22:16	<a href="#">WG2238302</a>
(S) 2-Fluorobiphenyl	74.0			34.0-125		03/04/2024 22:16	<a href="#">WG2238302</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4041355-1 03/04/24 17:08

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

L1710894-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1710894-08 03/04/24 18:43 • (DUP) R4041355-7 03/04/24 18:50

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	2.75	2.40	1	13.6		20

L1710946-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1710946-02 03/04/24 19:52 • (DUP) R4041355-8 03/04/24 19:58

	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) R4041355-2 03/04/24 17:17

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

L1710351-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710351-01 03/04/24 17:23 • (MS) R4041355-3 03/04/24 17:29 • (MSD) R4041355-4 03/04/24 17:35

	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	19.6	20.2	98.1	101	1	75.0-125			2.78	20

L1710947-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710947-02 03/04/24 20:10 • (MS) R4041355-9 03/04/24 20:16 • (MSD) R4041355-10 03/04/24 20:22

	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	0.293	19.3	18.1	94.8	89.0	1	75.0-125			6.26	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



L1710351-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1710351-01 03/04/24 17:23 • (MS) R4041355-5 03/04/24 17:42

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Hexavalent Chromium	638	U	669	105	50	75.0-125	

L1710947-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1710947-02 03/04/24 20:10 • (MS) R4041355-11 03/04/24 20:29

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Hexavalent Chromium	648	0.293	882	136	50	75.0-125	<u>J5</u>

<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

L1709899-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1709899-01 03/02/24 14:10 • (DUP) R4040746-2 03/02/24 14:10

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.69	7.73	1	0.519		1

Sample Narrative:

OS: 7.69 at 21.5C

DUP: 7.73 at 21C

L1710947-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1710947-01 03/02/24 14:10 • (DUP) R4040746-3 03/02/24 14:10

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.88	7.89	1	0.127		1

Sample Narrative:

OS: 7.88 at 19.5C

DUP: 7.89 at 19.7C

Laboratory Control Sample (LCS)

(LCS) R4040746-1 03/02/24 14:10

	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 at 20C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4041256-1 03/04/24 15:26

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

L1710945-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1710945-03 03/04/24 15:26 • (DUP) R4041256-3 03/04/24 15:26

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2760	2800	1	1.47		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1710947-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1710947-01 03/04/24 15:26 • (DUP) R4041256-4 03/04/24 15:26

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	9280	9230	1	0.540		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4041256-2 03/04/24 15:26

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	327	330	101	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) R4042235-1 03/06/24 11:59

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) R4042235-2 03/06/24 12:02 • (LCSD) R4042235-3 03/06/24 12:04

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	1.07	1.10	107	110	80.0-120			2.71	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4040978-1 03/04/24 01:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

<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) R4041336-2 03/04/24 20:34

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

Laboratory Control Sample (LCS)

(LCS) R4040978-2 03/04/24 01:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	103	103	80.0-120	
Barium	100	98.7	98.7	80.0-120	
Cadmium	100	103	103	80.0-120	
Copper	100	108	108	80.0-120	
Nickel	100	105	105	80.0-120	
Selenium	100	101	101	80.0-120	
Silver	20.0	21.7	108	80.0-120	
Zinc	100	100	100	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R4041336-3 03/04/24 20:37

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



L1710947-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710947-02 03/04/24 02:01 • (MS) R4040978-5 03/04/24 02:11 • (MSD) R4040978-6 03/04/24 02:14

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	9.68	109	103	99.1	93.5	5	75.0-125			5.37	20
Barium	100	121	226	235	105	113	5	75.0-125	E	E	3.80	20
Cadmium	100	1.03	113	104	112	103	5	75.0-125			8.51	20
Copper	100	36.2	152	142	116	105	5	75.0-125			7.13	20
Nickel	100	43.0	147	138	104	95.0	5	75.0-125			6.13	20
Selenium	100	0.809	110	101	109	100	5	75.0-125			8.31	20
Silver	20.0	U	23.5	21.6	117	108	5	75.0-125			8.14	20
Zinc	100	126	230	229	103	102	5	75.0-125			0.459	20

L1710947-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710947-02 03/04/24 20:40 • (MS) R4041336-6 03/04/24 20:50 • (MSD) R4041336-7 03/04/24 20:53

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	100	29.0	134	126	105	97.2	5	75.0-125			6.00	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R4042675-2 03/06/24 00:50

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)	96.9			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4042675-1 03/05/24 23:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	5.26	105	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			104	77.0-120	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R4042666-3 03/06/24 10:34

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	103			75.0-131
(S) 4-Bromofluorobenzene	96.0			67.0-138
(S) 1,2-Dichloroethane-d4	91.8			70.0-130

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

(LCS) R4042666-1 03/06/24 08:59 • (LCSD) R4042666-2 03/06/24 09:18

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	0.120	92.0	96.0	70.0-123			4.26	20
Toluene	0.125	0.120	0.128	96.0	102	75.0-121			6.45	20
Ethylbenzene	0.125	0.118	0.128	94.4	102	74.0-126			8.13	20
Xylenes, Total	0.375	0.359	0.382	95.7	102	72.0-127			6.21	20
1,2,4-Trimethylbenzene	0.125	0.126	0.135	101	108	70.0-126			6.90	20
1,3,5-Trimethylbenzene	0.125	0.128	0.139	102	111	73.0-127			8.24	20
(S) Toluene-d8				98.6	101	75.0-131				
(S) 4-Bromofluorobenzene				95.8	97.1	67.0-138				
(S) 1,2-Dichloroethane-d4				97.6	95.3	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4041485-1 03/04/24 19:51

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	0.496	⌵	0.274	4.00
(S) o-Terphenyl	64.7			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4041485-2 03/04/24 20:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	46.0	92.0	50.0-150	
(S) o-Terphenyl			79.0	18.0-148	

L1710958-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710958-06 03/05/24 00:38 • (MS) R4041485-3 03/05/24 00:51 • (MSD) R4041485-4 03/05/24 01:04

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	49.5	6.95	37.8	37.6	62.3	61.9	1	50.0-150			0.531	20
(S) o-Terphenyl					35.8	39.2		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4041684-2 03/04/24 20:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	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
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	85.0			23.0-120
(S) Nitrobenzene-d5	95.3			14.0-149
(S) 2-Fluorobiphenyl	80.0			34.0-125

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

Laboratory Control Sample (LCS)

(LCS) R4041684-1 03/04/24 20:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0679	84.9	50.0-120	
Anthracene	0.0800	0.0739	92.4	50.0-126	
Benzo(a)anthracene	0.0800	0.0760	95.0	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0654	81.8	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0599	74.9	49.0-125	
Benzo(a)pyrene	0.0800	0.0623	77.9	42.0-120	
Chrysene	0.0800	0.0706	88.3	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0723	90.4	47.0-125	
Fluoranthene	0.0800	0.0733	91.6	49.0-129	
Fluorene	0.0800	0.0716	89.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0737	92.1	46.0-125	
1-Methylnaphthalene	0.0800	0.0746	93.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0733	91.6	50.0-120	
Naphthalene	0.0800	0.0728	91.0	50.0-120	
Pyrene	0.0800	0.0689	86.1	43.0-123	



Laboratory Control Sample (LCS)

(LCS) R4041684-1 03/04/24 20:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
(S) p-Terphenyl-d14			89.3	23.0-120	
(S) Nitrobenzene-d5			111	14.0-149	
(S) 2-Fluorobiphenyl			86.7	34.0-125	

L1710946-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710946-02 03/04/24 22:16 • (MS) R4041684-3 03/04/24 22:34 • (MSD) R4041684-4 03/04/24 22:52

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acenaphthene	0.0776	U	0.0587	0.0580	75.6	75.1	1	14.0-127			1.20	27
Anthracene	0.0776	U	0.0599	0.0608	77.2	78.8	1	10.0-145			1.49	30
Benzo(a)anthracene	0.0776	U	0.0632	0.0632	81.4	81.9	1	10.0-139			0.000	30
Benzo(b)fluoranthene	0.0776	U	0.0594	0.0599	76.5	77.6	1	10.0-140			0.838	36
Benzo(k)fluoranthene	0.0776	U	0.0537	0.0535	69.2	69.3	1	10.0-137			0.373	31
Benzo(a)pyrene	0.0776	U	0.0562	0.0565	72.4	73.2	1	10.0-141			0.532	31
Chrysene	0.0776	U	0.0610	0.0608	78.6	78.8	1	10.0-145			0.328	30
Dibenz(a,h)anthracene	0.0776	U	0.0605	0.0602	78.0	78.0	1	10.0-132			0.497	31
Fluoranthene	0.0776	U	0.0617	0.0622	79.5	80.6	1	10.0-153			0.807	33
Fluorene	0.0776	U	0.0609	0.0608	78.5	78.8	1	11.0-130			0.164	29
Indeno(1,2,3-cd)pyrene	0.0776	U	0.0617	0.0615	79.5	79.7	1	10.0-137			0.325	32
1-Methylnaphthalene	0.0776	U	0.0641	0.0637	82.6	82.5	1	10.0-142			0.626	28
2-Methylnaphthalene	0.0776	U	0.0632	0.0628	81.4	81.3	1	10.0-137			0.635	28
Naphthalene	0.0776	U	0.0630	0.0622	81.2	80.6	1	10.0-135			1.28	27
Pyrene	0.0776	U	0.0601	0.0604	77.4	78.2	1	10.0-148			0.498	35
(S) p-Terphenyl-d14					80.3	80.7		23.0-120				
(S) Nitrobenzene-d5					92.3	93.9		14.0-149				
(S) 2-Fluorobiphenyl					79.1	78.0		34.0-125				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

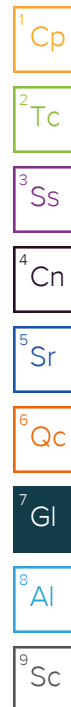
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
T8	Sample(s) received past/too close to holding time expiration.



# ACCREDITATIONS & LOCATIONS

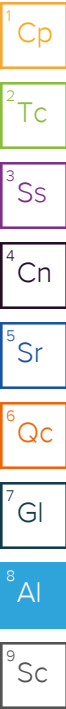
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.

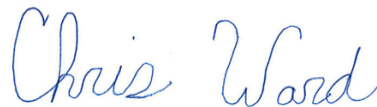




## Anschutz Exploration Corporation

Sample Delivery Group: L1710942  
Samples Received: 03/01/2024  
Project Number: PINYON RIDGE FED C-1  
Description: Pinyon Ridge Fed C-1W Pit Closure  
Site: PINYON RIDGE FED C-1W  
Report To: Schuyler Hamilton  
211 W. 5th St.  
Rifle, CO 81650

Entire Report Reviewed By:



Chris Ward  
Project Manager

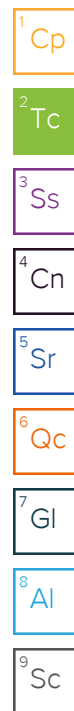
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory 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)

# TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
240228-PINYONRIDGE-SB01@6-7 L1710942-01	5
240228-PINYONRIDGE-SB01@9-9.5 L1710942-02	7
Qc: Quality Control Summary	9
Wet Chemistry by Method 7199	9
Wet Chemistry by Method 9045D	11
Wet Chemistry by Method 9050AMod	12
Metals (ICP) by Method 6010B-NE493 Ch 2	13
Metals (ICPMS) by Method 6020	14
Volatile Organic Compounds (GC) by Method 8015D/GRO	16
Volatile Organic Compounds (GC/MS) by Method 8260B	17
Semi-Volatile Organic Compounds (GC) by Method 8015M	18
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	19
Gl: Glossary of Terms	23
Al: Accreditations & Locations	24
Sc: Sample Chain of Custody	25





# SAMPLE SUMMARY

240228-PINYONRIDGE-SB01@6-7 L1710942-01 Solid

Collected by  
Alex Slorby

Collected date/time  
02/28/24 09:45

Received date/time  
03/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2239770	1	03/07/24 09:47	03/07/24 09:47	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2237435	1	03/03/24 22:57	03/04/24 19:21	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2238210	1	03/02/24 09:45	03/02/24 14:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2239058	1	03/04/24 10:51	03/04/24 15:26	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2239773	1	03/06/24 08:21	03/06/24 12:07	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2238232	5	03/03/24 09:17	03/04/24 02:17	SJM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2238232	5	03/03/24 09:17	03/04/24 20:57	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2240603	1	03/05/24 18:06	03/06/24 21:57	SB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2240585	1	03/05/24 18:06	03/06/24 11:09	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2238298	1	03/04/24 15:38	03/04/24 21:22	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2238142	1	03/04/24 05:39	03/04/24 16:38	AGW	Mt. Juliet, TN

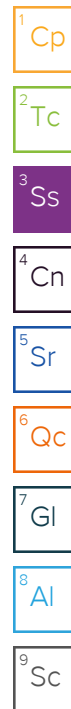
240228-PINYONRIDGE-SB01@9-9.5 L1710942-02 Solid

Collected by  
Alex Slorby

Collected date/time  
02/28/24 10:05

Received date/time  
03/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2239770	1	03/07/24 09:49	03/07/24 09:49	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2237435	1	03/03/24 22:57	03/04/24 19:39	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2238210	1	03/02/24 09:45	03/02/24 14:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2239058	1	03/04/24 10:51	03/04/24 15:26	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2239773	1	03/06/24 08:21	03/06/24 12:10	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2238232	5	03/03/24 09:17	03/04/24 02:20	SJM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2238232	5	03/03/24 09:17	03/04/24 21:00	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2240603	1	03/05/24 18:06	03/06/24 22:21	SB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2240585	1	03/05/24 18:06	03/06/24 11:29	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2238298	1	03/04/24 15:38	03/04/24 21:09	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2238302	1	03/04/24 08:01	03/04/24 20:47	LS	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	22.3		1	03/07/2024 09:47	WG2239770

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.348	J	0.255	1.00	1	03/04/2024 19:21	WG2237435

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.93	T8	1	03/02/2024 14:10	WG2238210

Sample Narrative:

L1710942-01 WG2238210: 8.93 at 19.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1510		10.0	1	03/04/2024 15:26	WG2239058

Sample Narrative:

L1710942-01 WG2239058: at 25C

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	0.381		0.0167	0.200	1	03/06/2024 12:07	WG2239773

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	13.6		0.100	1.00	5	03/04/2024 02:17	WG2238232
Barium	101		0.152	2.50	5	03/04/2024 02:17	WG2238232
Cadmium	0.450	J	0.0855	1.00	5	03/04/2024 02:17	WG2238232
Copper	28.8		0.132	5.00	5	03/04/2024 02:17	WG2238232
Lead	16.2		0.0990	2.00	5	03/04/2024 20:57	WG2238232
Nickel	20.5		0.197	2.50	5	03/04/2024 02:17	WG2238232
Selenium	1.03	J	0.180	2.50	5	03/04/2024 02:17	WG2238232
Silver	U		0.0865	0.500	5	03/04/2024 02:17	WG2238232
Zinc	77.9		0.740	25.0	5	03/04/2024 02:17	WG2238232

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	0.0791	B J	0.0217	0.100	1	03/06/2024 21:57	WG2240603
(S) a,a,a-Trifluorotoluene(FID)	88.2			77.0-120		03/06/2024 21:57	WG2240603

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	03/06/2024 11:09	<a href="#">WG2240585</a>
Toluene	U		0.00130	0.00500	1	03/06/2024 11:09	<a href="#">WG2240585</a>
Ethylbenzene	U		0.000737	0.00250	1	03/06/2024 11:09	<a href="#">WG2240585</a>
Xylenes, Total	U		0.000880	0.00650	1	03/06/2024 11:09	<a href="#">WG2240585</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	03/06/2024 11:09	<a href="#">WG2240585</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	03/06/2024 11:09	<a href="#">WG2240585</a>
(S) Toluene-d8	107			75.0-131		03/06/2024 11:09	<a href="#">WG2240585</a>
(S) 4-Bromofluorobenzene	92.6			67.0-138		03/06/2024 11:09	<a href="#">WG2240585</a>
(S) 1,2-Dichloroethane-d4	87.4			70.0-130		03/06/2024 11:09	<a href="#">WG2240585</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	2.03	J	1.61	4.00	1	03/04/2024 21:22	<a href="#">WG2238298</a>
C28-C36 Motor Oil Range	2.99	B J	0.274	4.00	1	03/04/2024 21:22	<a href="#">WG2238298</a>
(S) o-Terphenyl	39.0			18.0-148		03/04/2024 21:22	<a href="#">WG2238298</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
Acenaphthene	U		0.00209	0.00600	1	03/04/2024 16:38	<a href="#">WG2238142</a>
Anthracene	U		0.00230	0.00600	1	03/04/2024 16:38	<a href="#">WG2238142</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	03/04/2024 16:38	<a href="#">WG2238142</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	03/04/2024 16:38	<a href="#">WG2238142</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	03/04/2024 16:38	<a href="#">WG2238142</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	03/04/2024 16:38	<a href="#">WG2238142</a>
Chrysene	U		0.00232	0.00600	1	03/04/2024 16:38	<a href="#">WG2238142</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	03/04/2024 16:38	<a href="#">WG2238142</a>
Fluoranthene	U		0.00227	0.00600	1	03/04/2024 16:38	<a href="#">WG2238142</a>
Fluorene	U		0.00205	0.00600	1	03/04/2024 16:38	<a href="#">WG2238142</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	03/04/2024 16:38	<a href="#">WG2238142</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	03/04/2024 16:38	<a href="#">WG2238142</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	03/04/2024 16:38	<a href="#">WG2238142</a>
Naphthalene	U		0.00408	0.0200	1	03/04/2024 16:38	<a href="#">WG2238142</a>
Pyrene	U		0.00200	0.00600	1	03/04/2024 16:38	<a href="#">WG2238142</a>
(S) p-Terphenyl-d14	75.2			23.0-120		03/04/2024 16:38	<a href="#">WG2238142</a>
(S) Nitrobenzene-d5	53.9			14.0-149		03/04/2024 16:38	<a href="#">WG2238142</a>
(S) 2-Fluorobiphenyl	58.7			34.0-125		03/04/2024 16:38	<a href="#">WG2238142</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	22.4		1	03/07/2024 09:49	WG2239770

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.343	J	0.255	1.00	1	03/04/2024 19:39	WG2237435

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.72	T8	1	03/02/2024 14:10	WG2238210

Sample Narrative:

L1710942-02 WG2238210: 8.72 at 19.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	3220		10.0	1	03/04/2024 15:26	WG2239058

Sample Narrative:

L1710942-02 WG2239058: at 25C

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	0.347		0.0167	0.200	1	03/06/2024 12:10	WG2239773

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	10.6		0.100	1.00	5	03/04/2024 02:20	WG2238232
Barium	135		0.152	2.50	5	03/04/2024 02:20	WG2238232
Cadmium	0.345	J	0.0855	1.00	5	03/04/2024 02:20	WG2238232
Copper	25.1		0.132	5.00	5	03/04/2024 02:20	WG2238232
Lead	15.2		0.0990	2.00	5	03/04/2024 21:00	WG2238232
Nickel	18.6		0.197	2.50	5	03/04/2024 02:20	WG2238232
Selenium	0.874	J	0.180	2.50	5	03/04/2024 02:20	WG2238232
Silver	U		0.0865	0.500	5	03/04/2024 02:20	WG2238232
Zinc	73.2		0.740	25.0	5	03/04/2024 02:20	WG2238232

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	0.0931	B J	0.0217	0.100	1	03/06/2024 22:21	WG2240603
(S) a,a,a-Trifluorotoluene(FID)	87.5			77.0-120		03/06/2024 22:21	WG2240603

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	03/06/2024 11:29	<a href="#">WG2240585</a>
Toluene	U		0.00130	0.00500	1	03/06/2024 11:29	<a href="#">WG2240585</a>
Ethylbenzene	U		0.000737	0.00250	1	03/06/2024 11:29	<a href="#">WG2240585</a>
Xylenes, Total	U		0.000880	0.00650	1	03/06/2024 11:29	<a href="#">WG2240585</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	03/06/2024 11:29	<a href="#">WG2240585</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	03/06/2024 11:29	<a href="#">WG2240585</a>
(S) Toluene-d8	112			75.0-131		03/06/2024 11:29	<a href="#">WG2240585</a>
(S) 4-Bromofluorobenzene	95.8			67.0-138		03/06/2024 11:29	<a href="#">WG2240585</a>
(S) 1,2-Dichloroethane-d4	84.1			70.0-130		03/06/2024 11:29	<a href="#">WG2240585</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	03/04/2024 21:09	<a href="#">WG2238298</a>
C28-C36 Motor Oil Range	1.16	<a href="#">B J</a>	0.274	4.00	1	03/04/2024 21:09	<a href="#">WG2238298</a>
(S) o-Terphenyl	45.0			18.0-148		03/04/2024 21:09	<a href="#">WG2238298</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
Acenaphthene	U		0.00209	0.00600	1	03/04/2024 20:47	<a href="#">WG2238302</a>
Anthracene	U		0.00230	0.00600	1	03/04/2024 20:47	<a href="#">WG2238302</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	03/04/2024 20:47	<a href="#">WG2238302</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	03/04/2024 20:47	<a href="#">WG2238302</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	03/04/2024 20:47	<a href="#">WG2238302</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	03/04/2024 20:47	<a href="#">WG2238302</a>
Chrysene	U		0.00232	0.00600	1	03/04/2024 20:47	<a href="#">WG2238302</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	03/04/2024 20:47	<a href="#">WG2238302</a>
Fluoranthene	U		0.00227	0.00600	1	03/04/2024 20:47	<a href="#">WG2238302</a>
Fluorene	U		0.00205	0.00600	1	03/04/2024 20:47	<a href="#">WG2238302</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	03/04/2024 20:47	<a href="#">WG2238302</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	03/04/2024 20:47	<a href="#">WG2238302</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	03/04/2024 20:47	<a href="#">WG2238302</a>
Naphthalene	U		0.00408	0.0200	1	03/04/2024 20:47	<a href="#">WG2238302</a>
Pyrene	U		0.00200	0.00600	1	03/04/2024 20:47	<a href="#">WG2238302</a>
(S) p-Terphenyl-d14	73.5			23.0-120		03/04/2024 20:47	<a href="#">WG2238302</a>
(S) Nitrobenzene-d5	89.2			14.0-149		03/04/2024 20:47	<a href="#">WG2238302</a>
(S) 2-Fluorobiphenyl	56.5			34.0-125		03/04/2024 20:47	<a href="#">WG2238302</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R4041355-1 03/04/24 17:08

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

L1710894-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1710894-08 03/04/24 18:43 • (DUP) R4041355-7 03/04/24 18:50

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	2.75	2.40	1	13.6		20

L1710946-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1710946-02 03/04/24 19:52 • (DUP) R4041355-8 03/04/24 19:58

	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) R4041355-2 03/04/24 17:17

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

L1710351-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710351-01 03/04/24 17:23 • (MS) R4041355-3 03/04/24 17:29 • (MSD) R4041355-4 03/04/24 17:35

	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	19.6	20.2	98.1	101	1	75.0-125			2.78	20

L1710947-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710947-02 03/04/24 20:10 • (MS) R4041355-9 03/04/24 20:16 • (MSD) R4041355-10 03/04/24 20:22

	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	0.293	19.3	18.1	94.8	89.0	1	75.0-125			6.26	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1710351-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1710351-01 03/04/24 17:23 • (MS) R4041355-5 03/04/24 17:42

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Hexavalent Chromium	638	U	669	105	50	75.0-125	

L1710947-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1710947-02 03/04/24 20:10 • (MS) R4041355-11 03/04/24 20:29

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Hexavalent Chromium	648	0.293	882	136	50	75.0-125	<u>J5</u>

<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

L1709899-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1709899-01 03/02/24 14:10 • (DUP) R4040746-2 03/02/24 14:10

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.69	7.73	1	0.519		1

Sample Narrative:

OS: 7.69 at 21.5C

DUP: 7.73 at 21C

L1710947-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1710947-01 03/02/24 14:10 • (DUP) R4040746-3 03/02/24 14:10

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.88	7.89	1	0.127		1

Sample Narrative:

OS: 7.88 at 19.5C

DUP: 7.89 at 19.7C

Laboratory Control Sample (LCS)

(LCS) R4040746-1 03/02/24 14:10

	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 at 20C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4041256-1 03/04/24 15:26

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

L1710945-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1710945-03 03/04/24 15:26 • (DUP) R4041256-3 03/04/24 15:26

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2760	2800	1	1.47		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1710947-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1710947-01 03/04/24 15:26 • (DUP) R4041256-4 03/04/24 15:26

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	9280	9230	1	0.540		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4041256-2 03/04/24 15:26

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	327	330	101	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) R4042235-1 03/06/24 11:59

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

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

(LCS) R4042235-2 03/06/24 12:02 • (LCSD) R4042235-3 03/06/24 12:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.07	1.10	107	110	80.0-120			2.71	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R4040978-1 03/04/24 01:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

<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) R4041336-2 03/04/24 20:34

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

Laboratory Control Sample (LCS)

(LCS) R4040978-2 03/04/24 01:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	103	103	80.0-120	
Barium	100	98.7	98.7	80.0-120	
Cadmium	100	103	103	80.0-120	
Copper	100	108	108	80.0-120	
Nickel	100	105	105	80.0-120	
Selenium	100	101	101	80.0-120	
Silver	20.0	21.7	108	80.0-120	
Zinc	100	100	100	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R4041336-3 03/04/24 20:37

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



L1710947-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710947-02 03/04/24 02:01 • (MS) R4040978-5 03/04/24 02:11 • (MSD) R4040978-6 03/04/24 02:14

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	9.68	109	103	99.1	93.5	5	75.0-125			5.37	20
Barium	100	121	226	235	105	113	5	75.0-125	E	E	3.80	20
Cadmium	100	1.03	113	104	112	103	5	75.0-125			8.51	20
Copper	100	36.2	152	142	116	105	5	75.0-125			7.13	20
Nickel	100	43.0	147	138	104	95.0	5	75.0-125			6.13	20
Selenium	100	0.809	110	101	109	100	5	75.0-125			8.31	20
Silver	20.0	U	23.5	21.6	117	108	5	75.0-125			8.14	20
Zinc	100	126	230	229	103	102	5	75.0-125			0.459	20

L1710947-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710947-02 03/04/24 20:40 • (MS) R4041336-6 03/04/24 20:50 • (MSD) R4041336-7 03/04/24 20:53

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	100	29.0	134	126	105	97.2	5	75.0-125			6.00	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R4042886-2 03/06/24 12:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0781	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	93.0			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4042886-1 03/06/24 11:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	4.50	90.0	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			105	77.0-120	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R4042680-2 03/06/24 09:13

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	0.00178	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	109			75.0-131
(S) 4-Bromofluorobenzene	95.4			67.0-138
(S) 1,2-Dichloroethane-d4	84.7			70.0-130

Laboratory Control Sample (LCS)

(LCS) R4042680-1 03/06/24 05:46

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.119	95.2	70.0-123	
Toluene	0.125	0.134	107	75.0-121	
Ethylbenzene	0.125	0.128	102	74.0-126	
Xylenes, Total	0.375	0.406	108	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.135	108	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.124	99.2	73.0-127	
(S) Toluene-d8			107	75.0-131	
(S) 4-Bromofluorobenzene			102	67.0-138	
(S) 1,2-Dichloroethane-d4			92.9	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4041485-1 03/04/24 19:51

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	0.496	⬇	0.274	4.00
(S) o-Terphenyl	64.7			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4041485-2 03/04/24 20:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	46.0	92.0	50.0-150	
(S) o-Terphenyl			79.0	18.0-148	

L1710958-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710958-06 03/05/24 00:38 • (MS) R4041485-3 03/05/24 00:51 • (MSD) R4041485-4 03/05/24 01:04

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	49.5	6.95	37.8	37.6	62.3	61.9	1	50.0-150			0.531	20
(S) o-Terphenyl					35.8	39.2		18.0-148				

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

Method Blank (MB)

(MB) R4042384-2 03/04/24 11:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	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
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	85.5			23.0-120
(S) Nitrobenzene-d5	78.4			14.0-149
(S) 2-Fluorobiphenyl	81.4			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) R4042384-1 03/04/24 11:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0799	99.9	50.0-120	
Anthracene	0.0800	0.0683	85.4	50.0-126	
Benzo(a)anthracene	0.0800	0.0689	86.1	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0625	78.1	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0656	82.0	49.0-125	
Benzo(a)pyrene	0.0800	0.0575	71.9	42.0-120	
Chrysene	0.0800	0.0720	90.0	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0674	84.3	47.0-125	
Fluoranthene	0.0800	0.0766	95.8	49.0-129	
Fluorene	0.0800	0.0625	78.1	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0648	81.0	46.0-125	
1-Methylnaphthalene	0.0800	0.0754	94.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0712	89.0	50.0-120	
Naphthalene	0.0800	0.0681	85.1	50.0-120	
Pyrene	0.0800	0.0692	86.5	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4042384-1 03/04/24 11:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			93.3	23.0-120	
(S) Nitrobenzene-d5			89.7	14.0-149	
(S) 2-Fluorobiphenyl			80.6	34.0-125	

L1710568-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710568-06 03/04/24 15:28 • (MS) R4042384-3 03/04/24 15:46 • (MSD) R4042384-4 03/04/24 16:03

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 %
Acenaphthene	0.0784	U	0.0512	0.0488	65.3	62.9	1	14.0-127			4.80	27
Anthracene	0.0784	U	0.0451	0.0426	57.5	54.9	1	10.0-145			5.70	30
Benzo(a)anthracene	0.0784	U	0.0451	0.0430	57.5	55.4	1	10.0-139			4.77	30
Benzo(b)fluoranthene	0.0784	U	0.0479	0.0452	61.1	58.2	1	10.0-140			5.80	36
Benzo(k)fluoranthene	0.0784	U	0.0477	0.0572	60.8	73.7	1	10.0-137			18.1	31
Benzo(a)pyrene	0.0784	U	0.0467	0.0454	59.6	58.5	1	10.0-141			2.82	31
Chrysene	0.0784	U	0.0556	0.0539	70.9	69.5	1	10.0-145			3.11	30
Dibenz(a,h)anthracene	0.0784	U	0.0442	0.0427	56.4	55.0	1	10.0-132			3.45	31
Fluoranthene	0.0784	U	0.0544	0.0512	69.4	66.0	1	10.0-153			6.06	33
Fluorene	0.0784	U	0.0506	0.0489	64.5	63.0	1	11.0-130			3.42	29
Indeno(1,2,3-cd)pyrene	0.0784	U	0.0424	0.0406	54.1	52.3	1	10.0-137			4.34	32
1-Methylnaphthalene	0.0784	U	0.0581	0.0546	74.1	70.4	1	10.0-142			6.21	28
2-Methylnaphthalene	0.0784	U	0.0533	0.0510	68.0	65.7	1	10.0-137			4.41	28
Naphthalene	0.0784	U	0.0548	0.0520	69.9	67.0	1	10.0-135			5.24	27
Pyrene	0.0784	U	0.0524	0.0502	66.8	64.7	1	10.0-148			4.29	35
(S) p-Terphenyl-d14					63.3	75.4		23.0-120				
(S) Nitrobenzene-d5					70.0	67.1		14.0-149				
(S) 2-Fluorobiphenyl					66.2	74.5		34.0-125				

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc



Method Blank (MB)

(MB) R4041684-2 03/04/24 20:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	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
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	85.0			23.0-120
(S) Nitrobenzene-d5	95.3			14.0-149
(S) 2-Fluorobiphenyl	80.0			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) R4041684-1 03/04/24 20:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0679	84.9	50.0-120	
Anthracene	0.0800	0.0739	92.4	50.0-126	
Benzo(a)anthracene	0.0800	0.0760	95.0	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0654	81.8	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0599	74.9	49.0-125	
Benzo(a)pyrene	0.0800	0.0623	77.9	42.0-120	
Chrysene	0.0800	0.0706	88.3	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0723	90.4	47.0-125	
Fluoranthene	0.0800	0.0733	91.6	49.0-129	
Fluorene	0.0800	0.0716	89.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0737	92.1	46.0-125	
1-Methylnaphthalene	0.0800	0.0746	93.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0733	91.6	50.0-120	
Naphthalene	0.0800	0.0728	91.0	50.0-120	
Pyrene	0.0800	0.0689	86.1	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4041684-1 03/04/24 20:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			89.3	23.0-120	
(S) Nitrobenzene-d5			111	14.0-149	
(S) 2-Fluorobiphenyl			86.7	34.0-125	

L1710946-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710946-02 03/04/24 22:16 • (MS) R4041684-3 03/04/24 22:34 • (MSD) R4041684-4 03/04/24 22:52

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 %
Acenaphthene	0.0776	U	0.0587	0.0580	75.6	75.1	1	14.0-127			1.20	27
Anthracene	0.0776	U	0.0599	0.0608	77.2	78.8	1	10.0-145			1.49	30
Benzo(a)anthracene	0.0776	U	0.0632	0.0632	81.4	81.9	1	10.0-139			0.000	30
Benzo(b)fluoranthene	0.0776	U	0.0594	0.0599	76.5	77.6	1	10.0-140			0.838	36
Benzo(k)fluoranthene	0.0776	U	0.0537	0.0535	69.2	69.3	1	10.0-137			0.373	31
Benzo(a)pyrene	0.0776	U	0.0562	0.0565	72.4	73.2	1	10.0-141			0.532	31
Chrysene	0.0776	U	0.0610	0.0608	78.6	78.8	1	10.0-145			0.328	30
Dibenz(a,h)anthracene	0.0776	U	0.0605	0.0602	78.0	78.0	1	10.0-132			0.497	31
Fluoranthene	0.0776	U	0.0617	0.0622	79.5	80.6	1	10.0-153			0.807	33
Fluorene	0.0776	U	0.0609	0.0608	78.5	78.8	1	11.0-130			0.164	29
Indeno(1,2,3-cd)pyrene	0.0776	U	0.0617	0.0615	79.5	79.7	1	10.0-137			0.325	32
1-Methylnaphthalene	0.0776	U	0.0641	0.0637	82.6	82.5	1	10.0-142			0.626	28
2-Methylnaphthalene	0.0776	U	0.0632	0.0628	81.4	81.3	1	10.0-137			0.635	28
Naphthalene	0.0776	U	0.0630	0.0622	81.2	80.6	1	10.0-135			1.28	27
Pyrene	0.0776	U	0.0601	0.0604	77.4	78.2	1	10.0-148			0.498	35
(S) p-Terphenyl-d14					80.3	80.7		23.0-120				
(S) Nitrobenzene-d5					92.3	93.9		14.0-149				
(S) 2-Fluorobiphenyl					79.1	78.0		34.0-125				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

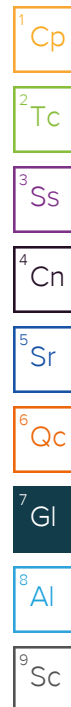
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
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.





March 07, 2024

<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

## Anschutz Exploration Corporation

Sample Delivery Group: L1710947  
Samples Received: 03/01/2024  
Project Number: PINYON RIDGE FED C-1  
Description: Pinyon Ridge Fed C-1W Pit Closure  
Site: PINYON RIDGE FED C-1W  
Report To: Schuyler Hamilton  
211 W. 5th St.  
Rifle, CO 81650

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)

ACCOUNT:

Anschutz Exploration Corporation

PROJECT:

PINYON RIDGE FED C-1

SDG:

L1710947

DATE/TIME:

03/07/24 16:58

PAGE:

1 of 23

# TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
240228-PINYONRIDGE-SB04@5-6 L1710947-01	5
240228-PINYONRIDGE-SB04@9 L1710947-02	7
Qc: Quality Control Summary	9
Wet Chemistry by Method 7199	9
Wet Chemistry by Method 9045D	11
Wet Chemistry by Method 9050AMod	12
Metals (ICP) by Method 6010B-NE493 Ch 2	13
Metals (ICPMS) by Method 6020	14
Volatile Organic Compounds (GC) by Method 8015D/GRO	16
Volatile Organic Compounds (GC/MS) by Method 8260B	17
Semi-Volatile Organic Compounds (GC) by Method 8015M	18
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	19
Gl: Glossary of Terms	21
Al: Accreditations & Locations	22
Sc: Sample Chain of Custody	23





# SAMPLE SUMMARY

240228-PINYONRIDGE-SB04@5-6 L1710947-01 Solid

Collected by  
Alex Slorby

Collected date/time  
02/28/24 10:55

Received date/time  
03/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2239770	1	03/07/24 09:57	03/07/24 09:57	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2237435	1	03/03/24 22:57	03/04/24 20:04	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2238210	1	03/02/24 09:45	03/02/24 14:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2239058	1	03/04/24 10:51	03/04/24 15:26	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2239773	1	03/06/24 08:21	03/06/24 12:25	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2238232	5	03/03/24 09:17	03/04/24 03:18	SJM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2238232	5	03/03/24 09:17	03/04/24 21:19	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2240412	1	03/05/24 19:24	03/06/24 04:41	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2240693	1	03/05/24 19:24	03/06/24 13:01	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2238298	1	03/04/24 15:38	03/05/24 10:34	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2238302	1	03/04/24 08:01	03/04/24 23:10	LS	Mt. Juliet, TN

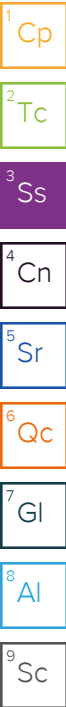
240228-PINYONRIDGE-SB04@9 L1710947-02 Solid

Collected by  
Alex Slorby

Collected date/time  
02/28/24 12:05

Received date/time  
03/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2239770	1	03/07/24 09:59	03/07/24 09:59	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2237435	1	03/03/24 22:57	03/04/24 20:10	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2238210	1	03/02/24 09:45	03/02/24 14:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2239058	1	03/04/24 10:51	03/04/24 15:26	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2239773	1	03/06/24 08:21	03/06/24 11:42	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2238232	5	03/03/24 09:17	03/04/24 02:01	SJM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2238232	5	03/03/24 09:17	03/04/24 20:40	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2240412	1	03/05/24 19:24	03/06/24 06:19	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2240693	1	03/05/24 19:24	03/06/24 13:20	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2238298	1	03/04/24 15:38	03/04/24 21:48	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2238302	1	03/04/24 08:01	03/04/24 23:27	LS	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

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte					
Sodium Adsorption Ratio	14.8		1	03/07/2024 09:57	WG2239770

Wet Chemistry by Method 7199

	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Analyte							
Hexavalent Chromium	U		0.255	1.00	1	03/04/2024 20:04	<a href="#">WG2237435</a>

Wet Chemistry by Method 9045D

	Result su	Qualifier	Dilution	Analysis date / time	Batch
Analyte					
pH	7.88	<a href="#">T8</a>	1	03/02/2024 14:10	<a href="#">WG2238210</a>

Sample Narrative:

L1710947-01 WG2238210: 7.88 at 19.5C

Wet Chemistry by Method 9050AMod

	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Analyte						
Specific Conductance	9280		10.0	1	03/04/2024 15:26	<a href="#">WG2239058</a>

Sample Narrative:

L1710947-01 WG2239058: at 25C

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

	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Analyte							
Hot Water Sol. Boron	0.778		0.0167	0.200	1	03/06/2024 12:25	<a href="#">WG2239773</a>

Metals (ICPMS) by Method 6020

	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Analyte							
Arsenic	11.2		0.100	1.00	5	03/04/2024 03:18	<a href="#">WG2238232</a>
Barium	79.6		0.152	2.50	5	03/04/2024 03:18	<a href="#">WG2238232</a>
Cadmium	0.142	<a href="#">J</a>	0.0855	1.00	5	03/04/2024 03:18	<a href="#">WG2238232</a>
Copper	16.5		0.132	5.00	5	03/04/2024 03:18	<a href="#">WG2238232</a>
Lead	14.9		0.0990	2.00	5	03/04/2024 21:19	<a href="#">WG2238232</a>
Nickel	13.8		0.197	2.50	5	03/04/2024 03:18	<a href="#">WG2238232</a>
Selenium	1.40	<a href="#">J</a>	0.180	2.50	5	03/04/2024 03:18	<a href="#">WG2238232</a>
Silver	U		0.0865	0.500	5	03/04/2024 03:18	<a href="#">WG2238232</a>
Zinc	65.2		0.740	25.0	5	03/04/2024 03:18	<a href="#">WG2238232</a>

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

	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Analyte							
TPH (GC/FID) Low Fraction	U		0.0217	0.100	1	03/06/2024 04:41	<a href="#">WG2240412</a>
(S) a,a,a-Trifluorotoluene(FID)	93.3			77.0-120		03/06/2024 04:41	<a href="#">WG2240412</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	03/06/2024 13:01	<a href="#">WG2240693</a>
Toluene	U		0.00130	0.00500	1	03/06/2024 13:01	<a href="#">WG2240693</a>
Ethylbenzene	U		0.000737	0.00250	1	03/06/2024 13:01	<a href="#">WG2240693</a>
Xylenes, Total	U		0.000880	0.00650	1	03/06/2024 13:01	<a href="#">WG2240693</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	03/06/2024 13:01	<a href="#">WG2240693</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	03/06/2024 13:01	<a href="#">WG2240693</a>
(S) Toluene-d8	103			75.0-131		03/06/2024 13:01	<a href="#">WG2240693</a>
(S) 4-Bromofluorobenzene	96.6			67.0-138		03/06/2024 13:01	<a href="#">WG2240693</a>
(S) 1,2-Dichloroethane-d4	92.1			70.0-130		03/06/2024 13:01	<a href="#">WG2240693</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	3.60	J	1.61	4.00	1	03/05/2024 10:34	<a href="#">WG2238298</a>
C28-C36 Motor Oil Range	6.10		0.274	4.00	1	03/05/2024 10:34	<a href="#">WG2238298</a>
(S) o-Terphenyl	50.5			18.0-148		03/05/2024 10:34	<a href="#">WG2238298</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
Acenaphthene	U		0.00209	0.00600	1	03/04/2024 23:10	<a href="#">WG2238302</a>
Anthracene	U		0.00230	0.00600	1	03/04/2024 23:10	<a href="#">WG2238302</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	03/04/2024 23:10	<a href="#">WG2238302</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	03/04/2024 23:10	<a href="#">WG2238302</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	03/04/2024 23:10	<a href="#">WG2238302</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	03/04/2024 23:10	<a href="#">WG2238302</a>
Chrysene	U		0.00232	0.00600	1	03/04/2024 23:10	<a href="#">WG2238302</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	03/04/2024 23:10	<a href="#">WG2238302</a>
Fluoranthene	U		0.00227	0.00600	1	03/04/2024 23:10	<a href="#">WG2238302</a>
Fluorene	U		0.00205	0.00600	1	03/04/2024 23:10	<a href="#">WG2238302</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	03/04/2024 23:10	<a href="#">WG2238302</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	03/04/2024 23:10	<a href="#">WG2238302</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	03/04/2024 23:10	<a href="#">WG2238302</a>
Naphthalene	U		0.00408	0.0200	1	03/04/2024 23:10	<a href="#">WG2238302</a>
Pyrene	U		0.00200	0.00600	1	03/04/2024 23:10	<a href="#">WG2238302</a>
(S) p-Terphenyl-d14	82.6			23.0-120		03/04/2024 23:10	<a href="#">WG2238302</a>
(S) Nitrobenzene-d5	93.8			14.0-149		03/04/2024 23:10	<a href="#">WG2238302</a>
(S) 2-Fluorobiphenyl	78.0			34.0-125		03/04/2024 23:10	<a href="#">WG2238302</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	35.7		1	03/07/2024 09:59	WG2239770

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.293	J J5	0.255	1.00	1	03/04/2024 20:10	WG2237435

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.08	T8	1	03/02/2024 14:10	WG2238210

Sample Narrative:  
L1710947-02 WG2238210: 9.08 at 19.7C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2000		10.0	1	03/04/2024 15:26	WG2239058

Sample Narrative:  
L1710947-02 WG2239058: at 25C

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	0.478		0.0167	0.200	1	03/06/2024 11:42	WG2239773

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	9.68		0.100	1.00	5	03/04/2024 02:01	WG2238232
Barium	121		0.152	2.50	5	03/04/2024 02:01	WG2238232
Cadmium	1.03		0.0855	1.00	5	03/04/2024 02:01	WG2238232
Copper	36.2		0.132	5.00	5	03/04/2024 02:01	WG2238232
Lead	29.0		0.0990	2.00	5	03/04/2024 20:40	WG2238232
Nickel	43.0		0.197	2.50	5	03/04/2024 02:01	WG2238232
Selenium	0.809	J	0.180	2.50	5	03/04/2024 02:01	WG2238232
Silver	U		0.0865	0.500	5	03/04/2024 02:01	WG2238232
Zinc	126		0.740	25.0	5	03/04/2024 02:01	WG2238232

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	03/06/2024 06:19	WG2240412
(S) a,a,a-Trifluorotoluene(FID)	93.7			77.0-120		03/06/2024 06:19	WG2240412

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	03/06/2024 13:20	<a href="#">WG2240693</a>
Toluene	U		0.00130	0.00500	1	03/06/2024 13:20	<a href="#">WG2240693</a>
Ethylbenzene	U		0.000737	0.00250	1	03/06/2024 13:20	<a href="#">WG2240693</a>
Xylenes, Total	U		0.000880	0.00650	1	03/06/2024 13:20	<a href="#">WG2240693</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	03/06/2024 13:20	<a href="#">WG2240693</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	03/06/2024 13:20	<a href="#">WG2240693</a>
(S) Toluene-d8	104			75.0-131		03/06/2024 13:20	<a href="#">WG2240693</a>
(S) 4-Bromofluorobenzene	99.0			67.0-138		03/06/2024 13:20	<a href="#">WG2240693</a>
(S) 1,2-Dichloroethane-d4	90.4			70.0-130		03/06/2024 13:20	<a href="#">WG2240693</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	2.28	J	1.61	4.00	1	03/04/2024 21:48	<a href="#">WG2238298</a>
C28-C36 Motor Oil Range	3.90	B J	0.274	4.00	1	03/04/2024 21:48	<a href="#">WG2238298</a>
(S) o-Terphenyl	50.9			18.0-148		03/04/2024 21:48	<a href="#">WG2238298</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
Acenaphthene	U		0.00209	0.00600	1	03/04/2024 23:27	<a href="#">WG2238302</a>
Anthracene	U		0.00230	0.00600	1	03/04/2024 23:27	<a href="#">WG2238302</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	03/04/2024 23:27	<a href="#">WG2238302</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	03/04/2024 23:27	<a href="#">WG2238302</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	03/04/2024 23:27	<a href="#">WG2238302</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	03/04/2024 23:27	<a href="#">WG2238302</a>
Chrysene	U		0.00232	0.00600	1	03/04/2024 23:27	<a href="#">WG2238302</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	03/04/2024 23:27	<a href="#">WG2238302</a>
Fluoranthene	U		0.00227	0.00600	1	03/04/2024 23:27	<a href="#">WG2238302</a>
Fluorene	U		0.00205	0.00600	1	03/04/2024 23:27	<a href="#">WG2238302</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	03/04/2024 23:27	<a href="#">WG2238302</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	03/04/2024 23:27	<a href="#">WG2238302</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	03/04/2024 23:27	<a href="#">WG2238302</a>
Naphthalene	U		0.00408	0.0200	1	03/04/2024 23:27	<a href="#">WG2238302</a>
Pyrene	U		0.00200	0.00600	1	03/04/2024 23:27	<a href="#">WG2238302</a>
(S) p-Terphenyl-d14	78.8			23.0-120		03/04/2024 23:27	<a href="#">WG2238302</a>
(S) Nitrobenzene-d5	79.5			14.0-149		03/04/2024 23:27	<a href="#">WG2238302</a>
(S) 2-Fluorobiphenyl	70.9			34.0-125		03/04/2024 23:27	<a href="#">WG2238302</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4041355-1 03/04/24 17:08

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

L1710894-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1710894-08 03/04/24 18:43 • (DUP) R4041355-7 03/04/24 18:50

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	2.75	2.40	1	13.6		20

L1710946-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1710946-02 03/04/24 19:52 • (DUP) R4041355-8 03/04/24 19:58

	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) R4041355-2 03/04/24 17:17

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

L1710351-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710351-01 03/04/24 17:23 • (MS) R4041355-3 03/04/24 17:29 • (MSD) R4041355-4 03/04/24 17:35

	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	19.6	20.2	98.1	101	1	75.0-125			2.78	20

L1710947-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710947-02 03/04/24 20:10 • (MS) R4041355-9 03/04/24 20:16 • (MSD) R4041355-10 03/04/24 20:22

	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	0.293	19.3	18.1	94.8	89.0	1	75.0-125			6.26	20





L1710351-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1710351-01 03/04/24 17:23 • (MS) R4041355-5 03/04/24 17:42

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Hexavalent Chromium	638	U	669	105	50	75.0-125	

L1710947-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1710947-02 03/04/24 20:10 • (MS) R4041355-11 03/04/24 20:29

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Hexavalent Chromium	648	0.293	882	136	50	75.0-125	<u>J5</u>

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L1709899-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1709899-01 03/02/24 14:10 • (DUP) R4040746-2 03/02/24 14:10

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.69	7.73	1	0.519		1

Sample Narrative:

OS: 7.69 at 21.5C

DUP: 7.73 at 21C

L1710947-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1710947-01 03/02/24 14:10 • (DUP) R4040746-3 03/02/24 14:10

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.88	7.89	1	0.127		1

Sample Narrative:

OS: 7.88 at 19.5C

DUP: 7.89 at 19.7C

Laboratory Control Sample (LCS)

(LCS) R4040746-1 03/02/24 14:10

	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 at 20C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4041256-1 03/04/24 15:26

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

L1710945-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1710945-03 03/04/24 15:26 • (DUP) R4041256-3 03/04/24 15:26

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2760	2800	1	1.47		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1710947-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1710947-01 03/04/24 15:26 • (DUP) R4041256-4 03/04/24 15:26

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	9280	9230	1	0.540		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4041256-2 03/04/24 15:26

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	327	330	101	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) R4042235-1 03/06/24 11:59

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) R4042235-2 03/06/24 12:02 • (LCSD) R4042235-3 03/06/24 12:04

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	1.07	1.10	107	110	80.0-120			2.71	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R4040978-1 03/04/24 01:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

<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) R4041336-2 03/04/24 20:34

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

Laboratory Control Sample (LCS)

(LCS) R4040978-2 03/04/24 01:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	103	103	80.0-120	
Barium	100	98.7	98.7	80.0-120	
Cadmium	100	103	103	80.0-120	
Copper	100	108	108	80.0-120	
Nickel	100	105	105	80.0-120	
Selenium	100	101	101	80.0-120	
Silver	20.0	21.7	108	80.0-120	
Zinc	100	100	100	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R4041336-3 03/04/24 20:37

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

L1710947-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710947-02 03/04/24 02:01 • (MS) R4040978-5 03/04/24 02:11 • (MSD) R4040978-6 03/04/24 02:14

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	9.68	109	103	99.1	93.5	5	75.0-125			5.37	20
Barium	100	121	226	235	105	113	5	75.0-125	E	E	3.80	20
Cadmium	100	1.03	113	104	112	103	5	75.0-125			8.51	20
Copper	100	36.2	152	142	116	105	5	75.0-125			7.13	20
Nickel	100	43.0	147	138	104	95.0	5	75.0-125			6.13	20
Selenium	100	0.809	110	101	109	100	5	75.0-125			8.31	20
Silver	20.0	U	23.5	21.6	117	108	5	75.0-125			8.14	20
Zinc	100	126	230	229	103	102	5	75.0-125			0.459	20

L1710947-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710947-02 03/04/24 20:40 • (MS) R4041336-6 03/04/24 20:50 • (MSD) R4041336-7 03/04/24 20:53

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	100	29.0	134	126	105	97.2	5	75.0-125			6.00	20

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

Method Blank (MB)

(MB) R4042675-2 03/06/24 00:50

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)	96.9			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4042675-1 03/05/24 23:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	5.26	105	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			104	77.0-120	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



Method Blank (MB)

(MB) R4042666-3 03/06/24 10:34

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	103			75.0-131
(S) 4-Bromofluorobenzene	96.0			67.0-138
(S) 1,2-Dichloroethane-d4	91.8			70.0-130

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

(LCS) R4042666-1 03/06/24 08:59 • (LCSD) R4042666-2 03/06/24 09:18

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	0.120	92.0	96.0	70.0-123			4.26	20
Toluene	0.125	0.120	0.128	96.0	102	75.0-121			6.45	20
Ethylbenzene	0.125	0.118	0.128	94.4	102	74.0-126			8.13	20
Xylenes, Total	0.375	0.359	0.382	95.7	102	72.0-127			6.21	20
1,2,4-Trimethylbenzene	0.125	0.126	0.135	101	108	70.0-126			6.90	20
1,3,5-Trimethylbenzene	0.125	0.128	0.139	102	111	73.0-127			8.24	20
(S) Toluene-d8				98.6	101	75.0-131				
(S) 4-Bromofluorobenzene				95.8	97.1	67.0-138				
(S) 1,2-Dichloroethane-d4				97.6	95.3	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4041485-1 03/04/24 19:51

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	0.496	⬇	0.274	4.00
(S) o-Terphenyl	64.7			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4041485-2 03/04/24 20:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	46.0	92.0	50.0-150	
(S) o-Terphenyl			79.0	18.0-148	

L1710958-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710958-06 03/05/24 00:38 • (MS) R4041485-3 03/05/24 00:51 • (MSD) R4041485-4 03/05/24 01:04

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	49.5	6.95	37.8	37.6	62.3	61.9	1	50.0-150			0.531	20
(S) o-Terphenyl					35.8	39.2		18.0-148				

1  
Cp

2  
Tc

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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) R4041684-2 03/04/24 20:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	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
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	85.0			23.0-120
(S) Nitrobenzene-d5	95.3			14.0-149
(S) 2-Fluorobiphenyl	80.0			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) R4041684-1 03/04/24 20:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0679	84.9	50.0-120	
Anthracene	0.0800	0.0739	92.4	50.0-126	
Benzo(a)anthracene	0.0800	0.0760	95.0	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0654	81.8	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0599	74.9	49.0-125	
Benzo(a)pyrene	0.0800	0.0623	77.9	42.0-120	
Chrysene	0.0800	0.0706	88.3	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0723	90.4	47.0-125	
Fluoranthene	0.0800	0.0733	91.6	49.0-129	
Fluorene	0.0800	0.0716	89.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0737	92.1	46.0-125	
1-Methylnaphthalene	0.0800	0.0746	93.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0733	91.6	50.0-120	
Naphthalene	0.0800	0.0728	91.0	50.0-120	
Pyrene	0.0800	0.0689	86.1	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4041684-1 03/04/24 20:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
(S) p-Terphenyl-d14			89.3	23.0-120	
(S) Nitrobenzene-d5			111	14.0-149	
(S) 2-Fluorobiphenyl			86.7	34.0-125	

L1710946-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1710946-02 03/04/24 22:16 • (MS) R4041684-3 03/04/24 22:34 • (MSD) R4041684-4 03/04/24 22:52

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acenaphthene	0.0776	U	0.0587	0.0580	75.6	75.1	1	14.0-127			1.20	27
Anthracene	0.0776	U	0.0599	0.0608	77.2	78.8	1	10.0-145			1.49	30
Benzo(a)anthracene	0.0776	U	0.0632	0.0632	81.4	81.9	1	10.0-139			0.000	30
Benzo(b)fluoranthene	0.0776	U	0.0594	0.0599	76.5	77.6	1	10.0-140			0.838	36
Benzo(k)fluoranthene	0.0776	U	0.0537	0.0535	69.2	69.3	1	10.0-137			0.373	31
Benzo(a)pyrene	0.0776	U	0.0562	0.0565	72.4	73.2	1	10.0-141			0.532	31
Chrysene	0.0776	U	0.0610	0.0608	78.6	78.8	1	10.0-145			0.328	30
Dibenz(a,h)anthracene	0.0776	U	0.0605	0.0602	78.0	78.0	1	10.0-132			0.497	31
Fluoranthene	0.0776	U	0.0617	0.0622	79.5	80.6	1	10.0-153			0.807	33
Fluorene	0.0776	U	0.0609	0.0608	78.5	78.8	1	11.0-130			0.164	29
Indeno(1,2,3-cd)pyrene	0.0776	U	0.0617	0.0615	79.5	79.7	1	10.0-137			0.325	32
1-Methylnaphthalene	0.0776	U	0.0641	0.0637	82.6	82.5	1	10.0-142			0.626	28
2-Methylnaphthalene	0.0776	U	0.0632	0.0628	81.4	81.3	1	10.0-137			0.635	28
Naphthalene	0.0776	U	0.0630	0.0622	81.2	80.6	1	10.0-135			1.28	27
Pyrene	0.0776	U	0.0601	0.0604	77.4	78.2	1	10.0-148			0.498	35
(S) p-Terphenyl-d14					80.3	80.7		23.0-120				
(S) Nitrobenzene-d5					92.3	93.9		14.0-149				
(S) 2-Fluorobiphenyl					79.1	78.0		34.0-125				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

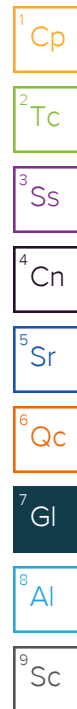
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
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.



