

REPORT OF WORK COMPLETION (ROWC)

Property:

**H26 596 Flowline (06A)
Caerus Piceance, LLC
Garfield County, Colorado
Remediation Project Number : Not Assigned**

June 28, 2024

Ensolum Project No. 09D2436014

Prepared for:

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1.0 INTRODUCTION

Ensolum, LLC (Ensolum) was contracted by Caerus Oil & Gas, LLC (Caerus) to complete soil assessment activities at the H26 596 Flowline (06A) (Site) located in Garfield County, Colorado. The soil assessment screening and sampling was conducted in accordance with Colorado Energy & Carbon Management Commission (ECMC) guidelines.

1.1 Site Description

The Site is located approximately 10.18 miles northwest of Parachute, CO within the North Parachute Ranch Field. Land use is primarily non-cropland and oil & gas operations with topography sloping to the north-northeast. The nearest surface water feature is West Fork Parachute Creek, approximately 638 feet northeast of the Site. According to data from the Division of Water Resources (DWR), there are two (2) constructed water wells within 0.5 miles of the Site. The nearest constructed water well, receipt number 3653043, is located approximately 2,038 feet east of the Site and is approximately 150 feet lower in elevation than the Site with an estimated depth to water (DTW) of 20 feet below ground (bgs). Estimated depth to groundwater is approximately 200 feet bgs.

1.2 Site Background

On March 30, 2024, the onsite operator observed a flowline release, as documented in Form 19, Document Number 403737080 and Supplemental Form 19, Document Number 403748610. The wellhead was immediately shut in to control any further release of liquid. No liquid surfaced, and the release volume is unknown. The area around the flowline was then excavated to pinpoint the point of release (POR).

2.0 FIELD ACTIVITIES

2.1 Initial Assessment

On April 17, 2024, an initial assessment of impacted soil was conducted at the point of release (POR) via hydrovac truck and hand auger. One (1) soil sample (H26-(POR)@6) was collected under the POR at a depth of approximately 6 feet bgs. Additionally, four (4) sidewall samples (H26-(NW01)@4, H26-(EW01)@4, H26-(SW01)@4, and H26-(WW01)@4) were taken from the existing excavation at a depth of 4 feet bgs. The soil samples were field screened for volatile organic compound (VOC) concentrations utilizing a photoionization detector (PID) and exhibited readings ranging from 0.0 to 7.1 ppm. A 10-point composite soil sample (H26-(STOCK01)) was also collected from the stockpile on location. The 10-point composite sample was collected by placing ten equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the sample by thoroughly mixing. The composite sample was field screened for volatile organic compound (VOC) concentrations using a PID and exhibited a reading of 0.0 ppm. All six (6) were submitted to Pace Analytical (Pace) and Elevation Diagnostics for analysis of the full Table 915-1 analytical suite with a standard turnaround request.

Additionally, between April 17 and April 22, 2024, three (3) background soil samples (NPRBG-(H26-N)@1, NPRBG-(H26-SE)@1, and NPRBG-(H26-SW)@1) were collected off location in native soil at a depth of approximately 1-foot bgs. The soil samples were field screened for VOC concentrations using a PID with all exhibiting a reading of 0.0 ppm. All three (3) soil samples were submitted to Pace for 915-1 metals and soil suitability with a standard turnaround request.

Based on the April 17, 2024, analytical results, all samples exceeded ECMC Table 915-1 protection of groundwater standards for barium and arsenic. Samples H26-(POR)@6 and H26-(SW01)@4 exceeded protection of groundwater standards for 1,3,5 trimethylbenzene. Lead exceeded protection of groundwater standards for samples H26-(STOCK01) and H26-(WW01)@4. Samples H26-(NW01)@4, H26-(EW01)@4, and H26-(WW01)@4 exceeded protection of groundwater standards for pH.

A general site location map is included as Figure 1; and the Site Map displaying the location of the Site on aerial imagery is included as Figure 2. The photographic log is included as Appendix C.

2.2 Source Water Sampling

On the H26 596 well pad, the produced fluid from the WF06A well is transported through a three-phase flowline, through an onsite meter, and then through a gathering line where it is separated at the Middle Fork Central Tank Battery. Since the POR was on the WF06A flowline, fluid from the WF06A well is representative of the fluid that was released from its flowline. On April 22, 2024, Ensolum personnel returned to the Site to collect a source fluid sample from the WF06A wellhead to characterize the Arsenic and pH content of the fluid being produced from the H26 well pad.

Sample Name	Sample Date	Sample Type	Arsenic (mg/kg)	pH
20240422- NPRSOURCE- (H26-19024)	04/22/24	Wellhead	<0.0100	6.92

The following information outlines the well and associated formation for the H26 location:

H29 596-N. PARACHUTE SENE 26 5S96W 6	Formation
H26 596 (Location ID 415372)	WMFK

It is the Operators knowledge that the most likely source for impacts around the flowline would be due to produced fluid leaks. Based on the laboratory analytical results of the produced fluid sample collected from the wellhead, which show an absence of arsenic and a pH of 6.92 in the production stream, Caerus believes that the arsenic and pH exceedance found at the POR cannot be due to oil and natural gas production activities but are rather naturally occurring background concentrations within the area.

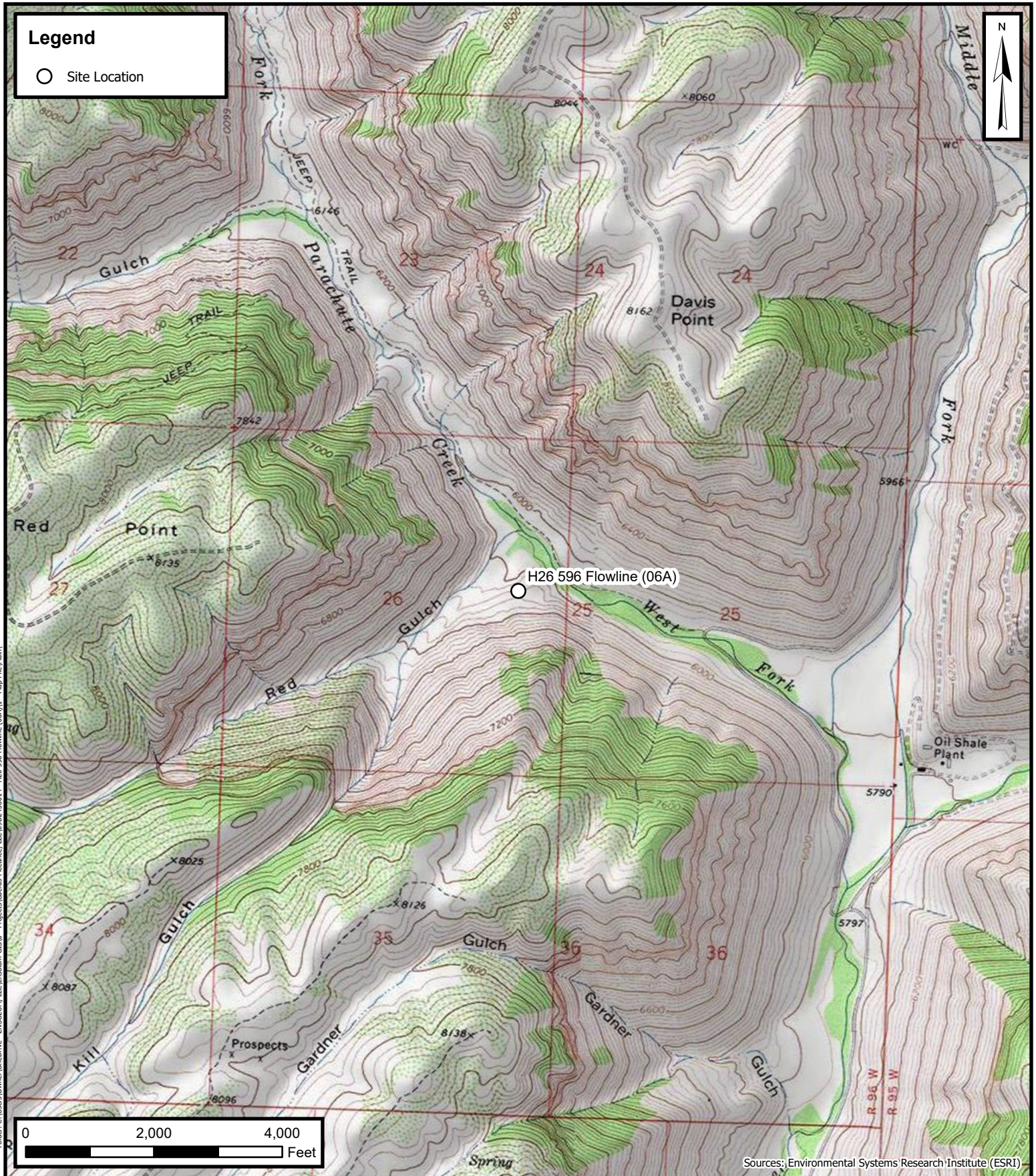
3.0 FINDINGS AND CONCLUSIONS

Based on the analytical results from the April 22, 2024, source water sampling, the produced fluid has a pH of 6.92 and an arsenic analytical result of <0.0100 mg/L. As a result, all pH and arsenic exceedances in soil samples H26-(POR)@6, H26-(NW01)@4, H26-(EW01)@4, H26-(SW01)@4, and H26-(WW01)@4 do not appear to be associated with the March 30, 2024 release.

Additional reference data drawn from background samples taken from the H26A pad, located approximately 0.10 miles north of the H26 pad, support the conclusion that all arsenic exceedances are not related to the March 30, 2024 release. Arsenic analytical results from background soil samples NPRBG-(H26A-E)@0.5, NPRBG-(H26A-N)@0.5, and NPRBG-(H26A-W)@0.5 range from 15.6 to 18.3 mg/kg, which exceed the arsenic levels within the excavation. The additional reference background data is included in Table 3.

Ensolum concludes there is no reasonable pathway for groundwater within the investigation area. According to data from the Division of Water Resources (DWR) records, two water wells are within 0.5 miles of the site and are approximately 150-200 lower in elevation than the site. Estimated depth to groundwater is approximately 200 feet. Ensolum recommends a request to the ECMC for using Table 915-1 Residential soil screening levels (RSSL) cleanup concentrations. Assuming the request to utilize the use of RSSLs is approved, all COCs are compliant with Table 915-1.

Based on the April analytical results, all soil samples were below ECMC standards when compared to RSSL concentrations. Based on the produced fluid analytical results and background sample analytical results, it appears the arsenic and pH concentrations found in soils collected from the impacted area are naturally occurring and are not associated with the produced fluids associated with this release. Based on the April 17, 2024, and April 22, 2024, analytical results, Caerus is requesting an NFA determination for this site.



Topographic Map

H26 596 Flowline (06A)
Caerus Piceance, LLC
39.586664, -108.129779
Garfield County, Colorado

Project Number: 09D2436014

FIGURE

1

Legend

○ Site Location



Site Vicinity Map

H26 596 Flowline (06A)
Caerus Piceance, LLC
39.586664, -108.129779
Garfield County, Colorado

Project Number: 09D2436014

FIGURE
2

Legend

- Soil Sample
- Excavation Extent



H26-(STOCK01)
H26-(WW01)@4
H26-(NW01)@4
H26-(POR)@6
H26-(EW01)@4
H26-(SW01)@4

0 75 150
Feet

Sources: Environmental Systems Research Institute (ESRI)



Site Map

H26 596 Flowline (06A)
Caerus Piceance, LLC
39.586664, -108.129779
Garfield County, Colorado

Project Number: 09D2436014

FIGURE

3

Legend

- ▲ Background Soil Sample
- ⊕ Groundwater Sample



Background Sample Location Map

H26 596 Flowline (06A)
Caerus Piceance, LLC
39.586664, -108.129779
Garfield County, Colorado

Project Number: 09D2436014

FIGURE

4



Additional Reference Background Data

Caerus Piceance, LLC
H26 596 Flowline (06A)
39.588220, -108.129960
Garfield County, CO

Project Number: 09D2436014

FIGURE

5



ECMC Location Name (ID): 415372	Legal Description: SENE Sec 26 T5S-R96W
Client Location Name: H26 596 Flowline (06A)	Coordinates (Lat/Long): 39.586664/-108.129779
ECMC Remediation Project(s): TBD	County: Garfield

Table 1 - Soil Sampling Summary

Soil Sample ID	Sample Type	Depth (FT BGS)	PID Reading (ppm)	Odor (Y/N)	Odor Description (If Applicable)	Staining (Y/N)	Staining Description (If Applicable)	Grab (G) or Composite (C)	Submitted for Analysis (Y/N)	Analysis or Rationale for no Submittal	Turnaround Time (TAT)
20240417-H26-(POR)@6	Point of Release	6	7.1	Y	Hydrocarbon	N	NA	G	Y	Full Table 915-1	Standard
20240417-H26-(NW01)@4	Side Wall	4	0.0	N	NA	N	NA	G	Y	Full Table 915-1	Standard
20240417-H26-(WW01)@4	Side Wall	4	0.0	N	NA	N	NA	G	Y	Full Table 915-1	Standard
20240417-H26-(SW01)@4	Side Wall	4	0.2	N	NA	N	NA	G	Y	Full Table 915-1	Standard
20240417-H26-(EW01)@4	Side Wall	4	0.0	N	NA	N	NA	G	Y	Full Table 915-1	Standard
20240417-H26-(STOCK01)	Stockpile	-	0.0	N	NA	N	NA	C	Y	Full Table 915-1	Standard
20240417-NPRBG-(H26-SW)@1	Background	1	0.0	N	NA	N	NA	G	Y	915-1 Metals and Soil Suitability	Standard
20240422-NPRSOURCE-(H26-19024)	Produced Fluid	-	-	Y	Hydrocarbon	N	NA	G	Y	915-1 Metals and pH	Standard
20240422-NPRBG-(H26-SE)@1	Background	1	0.0	N	NA	N	NA	G	Y	915-1 Metals and Soil Suitability	Standard
20240422-NPRBG-(H26-N)@1	Background	1	0.0	N	NA	N	NA	G	Y	915-1 Metals and Soil Suitability	Standard



SOIL ANALYTICAL RESULTS TABLE 2
H26 596 Flowline (06A)

Analyte 915-1 PROTECTION OF GW 915-1 RESIDENTIAL SOIL Units				GRO	DRO	ORO	Benzene	Toluene	Ethylbenzene	Total Xylenes	1,2,4-TMB	1,3,5-TMB	Acenaphthene	Anthracene	Benz(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)Pyre	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Pyrene			
				500			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.55	5.8	0.011	0.3	2.9	0.24	9	0.096	5.9	0.54	0.98	0.006	0.019	0.0038	1.3			
				500			1.2	490	5.8	58	30	27	360	1800	1.1	1.1	11	0.11	110	0.11	240	240	1.1	18	24	2	180			
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				Sample Name	Sample Type	Sample Date	Lab Report																							
20240417-H26-(EW01)@4	Side Wall	04/17/2024	L1727206	0.148	29.1	52.8	< 0.00101	< 0.00505	< 0.00253	< 0.00656	< 0.00505	< 0.00505	< 0.00600	< 0.00600	< 0.00600	0.0116	< 0.00600	< 0.00600	0.00634	< 0.00600	0.00740	< 0.00600	< 0.00600	< 0.0200	< 0.0200	< 0.0200	< 0.00600			
20240417-H26-(NW01)@4	Side Wall	04/17/2024	L1727206	0.111	45.8	83.9	< 0.00100	< 0.00500	< 0.00250	< 0.00650	< 0.00500	< 0.00500	< 0.00600	< 0.00600	0.00710	0.0164	< 0.00600	< 0.00600	0.00843	< 0.00600	0.0105	< 0.00600	< 0.00600	< 0.0200	< 0.0200	< 0.0200	< 0.00600			
20240417-H26-(POR)@6	POR	04/17/2024	L1727206	0.392	27.3	48.2	0.00143	0.00823	< 0.00250	0.0164	< 0.00500	0.0371	< 0.00600	< 0.00600	< 0.00600	0.0117	< 0.00600	< 0.00600	0.00651	< 0.00600	0.00829	< 0.00600	< 0.00600	< 0.0200	< 0.0200	< 0.0200	< 0.00600			
20240417-H26-(STOCK01)	Stockpile	04/17/2024	L1727206	0.104	24.4	36.6	< 0.00101	< 0.00505	< 0.00253	< 0.00656	< 0.00505	< 0.00505	< 0.00600	< 0.00600	< 0.00600	0.00849	< 0.00600	< 0.00600	< 0.00600	< 0.00600	< 0.00600	< 0.00600	< 0.00600	< 0.0200	< 0.0200	< 0.0200	< 0.00600			
20240417-H26-(SW01)@4	Side Wall	04/17/2024	L1727206	0.135	23.1	40.7	0.00138	0.00860	< 0.00250	0.0141	< 0.00500	0.0232	< 0.00600	< 0.00600	< 0.00600	0.0148	< 0.00600	< 0.00600	0.00741	< 0.00600	0.00987	< 0.00600	< 0.00600	< 0.0200	< 0.0200	< 0.0200	< 0.00600			
20240417-H26-(WW01)@4	Side Wall	04/17/2024	L1727206	0.124	17.1	33.7	< 0.00101	< 0.00505	< 0.00253	< 0.00656	< 0.00505	< 0.00505	< 0.00600	< 0.00600	< 0.00600	0.0103	< 0.00600	< 0.00600	< 0.00600	< 0.00600	0.00761	< 0.00600	< 0.00600	< 0.0200	< 0.0200	< 0.0200	< 0.00600			

Notes:
Bold with silver highlight: Exceeds RSSLs
Bold with blue highlight: Exceeds POGs
"<" (as in, less than laboratory reporting detection limit)



SOIL ANALYTICAL RESULTS TABLE 3
H26 596 Flowline (06A)

Analyte				EC	SAR	pH	Boron	Arsenic	Barium	Cadmium	Chromium VI	Copper	Lead	Nickel	Selenium	Silver	Zinc
915-1 PROTECTION OF GW				4	6	8.3	2	0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
915-1 RESIDENTIAL SOIL				4	6	8.3	2	0.68	15000	71	0.3	3100	400	1500	390	390	23000
Units				mmhos/cm	No Unit	SU	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample Name	Sample Type	Sample Date	Lab Report														
20240417-H26-(EW01)@4	Side Wall	04/17/2024	L1727206	0.454	0.639	8.31	0.494	13.3	973	< 1.00	< 1.00	22.9	13.2	16.7	< 2.50	< 0.500	53.1
20240417-H26-(NW01)@4	Side Wall	04/17/2024	L1727206	0.504	1.03	8.33	0.447	13.4	833	< 1.00	< 1.00	23.1	13.7	19.2	< 2.50	< 0.500	53.1
20240417-H26-(POR)@6	POR	04/17/2024	L1727206	0.412	0.759	8.21	0.687	13.6	1230	< 1.00	< 1.00	26.5	13.0	17.6	< 2.50	< 0.500	54.3
20240417-H26-(STOCK01)	Stockpile	04/17/2024	L1727206	0.348	0.566	8.25	0.658	17.7	1070	< 1.00	< 1.00	29.4	16.5	19.8	< 2.50	< 0.500	58.1
20240417-H26-(SW01)@4	Side Wall	04/17/2024	L1727206	0.419	0.434	8.27	0.281	13.2	1100	< 1.00	< 1.00	26.6	13.8	18.7	< 2.50	< 0.500	56.2
20240417-H26-(WW01)@4	Side Wall	04/17/2024	L1727206	0.455	0.755	8.36	0.540	16.8	874	< 1.00	< 1.00	26.3	15.9	19.3	< 2.50	< 0.500	60.5
20240417-NPRBG-(H26-SW)@1	Background	04/17/2024	L1727206	0.301	0.0754	7.65	< 0.200	12.5	262	< 1.00	< 1.00	17.5	15.2	17.0	< 2.50	< 0.500	52.6
20240422-NPRBG-(H26-SE)@1	Background	04/22/2024	L1728558	0.207	0.151	7.93	0.803	10.3	315	< 1.00	< 1.00	19.1	14.2	16.8	< 2.50	< 0.500	65.4
20240422-NPRBG-(H26-N)@1	Background	04/22/2024	L1728558	0.155	0.579	8.17	0.430	11.3	176	< 1.00	< 1.00	12.8	10.3	11.9	< 2.50	< 0.500	33.4
20240430-NPRBG-(H26A-E)@0.5	Background	04/30/2024	L1731433	0.353	0.0892	7.71	0.922	17.9	314	< 1.00	< 1.00	22.7	16.9	17.2	< 2.50	< 0.500	65.7
20240430-NPRBG-(H26A-N)@0.5	Background	04/30/2024	L1731433	1.66	0.139	6.94	0.615	18.3	238	< 1.00	< 1.00	14.9	10.7	12.2	< 2.50	< 0.500	58.7
20240430-NPRBG-(H26A-S)@0.5	Background	04/30/2024	L1731433	0.941	0.208	7.68	<0.200	8.45	221	< 1.00	< 1.00	12.9	7.45	10	< 2.50	< 0.500	31.1
20240430-NPRBG-(H26A-W)@0.5	Background	04/30/2024	L1731433	0.331	0.407	8.02	0.451	15.6	285	< 1.00	< 1.00	19.2	18.3	14.3	< 2.50	< 0.500	38.4

Notes:
Bold with silver highlight: Exceeds RSSLs
Bold with blue highlight: Exceeds POGs
"<" (as in, less than laboratory reporting detection limit)




SOURCE FLUID ANALYTICAL RESULTS TABLE
H26 596 Flowline (06A)


Analyte 915-1 WATER				Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1,2,4-TMB	1,3,5-TMB	TDS	TSS	Arsenic	Barium	Cadmium	Copper	Lead	Methanol	Nickel	pH	Selenium	Silver	Sulfide	Zinc
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L
				Units																				
Sample Name	Sample	Sample	Lab Report																					
20240422-NPRSOURCE-(H26-190)	Source Fluid	04/22/2024	L1728561										< 0.0100	40.8	< 0.00500	< 0.0250	< 0.0100		< 0.0100	6.92	< 0.0100	< 0.0100		< 0.125


Notes:


Bold with blue highlight: Exceeds Water Standards


"<" (as in, less than laboratory reporting detection limit)


PHOTOGRAPHIC LOG		
Caerus Piceance, LLC	H26 596 Flowline (06A) Garfield County, Colorado	Sample ID: 20240417-H26-(POR)@6
Date: April 17, 2024	Photo No. 1 – POR, EW, SW	Coordinates Lat/Long: 39.586698/ -108.129836
<div> <div> <p> Date & Time: Wed, Apr 17, 2024 at 11:22:58 MDT Position: +039.586698° / -108.129836° (±13.7ft) Altitude: 6076ft (±13.4ft) Datum: WGS-84 Azimuth/Bearing: 358° N02W 6364mils True (±14°) Elevation Angle: -25.8° Horizon Angle: +02.6° Zoom: 0.5X Excavation Extent </p> </div>  </div>		
View facing southeast of point of release (POR).		


PHOTOGRAPHIC LOG		
Caerus Piceance, LLC	H26 596 Flowline (06A) Garfield County, Colorado	Sample ID: 20240417-H26-(STOCK01)
Date: April 17, 2024	Photo No. 2 – STOCK01	Coordinates Lat/Long: 39.586807/ -108.129734
<div> <div> <p> Date & Time: Wed, Apr 17, 2024 at 11:40:34 MDT Position: +039.586807° / -108.129734° (±12.1ft) Altitude: 6091ft (±19.7ft) Datum: WGS-84 Azimuth/Bearing: 188° S08W 3342mils True (±14°) Elevation Angle: -10.7° Horizon Angle: +00.2° Zoom: 0.5X Stockpile </p> </div>  </div>		
View facing west of stockpile.		

PHOTOGRAPHIC LOG		
Caerus Piceance, LLC	H26 596 Flowline (06A) Garfield County, Colorado	Sample ID: 20240417-NPRBG-(H26-SW)@1
Date: April 17, 2024	Photo No. 3 – H26-SW	Coordinates Lat/Long: 39.586185/ -108.130825
<div> <div> Date & Time: Wed, Apr 17, 2024 at 13:01:18 MDT Position: +039.586185° / -108.130825° (±15.5ft) Altitude: 6133ft (±11.1ft) Datum: WGS-84 Azimuth/Bearing: 211° S31W 3751mils True (±13°) Elevation Angle: -14.3° Horizon Angle: -00.5° Zoom: 0.5X NPRBG-(H26-SW) </div>  </div>		
View facing southwest of background sample H26-SW.		

PHOTOGRAPHIC LOG		
Caerus Piceance, LLC	H26 596 Flowline (06A) Garfield County, Colorado	Sample ID: 20240417-H26-(NW01)@4
Date: April 17, 2024	Photo No. 4 – NW01	Coordinates Lat/Long: 39.586661/ -108.129871
<div> <div> Date & Time: Wed, Apr 17, 2024 at 13:35:12 MDT Position: +039.586661° / -108.129871° (±15.7ft) Altitude: 6097ft (±10.9ft) Datum: WGS-84 Azimuth/Bearing: 299° N61W 5316mils True (±13°) Elevation Angle: -18.2° Horizon Angle: +03.3° Zoom: 0.5X Excavation Extent </div>  </div>		
View facing northeast of the excavation extent.		

PHOTOGRAPHIC LOG		
Caerus Piceance, LLC	H26 596 Flowline (06A) Garfield County, Colorado	Sample ID: 20240422-NPRSOURCE-(H26-19024)
Date: April 22, 2024	Photo No. 1 – Well Sign	Coordinates Lat/Long: 39.586726/-108.130314
<div> <div> <p>Date & Time: Mon, Apr 22, 2024 at 10:14:54 MDT Position: +039.586726° / -108.130314° (±57.6ft) Altitude: 6137ft (±105.0ft) Datum: WGS-84 Azimuth/Bearing: 043° N43E 0764mils True (±12°) Elevation Angle: -29.3° Horizon Angle: +02.0° Zoom: 0.5X H26 Produced Fluid Sample Sign</p> </div>  </div>		
View facing east of the well sign.		

PHOTOGRAPHIC LOG		
Caerus Piceance, LLC	H26 596 Flowline (06A) Garfield County, Colorado	Sample ID: 20240422-NPRSOURCE-(H26-19024)
Date: April 22, 2024	Photo No. 2 – H26-19024	Coordinates Lat/Long: 39.58586649/-108.129793
<div> <div> <p>Date & Time: Mon, Apr 22, 2024 at 10:38:07 MDT Position: +039.586649° / -108.129793° (±15.1ft) Altitude: 6090ft (±11.7ft) Datum: WGS-84 Azimuth/Bearing: 347° N13W 6169mils True (±13°) Elevation Angle: -19.9° Horizon Angle: +01.8° Zoom: 0.5X H26 Produced Fluid Sample</p> </div>  </div>		
View facing north of 06A wellhead.		

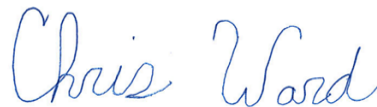
PHOTOGRAPHIC LOG		
Caerus Piceance, LLC	H26 596 Flowline (06A) Garfield County, Colorado	Sample ID: 20240422-NPRBG-(H26-N)@1
Date: April 22, 2024	Photo No. 3 – H26-N	Coordinates Lat/Long: 39.587981/-108.129601
<div><div><div>Date & Time: Mon, Apr 22, 2024 at 10:53:34 MDt Position: +039.587981° / -108.129601° (±15.6ft) Altitude: 5983ft (±11.0ft) Datum: WGS-84 Azimuth/Bearing: 210° S90W 3733mils True (±11°) Elevation Angle: -13.8° Horizon Angle: +06.6° Zoom: 0.5X NPRBG-(H26-N)</div></div><div>View facing southwest of background sample H26-N.</div></div>		

Caerus Oil and Gas

Sample Delivery Group: L1727206
Samples Received: 04/18/2024
Project Number:
Description: H26 596 Flowline (06A)

Report To: Jake J. / Brett M. / Blair R. / Andy V.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
Project Manager

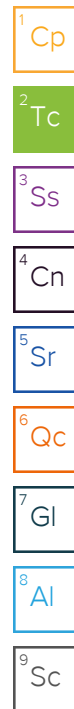
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory 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.com¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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SAMPLE SUMMARY

20240417-H26-(POR)@6 L1727206-05 Solid

Collected by
MR / GG

Collected date/time
04/17/24 11:25

Received date/time
04/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2271336	1	04/22/24 16:42	04/22/24 16:42	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2268647	1	04/19/24 11:53	04/22/24 12:43	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2270291	1	04/19/24 08:28	04/19/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2270855	1	04/19/24 19:14	04/21/24 13:48	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2272571	1	04/24/24 10:22	04/24/24 12:57	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2270379	5	04/20/24 13:57	04/23/24 20:36	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2272910	1	04/22/24 20:59	04/24/24 01:17	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2272727	1	04/22/24 20:59	04/24/24 11:27	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2272138	1	04/23/24 06:08	04/23/24 12:22	JSS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2271403	1	04/23/24 05:55	04/23/24 17:39	ALM	Mt. Juliet, TN

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

20240417-H26-(NW01)@4 L1727206-06 Solid

Collected by
MR / GG

Collected date/time
04/17/24 11:30

Received date/time
04/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2271330	1	04/22/24 09:43	04/22/24 09:43	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2268647	1	04/19/24 11:53	04/22/24 12:49	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2270291	1	04/19/24 08:28	04/19/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2270855	1	04/19/24 19:14	04/21/24 13:48	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2271332	1	04/21/24 08:09	04/21/24 16:32	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2270379	5	04/20/24 13:57	04/23/24 20:39	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2272910	1	04/22/24 20:59	04/24/24 01:39	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2272727	1	04/22/24 20:59	04/24/24 11:46	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2272138	1	04/23/24 06:08	04/23/24 13:00	JSS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2271403	1	04/23/24 05:55	04/23/24 17:57	ALM	Mt. Juliet, TN

7
Gl

8
Al

9
Sc

20240417-H26-(WW01)@4 L1727206-07 Solid

Collected by
MR / GG

Collected date/time
04/17/24 11:35

Received date/time
04/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2271330	1	04/22/24 09:45	04/22/24 09:45	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2268647	1	04/19/24 11:53	04/22/24 12:55	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2270291	1	04/19/24 08:28	04/19/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2270855	1	04/19/24 19:14	04/21/24 13:48	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2271332	1	04/21/24 08:09	04/21/24 16:33	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2270379	5	04/20/24 13:57	04/23/24 20:50	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2272910	1	04/22/24 20:59	04/24/24 02:02	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2272727	1.01	04/22/24 20:59	04/24/24 12:05	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2272138	1	04/23/24 06:08	04/23/24 11:56	JSS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2271403	1	04/23/24 05:55	04/23/24 18:15	ALM	Mt. Juliet, TN

Collected by
MR / GG

Collected date/time
04/17/24 11:40

Received date/time
04/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2271330	1	04/22/24 09:47	04/22/24 09:47	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2268647	1	04/19/24 11:53	04/22/24 13:01	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2270291	1	04/19/24 08:28	04/19/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2270855	1	04/19/24 19:14	04/21/24 13:48	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2271332	1	04/21/24 08:09	04/21/24 16:38	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2270379	5	04/20/24 13:57	04/23/24 20:53	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2272910	1.01	04/22/24 20:59	04/24/24 02:25	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2272727	1	04/22/24 20:59	04/24/24 12:24	JBE	Mt. Juliet, TN

SAMPLE SUMMARY

20240417-H26-(SW01)@4 L1727206-08 Solid

Collected by
MR / GG

Collected date/time
04/17/24 11:40

Received date/time
04/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2272138	1	04/23/24 06:08	04/23/24 12:09	JSS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2271403	1	04/23/24 05:55	04/23/24 18:33	ALM	Mt. Juliet, TN

20240417-H26-(EW01)@4 L1727206-09 Solid

Collected by
MR / GG

Collected date/time
04/17/24 11:45

Received date/time
04/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2271330	1	04/22/24 09:51	04/22/24 09:51	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2268647	1	04/19/24 11:53	04/22/24 13:26	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2270291	1	04/19/24 08:28	04/19/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2270855	1	04/19/24 19:14	04/21/24 13:48	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2271332	1	04/21/24 08:09	04/21/24 16:40	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2270379	5	04/20/24 13:57	04/23/24 20:57	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2272910	1	04/22/24 20:59	04/24/24 02:48	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2272727	1.01	04/22/24 20:59	04/24/24 12:44	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2272138	1	04/23/24 06:08	04/23/24 12:35	JSS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2272029	1	04/22/24 19:45	04/23/24 19:26	ALM	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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.



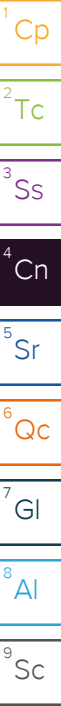
Chris Ward
Project Manager

Report Revision History

Level II Report - Version 1: 04/25/24 15:39
Level II Report - Version 2: 04/29/24 12:05
Level II Report - Version 3: 04/29/24 12:53
Level II Report - Version 4: 04/29/24 13:16

Project Narrative

Version C



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.759		1	04/22/2024 16:42	WG2271336

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	04/22/2024 12:43	WG2268647

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.21	T8	1	04/19/2024 22:10	WG2270291

Sample Narrative:
L1727206-05 WG2270291: 8.21 at 20C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	412		10.0	1	04/21/2024 13:48	WG2270855

Sample Narrative:
L1727206-05 WG2270855: at 25C

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.687		0.200	1	04/24/2024 12:57	WG2272571

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	13.6		1.00	5	04/23/2024 20:36	WG2270379
Barium	1230		2.50	5	04/23/2024 20:36	WG2270379
Cadmium	ND		1.00	5	04/23/2024 20:36	WG2270379
Copper	26.5		5.00	5	04/23/2024 20:36	WG2270379
Lead	13.0		2.00	5	04/23/2024 20:36	WG2270379
Nickel	17.6		2.50	5	04/23/2024 20:36	WG2270379
Selenium	ND		2.50	5	04/23/2024 20:36	WG2270379
Silver	ND		0.500	5	04/23/2024 20:36	WG2270379
Zinc	54.3		25.0	5	04/23/2024 20:36	WG2270379

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.392	B	0.100	1	04/24/2024 01:17	WG2272910
(S) a,a,a-Trifluorotoluene(FID)	91.1		77.0-120		04/24/2024 01:17	WG2272910

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00143		0.00100	1	04/24/2024 11:27	WG2272727
Toluene	0.00823		0.00500	1	04/24/2024 11:27	WG2272727
Ethylbenzene	ND		0.00250	1	04/24/2024 11:27	WG2272727
Xylenes, Total	0.0164		0.00650	1	04/24/2024 11:27	WG2272727
1,2,4-Trimethylbenzene	ND		0.00500	1	04/24/2024 11:27	WG2272727
1,3,5-Trimethylbenzene	0.0371		0.00500	1	04/24/2024 11:27	WG2272727
(S) Toluene-d8	106		75.0-131		04/24/2024 11:27	WG2272727
(S) 4-Bromofluorobenzene	101		67.0-138		04/24/2024 11:27	WG2272727
(S) 1,2-Dichloroethane-d4	89.0		70.0-130		04/24/2024 11:27	WG2272727

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	27.3		4.00	1	04/23/2024 12:22	WG2272138
C28-C36 Motor Oil Range	48.2		4.00	1	04/23/2024 12:22	WG2272138
(S) o-Terphenyl	50.2		18.0-148		04/23/2024 12:22	WG2272138

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	04/23/2024 17:39	WG2271403
Anthracene	ND		0.00600	1	04/23/2024 17:39	WG2271403
Benzo(a)anthracene	ND		0.00600	1	04/23/2024 17:39	WG2271403
Benzo(b)fluoranthene	0.0117		0.00600	1	04/23/2024 17:39	WG2271403
Benzo(k)fluoranthene	ND		0.00600	1	04/23/2024 17:39	WG2271403
Benzo(a)pyrene	ND		0.00600	1	04/23/2024 17:39	WG2271403
Chrysene	0.00651		0.00600	1	04/23/2024 17:39	WG2271403
Dibenz(a,h)anthracene	ND		0.00600	1	04/23/2024 17:39	WG2271403
Fluoranthene	0.00829		0.00600	1	04/23/2024 17:39	WG2271403
Fluorene	ND		0.00600	1	04/23/2024 17:39	WG2271403
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	04/23/2024 17:39	WG2271403
1-Methylnaphthalene	ND		0.0200	1	04/23/2024 17:39	WG2271403
2-Methylnaphthalene	ND		0.0200	1	04/23/2024 17:39	WG2271403
Naphthalene	ND		0.0200	1	04/23/2024 17:39	WG2271403
Pyrene	ND		0.00600	1	04/23/2024 17:39	WG2271403
(S) p-Terphenyl-d14	71.6		23.0-120		04/23/2024 17:39	WG2271403
(S) Nitrobenzene-d5	77.9		14.0-149		04/23/2024 17:39	WG2271403
(S) 2-Fluorobiphenyl	79.0		34.0-125		04/23/2024 17:39	WG2271403

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.03		1	04/22/2024 09:43	WG2271330

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	04/22/2024 12:49	WG2268647

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.33	T8	1	04/19/2024 22:10	WG2270291

Sample Narrative:
L1727206-06 WG2270291: 8.33 at 20.4C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	504		10.0	1	04/21/2024 13:48	WG2270855

Sample Narrative:
L1727206-06 WG2270855: at 25C

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.447		0.200	1	04/21/2024 16:32	WG2271332

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	13.4		1.00	5	04/23/2024 20:39	WG2270379
Barium	833		2.50	5	04/23/2024 20:39	WG2270379
Cadmium	ND		1.00	5	04/23/2024 20:39	WG2270379
Copper	23.1		5.00	5	04/23/2024 20:39	WG2270379
Lead	13.7		2.00	5	04/23/2024 20:39	WG2270379
Nickel	19.2		2.50	5	04/23/2024 20:39	WG2270379
Selenium	ND		2.50	5	04/23/2024 20:39	WG2270379
Silver	ND		0.500	5	04/23/2024 20:39	WG2270379
Zinc	53.1		25.0	5	04/23/2024 20:39	WG2270379

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.111	B	0.100	1	04/24/2024 01:39	WG2272910
(S) a,a,a-Trifluorotoluene(FID)	90.2		77.0-120		04/24/2024 01:39	WG2272910

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	04/24/2024 11:46	WG2272727
Toluene	ND		0.00500	1	04/24/2024 11:46	WG2272727
Ethylbenzene	ND		0.00250	1	04/24/2024 11:46	WG2272727
Xylenes, Total	ND		0.00650	1	04/24/2024 11:46	WG2272727
1,2,4-Trimethylbenzene	ND		0.00500	1	04/24/2024 11:46	WG2272727
1,3,5-Trimethylbenzene	ND		0.00500	1	04/24/2024 11:46	WG2272727
(S) Toluene-d8	108		75.0-131		04/24/2024 11:46	WG2272727
(S) 4-Bromofluorobenzene	102		67.0-138		04/24/2024 11:46	WG2272727
(S) 1,2-Dichloroethane-d4	89.9		70.0-130		04/24/2024 11:46	WG2272727

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	45.8		4.00	1	04/23/2024 13:00	WG2272138
C28-C36 Motor Oil Range	83.9		4.00	1	04/23/2024 13:00	WG2272138
(S) o-Terphenyl	48.0		18.0-148		04/23/2024 13:00	WG2272138

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	04/23/2024 17:57	WG2271403
Anthracene	ND		0.00600	1	04/23/2024 17:57	WG2271403
Benzo(a)anthracene	0.00710		0.00600	1	04/23/2024 17:57	WG2271403
Benzo(b)fluoranthene	0.0164		0.00600	1	04/23/2024 17:57	WG2271403
Benzo(k)fluoranthene	ND		0.00600	1	04/23/2024 17:57	WG2271403
Benzo(a)pyrene	ND		0.00600	1	04/23/2024 17:57	WG2271403
Chrysene	0.00843		0.00600	1	04/23/2024 17:57	WG2271403
Dibenz(a,h)anthracene	ND		0.00600	1	04/23/2024 17:57	WG2271403
Fluoranthene	0.0105		0.00600	1	04/23/2024 17:57	WG2271403
Fluorene	ND		0.00600	1	04/23/2024 17:57	WG2271403
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	04/23/2024 17:57	WG2271403
1-Methylnaphthalene	ND		0.0200	1	04/23/2024 17:57	WG2271403
2-Methylnaphthalene	ND		0.0200	1	04/23/2024 17:57	WG2271403
Naphthalene	ND		0.0200	1	04/23/2024 17:57	WG2271403
Pyrene	ND		0.00600	1	04/23/2024 17:57	WG2271403
(S) p-Terphenyl-d14	73.6		23.0-120		04/23/2024 17:57	WG2271403
(S) Nitrobenzene-d5	80.4		14.0-149		04/23/2024 17:57	WG2271403
(S) 2-Fluorobiphenyl	78.4		34.0-125		04/23/2024 17:57	WG2271403

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.755		1	04/22/2024 09:45	WG2271330

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	04/22/2024 12:55	WG2268647

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.36	T8	1	04/19/2024 22:10	WG2270291

Sample Narrative:
L1727206-07 WG2270291: 8.36 at 20.5C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	455		10.0	1	04/21/2024 13:48	WG2270855

Sample Narrative:
L1727206-07 WG2270855: at 25C

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.540		0.200	1	04/21/2024 16:33	WG2271332

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	16.8		1.00	5	04/23/2024 20:50	WG2270379
Barium	874		2.50	5	04/23/2024 20:50	WG2270379
Cadmium	ND		1.00	5	04/23/2024 20:50	WG2270379
Copper	26.3		5.00	5	04/23/2024 20:50	WG2270379
Lead	15.9		2.00	5	04/23/2024 20:50	WG2270379
Nickel	19.3		2.50	5	04/23/2024 20:50	WG2270379
Selenium	ND		2.50	5	04/23/2024 20:50	WG2270379
Silver	ND		0.500	5	04/23/2024 20:50	WG2270379
Zinc	60.5		25.0	5	04/23/2024 20:50	WG2270379

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.124	B	0.100	1	04/24/2024 02:02	WG2272910
(S) a,a,a-Trifluorotoluene(FID)	92.1		77.0-120		04/24/2024 02:02	WG2272910

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00101	1.01	04/24/2024 12:05	WG2272727
Toluene	ND		0.00505	1.01	04/24/2024 12:05	WG2272727
Ethylbenzene	ND		0.00253	1.01	04/24/2024 12:05	WG2272727
Xylenes, Total	ND		0.00656	1.01	04/24/2024 12:05	WG2272727
1,2,4-Trimethylbenzene	ND		0.00505	1.01	04/24/2024 12:05	WG2272727
1,3,5-Trimethylbenzene	ND		0.00505	1.01	04/24/2024 12:05	WG2272727
(S) Toluene-d8	108		75.0-131		04/24/2024 12:05	WG2272727
(S) 4-Bromofluorobenzene	102		67.0-138		04/24/2024 12:05	WG2272727
(S) 1,2-Dichloroethane-d4	93.8		70.0-130		04/24/2024 12:05	WG2272727

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	17.1		4.00	1	04/23/2024 11:56	WG2272138
C28-C36 Motor Oil Range	33.7		4.00	1	04/23/2024 11:56	WG2272138
(S) o-Terphenyl	45.0		18.0-148		04/23/2024 11:56	WG2272138

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	04/23/2024 18:15	WG2271403
Anthracene	ND		0.00600	1	04/23/2024 18:15	WG2271403
Benzo(a)anthracene	ND		0.00600	1	04/23/2024 18:15	WG2271403
Benzo(b)fluoranthene	0.0103		0.00600	1	04/23/2024 18:15	WG2271403
Benzo(k)fluoranthene	ND		0.00600	1	04/23/2024 18:15	WG2271403
Benzo(a)pyrene	ND		0.00600	1	04/23/2024 18:15	WG2271403
Chrysene	ND		0.00600	1	04/23/2024 18:15	WG2271403
Dibenz(a,h)anthracene	ND		0.00600	1	04/23/2024 18:15	WG2271403
Fluoranthene	0.00761		0.00600	1	04/23/2024 18:15	WG2271403
Fluorene	ND		0.00600	1	04/23/2024 18:15	WG2271403
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	04/23/2024 18:15	WG2271403
1-Methylnaphthalene	ND		0.0200	1	04/23/2024 18:15	WG2271403
2-Methylnaphthalene	ND		0.0200	1	04/23/2024 18:15	WG2271403
Naphthalene	ND		0.0200	1	04/23/2024 18:15	WG2271403
Pyrene	ND		0.00600	1	04/23/2024 18:15	WG2271403
(S) p-Terphenyl-d14	76.8		23.0-120		04/23/2024 18:15	WG2271403
(S) Nitrobenzene-d5	88.1		14.0-149		04/23/2024 18:15	WG2271403
(S) 2-Fluorobiphenyl	86.7		34.0-125		04/23/2024 18:15	WG2271403

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.434		1	04/22/2024 09:47	WG2271330

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	04/22/2024 13:01	WG2268647

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.27	T8	1	04/19/2024 22:10	WG2270291

Sample Narrative:
L1727206-08 WG2270291: 8.27 at 20.4C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	419		10.0	1	04/21/2024 13:48	WG2270855

Sample Narrative:
L1727206-08 WG2270855: at 25C

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.281		0.200	1	04/21/2024 16:38	WG2271332

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	13.2		1.00	5	04/23/2024 20:53	WG2270379
Barium	1100		2.50	5	04/23/2024 20:53	WG2270379
Cadmium	ND		1.00	5	04/23/2024 20:53	WG2270379
Copper	26.6		5.00	5	04/23/2024 20:53	WG2270379
Lead	13.8		2.00	5	04/23/2024 20:53	WG2270379
Nickel	18.7		2.50	5	04/23/2024 20:53	WG2270379
Selenium	ND		2.50	5	04/23/2024 20:53	WG2270379
Silver	ND		0.500	5	04/23/2024 20:53	WG2270379
Zinc	56.2		25.0	5	04/23/2024 20:53	WG2270379

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.135	B	0.101	1.01	04/24/2024 02:25	WG2272910
(S) a,a,a-Trifluorotoluene(FID)	91.1		77.0-120		04/24/2024 02:25	WG2272910

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00138		0.00100	1	04/24/2024 12:24	WG2272727
Toluene	0.00860		0.00500	1	04/24/2024 12:24	WG2272727
Ethylbenzene	ND		0.00250	1	04/24/2024 12:24	WG2272727
Xylenes, Total	0.0141		0.00650	1	04/24/2024 12:24	WG2272727
1,2,4-Trimethylbenzene	ND		0.00500	1	04/24/2024 12:24	WG2272727
1,3,5-Trimethylbenzene	0.0232		0.00500	1	04/24/2024 12:24	WG2272727
(S) Toluene-d8	108		75.0-131		04/24/2024 12:24	WG2272727
(S) 4-Bromofluorobenzene	102		67.0-138		04/24/2024 12:24	WG2272727
(S) 1,2-Dichloroethane-d4	88.4		70.0-130		04/24/2024 12:24	WG2272727

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	23.1		4.00	1	04/23/2024 12:09	WG2272138
C28-C36 Motor Oil Range	40.7		4.00	1	04/23/2024 12:09	WG2272138
(S) o-Terphenyl	51.1		18.0-148		04/23/2024 12:09	WG2272138

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	04/23/2024 18:33	WG2271403
Anthracene	ND		0.00600	1	04/23/2024 18:33	WG2271403
Benzo(a)anthracene	ND		0.00600	1	04/23/2024 18:33	WG2271403
Benzo(b)fluoranthene	0.0148		0.00600	1	04/23/2024 18:33	WG2271403
Benzo(k)fluoranthene	ND		0.00600	1	04/23/2024 18:33	WG2271403
Benzo(a)pyrene	ND		0.00600	1	04/23/2024 18:33	WG2271403
Chrysene	0.00741		0.00600	1	04/23/2024 18:33	WG2271403
Dibenz(a,h)anthracene	ND		0.00600	1	04/23/2024 18:33	WG2271403
Fluoranthene	0.00987		0.00600	1	04/23/2024 18:33	WG2271403
Fluorene	ND		0.00600	1	04/23/2024 18:33	WG2271403
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	04/23/2024 18:33	WG2271403
1-Methylnaphthalene	ND		0.0200	1	04/23/2024 18:33	WG2271403
2-Methylnaphthalene	ND		0.0200	1	04/23/2024 18:33	WG2271403
Naphthalene	ND		0.0200	1	04/23/2024 18:33	WG2271403
Pyrene	ND		0.00600	1	04/23/2024 18:33	WG2271403
(S) p-Terphenyl-d14	75.3		23.0-120		04/23/2024 18:33	WG2271403
(S) Nitrobenzene-d5	81.4		14.0-149		04/23/2024 18:33	WG2271403
(S) 2-Fluorobiphenyl	81.4		34.0-125		04/23/2024 18:33	WG2271403

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.639		1	04/22/2024 09:51	WG2271330

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	04/22/2024 13:26	WG2268647

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.31	T8	1	04/19/2024 22:10	WG2270291

Sample Narrative:

L1727206-09 WG2270291: 8.31 at 20.2C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	454		10.0	1	04/21/2024 13:48	WG2270855

Sample Narrative:

L1727206-09 WG2270855: at 25C

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.494		0.200	1	04/21/2024 16:40	WG2271332

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	13.3		1.00	5	04/23/2024 20:57	WG2270379
Barium	973		2.50	5	04/23/2024 20:57	WG2270379
Cadmium	ND		1.00	5	04/23/2024 20:57	WG2270379
Copper	22.9		5.00	5	04/23/2024 20:57	WG2270379
Lead	13.2		2.00	5	04/23/2024 20:57	WG2270379
Nickel	16.7		2.50	5	04/23/2024 20:57	WG2270379
Selenium	ND		2.50	5	04/23/2024 20:57	WG2270379
Silver	ND		0.500	5	04/23/2024 20:57	WG2270379
Zinc	53.1		25.0	5	04/23/2024 20:57	WG2270379

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.148	B	0.100	1	04/24/2024 02:48	WG2272910
(S) a,a,a-Trifluorotoluene(FID)	91.0		77.0-120		04/24/2024 02:48	WG2272910

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00101	1.01	04/24/2024 12:44	WG2272727
Toluene	ND		0.00505	1.01	04/24/2024 12:44	WG2272727
Ethylbenzene	ND		0.00253	1.01	04/24/2024 12:44	WG2272727
Xylenes, Total	ND		0.00656	1.01	04/24/2024 12:44	WG2272727
1,2,4-Trimethylbenzene	ND		0.00505	1.01	04/24/2024 12:44	WG2272727
1,3,5-Trimethylbenzene	ND		0.00505	1.01	04/24/2024 12:44	WG2272727
(S) Toluene-d8	108		75.0-131		04/24/2024 12:44	WG2272727
(S) 4-Bromofluorobenzene	101		67.0-138		04/24/2024 12:44	WG2272727
(S) 1,2-Dichloroethane-d4	95.9		70.0-130		04/24/2024 12:44	WG2272727

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	29.1		4.00	1	04/23/2024 12:35	WG2272138
C28-C36 Motor Oil Range	52.8		4.00	1	04/23/2024 12:35	WG2272138
(S) o-Terphenyl	42.2		18.0-148		04/23/2024 12:35	WG2272138

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	04/23/2024 19:26	WG2272029
Anthracene	ND		0.00600	1	04/23/2024 19:26	WG2272029
Benzo(a)anthracene	ND		0.00600	1	04/23/2024 19:26	WG2272029
Benzo(b)fluoranthene	0.0116		0.00600	1	04/23/2024 19:26	WG2272029
Benzo(k)fluoranthene	ND		0.00600	1	04/23/2024 19:26	WG2272029
Benzo(a)pyrene	ND		0.00600	1	04/23/2024 19:26	WG2272029
Chrysene	0.00634		0.00600	1	04/23/2024 19:26	WG2272029
Dibenz(a,h)anthracene	ND		0.00600	1	04/23/2024 19:26	WG2272029
Fluoranthene	0.00740		0.00600	1	04/23/2024 19:26	WG2272029
Fluorene	ND		0.00600	1	04/23/2024 19:26	WG2272029
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	04/23/2024 19:26	WG2272029
1-Methylnaphthalene	ND		0.0200	1	04/23/2024 19:26	WG2272029
2-Methylnaphthalene	ND		0.0200	1	04/23/2024 19:26	WG2272029
Naphthalene	ND		0.0200	1	04/23/2024 19:26	WG2272029
Pyrene	ND		0.00600	1	04/23/2024 19:26	WG2272029
(S) p-Terphenyl-d14	108		23.0-120		04/23/2024 19:26	WG2272029
(S) Nitrobenzene-d5	119		14.0-149		04/23/2024 19:26	WG2272029
(S) 2-Fluorobiphenyl	119		34.0-125		04/23/2024 19:26	WG2272029

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4060490-1 04/22/24 09:35

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

L1727206-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1727206-08 04/22/24 13:01 • (DUP) R4060490-9 04/22/24 13:20

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	ND	ND	1	8.40		20

L1725676-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1725676-01 04/22/24 09:56 • (DUP) R4060490-3 04/22/24 10:02

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

Laboratory Control Sample (LCS)

(LCS) R4060490-2 04/22/24 09:43

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.0	100	80.0-120	

L1726938-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1726938-08 04/22/24 11:35 • (MS) R4060490-5 04/22/24 11:41 • (MSD) R4060490-6 04/22/24 11:47

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Hexavalent Chromium	20.0	ND	18.2	19.2	91.1	96.2	1	75.0-125			5.42	20

L1726938-08 Original Sample (OS) • Matrix Spike (MS)

(OS) L1726938-08 04/22/24 11:35 • (MS) R4060490-7 04/22/24 12:06

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	641	ND	677	106	50	75.0-125	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1726938-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1726938-06 04/19/24 22:10 • (DUP) R4060028-2 04/19/24 22:10

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	7.80	7.81	1	0.128		1

Sample Narrative:

OS: 7.8 at 20.1C

DUP: 7.81 at 20.5C

L1727206-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1727206-06 04/19/24 22:10 • (DUP) R4060028-3 04/19/24 22:10

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	pH	su		%		%
pH	8.33	8.33	1	0.000		1

Sample Narrative:

OS: 8.33 at 20.4C

DUP: 8.33 at 20.4C

Laboratory Control Sample (LCS)

(LCS) R4060028-1 04/19/24 22:10

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

Sample Narrative:

LCS: 10.01 at 20.4C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4060209-1 04/21/24 13:48

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

L1727196-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1727196-07 04/21/24 13:48 • (DUP) R4060209-3 04/21/24 13:48

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	8550	8360	1	2.25		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1727206-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1727206-08 04/21/24 13:48 • (DUP) R4060209-4 04/21/24 13:48

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	419	417	1	0.478		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4060209-2 04/21/24 13:48

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	327	331	101	85.0-115	

Sample Narrative:

LCS: at 25C



Method Blank (MB)

(MB) R4060569-1 04/21/24 15:59

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) R4060569-2 04/21/24 16:01 • (LCSD) R4060569-3 04/21/24 16:02

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	1.06	106	106	80.0-120			0.0866	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4061511-1 04/24/24 12:52

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) R4061511-2 04/24/24 12:53 • (LCSD) R4061511-3 04/24/24 12:55

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	1.12	1.14	112	114	80.0-120			1.57	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R4061194-1 04/23/24 19:29

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
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R4061194-2 04/23/24 19:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	90.9	90.9	80.0-120	
Barium	100	89.9	89.9	80.0-120	
Cadmium	100	90.3	90.3	80.0-120	
Copper	100	90.9	90.9	80.0-120	
Lead	100	87.4	87.4	80.0-120	
Nickel	100	93.7	93.7	80.0-120	
Selenium	100	90.6	90.6	80.0-120	
Silver	20.0	18.0	90.2	80.0-120	
Zinc	100	86.4	86.4	80.0-120	

L1727016-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727016-06 04/23/24 19:36 • (MS) R4061194-5 04/23/24 19:46 • (MSD) R4061194-6 04/23/24 19:49

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	2.32	83.2	82.1	80.8	79.8	5	75.0-125			1.30	20
Barium	100	108	203	236	94.5	128	5	75.0-125		J5	15.1	20
Cadmium	100	ND	96.6	100	96.6	100	5	75.0-125			3.55	20
Copper	100	11.8	104	110	91.9	98.3	5	75.0-125			5.94	20
Lead	100	13.2	104	111	90.8	97.7	5	75.0-125			6.42	20
Nickel	100	12.0	94.4	94.4	82.3	82.4	5	75.0-125			0.0446	20
Selenium	100	ND	100	102	99.2	100	5	75.0-125			1.26	20
Silver	20.0	ND	19.8	19.7	99.2	98.4	5	75.0-125			0.822	20
Zinc	100	43.7	117	119	73.3	75.3	5	75.0-125	J6		1.69	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4061451-3 04/23/24 21:06

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0444	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	96.2			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4061451-2 04/23/24 20:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	5.14	103	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			118	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4061842-2 04/24/24 10:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	108			75.0-131
(S) 4-Bromofluorobenzene	97.5			67.0-138
(S) 1,2-Dichloroethane-d4	96.3			70.0-130

Laboratory Control Sample (LCS)

(LCS) R4061842-1 04/24/24 09:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.120	96.0	70.0-123	
Toluene	0.125	0.120	96.0	75.0-121	
Ethylbenzene	0.125	0.128	102	74.0-126	
Xylenes, Total	0.375	0.366	97.6	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.103	82.4	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.0996	79.7	73.0-127	
(S) Toluene-d8			104	75.0-131	
(S) 4-Bromofluorobenzene			98.3	67.0-138	
(S) 1,2-Dichloroethane-d4			99.7	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4061179-1 04/23/24 11:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	54.8			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4061179-2 04/23/24 11:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	39.5	79.0	50.0-150	
(S) o-Terphenyl			58.0	18.0-148	

L1727255-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727255-01 04/23/24 15:09 • (MS) R4061179-3 04/23/24 15:23 • (MSD) R4061179-4 04/23/24 15:35

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	47.1	ND	41.5	44.1	79.7	84.8	1	50.0-150			6.07	20
(S) o-Terphenyl					53.0	54.9		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4061570-2 04/23/24 12:17

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	83.5			23.0-120
(S) Nitrobenzene-d5	86.2			14.0-149
(S) 2-Fluorobiphenyl	84.3			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) R4061570-1 04/23/24 11:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0609	76.1	50.0-120	
Anthracene	0.0800	0.0693	86.6	50.0-126	
Benzo(a)anthracene	0.0800	0.0703	87.9	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0557	69.6	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0514	64.3	49.0-125	
Benzo(a)pyrene	0.0800	0.0542	67.8	42.0-120	
Chrysene	0.0800	0.0688	86.0	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0547	68.4	47.0-125	
Fluoranthene	0.0800	0.0746	93.3	49.0-129	
Fluorene	0.0800	0.0781	97.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0534	66.8	46.0-125	
1-Methylnaphthalene	0.0800	0.0699	87.4	51.0-121	
2-Methylnaphthalene	0.0800	0.0690	86.3	50.0-120	
Naphthalene	0.0800	0.0660	82.5	50.0-120	
Pyrene	0.0800	0.0672	84.0	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4061570-1 04/23/24 11:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			89.1	23.0-120	
(S) Nitrobenzene-d5			95.1	14.0-149	
(S) 2-Fluorobiphenyl			88.2	34.0-125	

L1726235-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1726235-07 04/23/24 12:35 • (MS) R4061570-3 04/23/24 12:52 • (MSD) R4061570-4 04/23/24 13:10

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	0.0788	ND	0.0436	0.0508	55.3	64.5	1	14.0-127			15.3	27
Anthracene	0.0788	ND	0.0530	0.0553	67.3	70.2	1	10.0-145			4.25	30
Benzo(a)anthracene	0.0788	ND	0.0570	0.0573	72.3	72.7	1	10.0-139			0.525	30
Benzo(b)fluoranthene	0.0788	ND	0.0432	0.0475	54.8	60.3	1	10.0-140			9.48	36
Benzo(k)fluoranthene	0.0788	ND	0.0408	0.0462	51.8	58.6	1	10.0-137			12.4	31
Benzo(a)pyrene	0.0788	ND	0.0471	0.0470	59.8	59.6	1	10.0-141			0.213	31
Chrysene	0.0788	ND	0.0548	0.0567	69.5	72.0	1	10.0-145			3.41	30
Dibenz(a,h)anthracene	0.0788	ND	0.0529	0.0509	67.1	64.6	1	10.0-132			3.85	31
Fluoranthene	0.0788	ND	0.0580	0.0569	73.6	72.2	1	10.0-153			1.91	33
Fluorene	0.0788	ND	0.0505	0.0611	64.1	77.5	1	11.0-130			19.0	29
Indeno(1,2,3-cd)pyrene	0.0788	ND	0.0510	0.0488	64.7	61.9	1	10.0-137			4.41	32
1-Methylnaphthalene	0.0788	ND	0.0576	0.0603	73.1	76.5	1	10.0-142			4.58	28
2-Methylnaphthalene	0.0788	ND	0.0555	0.0590	70.4	74.9	1	10.0-137			6.11	28
Naphthalene	0.0788	ND	0.0563	0.0590	71.4	74.9	1	10.0-135			4.68	27
Pyrene	0.0788	ND	0.0529	0.0509	67.1	64.6	1	10.0-148			3.85	35
(S) p-Terphenyl-d14					73.7	66.5		23.0-120				
(S) Nitrobenzene-d5					83.3	83.9		14.0-149				
(S) 2-Fluorobiphenyl					67.4	81.0		34.0-125				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4061565-2 04/23/24 11:19

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	116			23.0-120
(S) Nitrobenzene-d5	65.5			14.0-149
(S) 2-Fluorobiphenyl	102			34.0-125

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4061565-1 04/23/24 11:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0690	86.3	50.0-120	
Anthracene	0.0800	0.0736	92.0	50.0-126	
Benzo(a)anthracene	0.0800	0.0728	91.0	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0842	105	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0800	100	49.0-125	
Benzo(a)pyrene	0.0800	0.0692	86.5	42.0-120	
Chrysene	0.0800	0.0817	102	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0862	108	47.0-125	
Fluoranthene	0.0800	0.0867	108	49.0-129	
Fluorene	0.0800	0.0770	96.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0800	100	46.0-125	
1-Methylnaphthalene	0.0800	0.0801	100	51.0-121	
2-Methylnaphthalene	0.0800	0.0794	99.3	50.0-120	
Naphthalene	0.0800	0.0696	87.0	50.0-120	
Pyrene	0.0800	0.0737	92.1	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4061565-1 04/23/24 11:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
(S) p-Terphenyl-d14			117	23.0-120	
(S) Nitrobenzene-d5			68.5	14.0-149	
(S) 2-Fluorobiphenyl			109	34.0-125	

L1727256-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727256-01 04/23/24 21:49 • (MS) R4061571-1 04/23/24 22:07 • (MSD) R4061571-2 04/23/24 22:25

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	0.0780	ND	0.0690	0.0748	88.5	93.5	1	14.0-127			8.07	27
Anthracene	0.0780	ND	0.0764	0.0849	97.9	106	1	10.0-145			10.5	30
Benzo(a)anthracene	0.0780	ND	0.0841	0.0904	108	113	1	10.0-139			7.22	30
Benzo(b)fluoranthene	0.0780	ND	0.0665	0.0686	82.7	83.3	1	10.0-140			3.11	36
Benzo(k)fluoranthene	0.0780	ND	0.0584	0.0646	74.9	80.7	1	10.0-137			10.1	31
Benzo(a)pyrene	0.0780	ND	0.0679	0.0723	87.1	90.4	1	10.0-141			6.28	31
Chrysene	0.0780	ND	0.0823	0.0866	106	108	1	10.0-145			5.09	30
Dibenz(a,h)anthracene	0.0780	ND	0.0683	0.0737	87.6	92.1	1	10.0-132			7.61	31
Fluoranthene	0.0780	ND	0.0863	0.0928	111	116	1	10.0-153			7.26	33
Fluorene	0.0780	ND	0.0829	0.0918	106	115	1	11.0-130			10.2	29
Indeno(1,2,3-cd)pyrene	0.0780	ND	0.0695	0.0744	89.1	93.0	1	10.0-137			6.81	32
1-Methylnaphthalene	0.0780	ND	0.0809	0.0868	104	109	1	10.0-142			7.04	28
2-Methylnaphthalene	0.0780	ND	0.0797	0.0851	102	106	1	10.0-137			6.55	28
Naphthalene	0.0780	ND	0.0733	0.0783	94.0	97.9	1	10.0-135			6.60	27
Pyrene	0.0780	ND	0.0708	0.0754	90.8	94.3	1	10.0-148			6.29	35
(S) p-Terphenyl-d14					172	180		23.0-120	J1	J1		
(S) Nitrobenzene-d5					202	218		14.0-149	J1	J1		
(S) 2-Fluorobiphenyl					194	204		34.0-125	J1	J1		

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

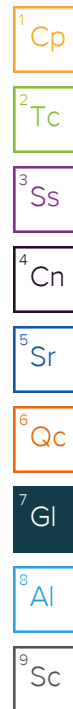
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

Abbreviations and Definitions

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

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.



ACCREDITATIONS & LOCATIONS

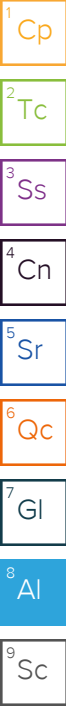
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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



[illegible]

Company Name/Address:
Caerus Oil & Gas
143 Diamond Ave
Parachute, CO 81635

Billing Information:
Accounts Payable
1001 17th Street, Suite 1600
Denver, CO 80202

Report to:
Jake J/Brett M/Blair R/Andy V

Email To:
labreports@caerusoilandgas.com

Project Description:
H26 596 FLOWLINE (06A)

City/State Collected:
PT MT CT ET

Please Circle:
PT MT CT ET

Phone: **970-285-2653**

Client Project #

Lab Project #
CAERUSPCO-915

Collected by (print):
Meredith Roberts/Garrett Green

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Quote #

Immediately
Packed on Ice N Y

Date Results Needed
Standard TAT

No. of Cntrs

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs
20240417-H26-(STOCK01)	C	SS	-	4/17/24	1150	4
<div>Remarks: Samples returned via: UPS FedEx Courier</div>						

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

Relinquished by : (Signature)
[Signature]

Date:
4/17/24

Time:
1520

Received by: (Signature)
[Signature]

Temp: **PPA 6°C**
1.8+0.1=1.9

Date:
4/18/24

Trip Blank Received: Yes / No
5

Bottles Received:
36

Hold:

Condition:
NCF / OK

Analysis / Container / Preservative

Chain of Custody
Pace
PEOPLE ADVANCING SCIENCE
12065 Lebanon Rd Mount Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>

SDG # **1727200**

Table # **D153**

Acctnum:

Template:

Prelogin:

PM:

PB:

Shipping Via:

Remarks

Sample # (lab only)
-09

[illegible]

Caerus Oil and Gas

Sample Delivery Group: L1727206
Samples Received: 04/18/2024
Project Number:
Description: H26 596 Flowline (06A)

Report To: Jake J. / Brett M. / Blair R. / Andy V.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Tony Gibson
Project Manager

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

Pace Analytical National

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

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¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SAMPLE SUMMARY

20240417-H26-(STOCK01) L1727206-04 Solid

Collected by
MR / GG

Collected date/time
04/17/24 11:50

Received date/time
04/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2271334	1	04/23/24 12:01	04/23/24 12:01	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2268647	1	04/19/24 11:53	04/22/24 12:37	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2270291	1	04/19/24 08:28	04/19/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2270855	1	04/19/24 19:14	04/21/24 13:48	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2271335	1	04/22/24 10:36	04/22/24 17:14	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2270379	5	04/20/24 13:57	04/23/24 20:32	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2272910	1	04/22/24 20:59	04/24/24 00:54	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2272727	1.01	04/22/24 20:59	04/24/24 11:08	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2272138	1	04/23/24 06:08	04/23/24 11:44	JSS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2271403	1	04/23/24 05:55	04/23/24 17:21	ALM	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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.



Tony Gibson
Project Manager

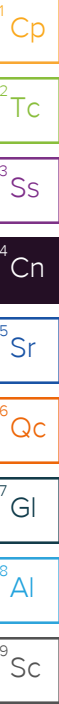
Report Revision History

Level II Report - Version 1: 04/25/24 15:39

Level II Report - Version 2: 04/29/24 12:05

Project Narrative

Split report into three versions per chain of custody - Tony Gibson 4/29/24



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.566		1	04/23/2024 12:01	WG2271334

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	04/22/2024 12:37	WG2268647

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.25	T8	1	04/19/2024 22:10	WG2270291

Sample Narrative:

L1727206-04 WG2270291: 8.25 at 20.1C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	348		10.0	1	04/21/2024 13:48	WG2270855

Sample Narrative:

L1727206-04 WG2270855: at 25C

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.658		0.200	1	04/22/2024 17:14	WG2271335

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	17.7		1.00	5	04/23/2024 20:32	WG2270379
Barium	1070		2.50	5	04/23/2024 20:32	WG2270379
Cadmium	ND		1.00	5	04/23/2024 20:32	WG2270379
Copper	29.4		5.00	5	04/23/2024 20:32	WG2270379
Lead	16.5		2.00	5	04/23/2024 20:32	WG2270379
Nickel	19.8		2.50	5	04/23/2024 20:32	WG2270379
Selenium	ND		2.50	5	04/23/2024 20:32	WG2270379
Silver	ND		0.500	5	04/23/2024 20:32	WG2270379
Zinc	58.1		25.0	5	04/23/2024 20:32	WG2270379

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.104	B	0.100	1	04/24/2024 00:54	WG2272910
(S) a,a,a-Trifluorotoluene(FID)	91.7		77.0-120		04/24/2024 00:54	WG2272910

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00101	1.01	04/24/2024 11:08	WG2272727
Toluene	ND		0.00505	1.01	04/24/2024 11:08	WG2272727
Ethylbenzene	ND		0.00253	1.01	04/24/2024 11:08	WG2272727
Xylenes, Total	ND		0.00656	1.01	04/24/2024 11:08	WG2272727
1,2,4-Trimethylbenzene	ND		0.00505	1.01	04/24/2024 11:08	WG2272727
1,3,5-Trimethylbenzene	ND		0.00505	1.01	04/24/2024 11:08	WG2272727
(S) Toluene-d8	106		75.0-131		04/24/2024 11:08	WG2272727
(S) 4-Bromofluorobenzene	101		67.0-138		04/24/2024 11:08	WG2272727
(S) 1,2-Dichloroethane-d4	91.8		70.0-130		04/24/2024 11:08	WG2272727

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	24.4		4.00	1	04/23/2024 11:44	WG2272138
C28-C36 Motor Oil Range	36.6		4.00	1	04/23/2024 11:44	WG2272138
(S) o-Terphenyl	44.2		18.0-148		04/23/2024 11:44	WG2272138

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	04/23/2024 17:21	WG2271403
Anthracene	ND		0.00600	1	04/23/2024 17:21	WG2271403
Benzo(a)anthracene	ND		0.00600	1	04/23/2024 17:21	WG2271403
Benzo(b)fluoranthene	0.00849		0.00600	1	04/23/2024 17:21	WG2271403
Benzo(k)fluoranthene	ND		0.00600	1	04/23/2024 17:21	WG2271403
Benzo(a)pyrene	ND		0.00600	1	04/23/2024 17:21	WG2271403
Chrysene	ND		0.00600	1	04/23/2024 17:21	WG2271403
Dibenz(a,h)anthracene	ND		0.00600	1	04/23/2024 17:21	WG2271403
Fluoranthene	ND		0.00600	1	04/23/2024 17:21	WG2271403
Fluorene	ND		0.00600	1	04/23/2024 17:21	WG2271403
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	04/23/2024 17:21	WG2271403
1-Methylnaphthalene	ND		0.0200	1	04/23/2024 17:21	WG2271403
2-Methylnaphthalene	ND		0.0200	1	04/23/2024 17:21	WG2271403
Naphthalene	ND		0.0200	1	04/23/2024 17:21	WG2271403
Pyrene	ND		0.00600	1	04/23/2024 17:21	WG2271403
(S) p-Terphenyl-d14	76.9		23.0-120		04/23/2024 17:21	WG2271403
(S) Nitrobenzene-d5	80.3		14.0-149		04/23/2024 17:21	WG2271403
(S) 2-Fluorobiphenyl	80.3		34.0-125		04/23/2024 17:21	WG2271403

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4060490-1 04/22/24 09:35

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

L1727206-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1727206-08 04/22/24 13:01 • (DUP) R4060490-9 04/22/24 13:20

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	ND	ND	1	8.40		20

L1725676-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1725676-01 04/22/24 09:56 • (DUP) R4060490-3 04/22/24 10:02

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

Laboratory Control Sample (LCS)

(LCS) R4060490-2 04/22/24 09:43

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.0	100	80.0-120	

L1726938-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1726938-08 04/22/24 11:35 • (MS) R4060490-5 04/22/24 11:41 • (MSD) R4060490-6 04/22/24 11:47

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Hexavalent Chromium	20.0	ND	18.2	19.2	91.1	96.2	1	75.0-125			5.42	20

L1726938-08 Original Sample (OS) • Matrix Spike (MS)

(OS) L1726938-08 04/22/24 11:35 • (MS) R4060490-7 04/22/24 12:06

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	641	ND	677	106	50	75.0-125	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1726938-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1726938-06 04/19/24 22:10 • (DUP) R4060028-2 04/19/24 22:10

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	7.80	7.81	1	0.128		1

Sample Narrative:

OS: 7.8 at 20.1C

DUP: 7.81 at 20.5C

L1727206-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1727206-06 04/19/24 22:10 • (DUP) R4060028-3 04/19/24 22:10

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	pH	su		%		%
pH	8.33	8.33	1	0.000		1

Sample Narrative:

OS: 8.33 at 20.4C

DUP: 8.33 at 20.4C

Laboratory Control Sample (LCS)

(LCS) R4060028-1 04/19/24 22:10

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

Sample Narrative:

LCS: 10.01 at 20.4C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4060209-1 04/21/24 13:48

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

L1727196-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1727196-07 04/21/24 13:48 • (DUP) R4060209-3 04/21/24 13:48

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	8550	8360	1	2.25		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1727206-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1727206-08 04/21/24 13:48 • (DUP) R4060209-4 04/21/24 13:48

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	419	417	1	0.478		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4060209-2 04/21/24 13:48

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	327	331	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) R4060665-4 04/22/24 19:09

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) R4060665-2 04/22/24 17:00 • (LCSD) R4060665-3 04/22/24 17:03

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	1.14	1.15	114	115	80.0-120			1.32	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R4061194-1 04/23/24 19:29

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
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R4061194-2 04/23/24 19:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	90.9	90.9	80.0-120	
Barium	100	89.9	89.9	80.0-120	
Cadmium	100	90.3	90.3	80.0-120	
Copper	100	90.9	90.9	80.0-120	
Lead	100	87.4	87.4	80.0-120	
Nickel	100	93.7	93.7	80.0-120	
Selenium	100	90.6	90.6	80.0-120	
Silver	20.0	18.0	90.2	80.0-120	
Zinc	100	86.4	86.4	80.0-120	

L1727016-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727016-06 04/23/24 19:36 • (MS) R4061194-5 04/23/24 19:46 • (MSD) R4061194-6 04/23/24 19:49

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	2.32	83.2	82.1	80.8	79.8	5	75.0-125			1.30	20
Barium	100	108	203	236	94.5	128	5	75.0-125		J5	15.1	20
Cadmium	100	ND	96.6	100	96.6	100	5	75.0-125			3.55	20
Copper	100	11.8	104	110	91.9	98.3	5	75.0-125			5.94	20
Lead	100	13.2	104	111	90.8	97.7	5	75.0-125			6.42	20
Nickel	100	12.0	94.4	94.4	82.3	82.4	5	75.0-125			0.0446	20
Selenium	100	ND	100	102	99.2	100	5	75.0-125			1.26	20
Silver	20.0	ND	19.8	19.7	99.2	98.4	5	75.0-125			0.822	20
Zinc	100	43.7	117	119	73.3	75.3	5	75.0-125	J6		1.69	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4061451-3 04/23/24 21:06

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0444	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	96.2			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4061451-2 04/23/24 20:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	5.14	103	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			118	77.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4061842-2 04/24/24 10:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	108			75.0-131
(S) 4-Bromofluorobenzene	97.5			67.0-138
(S) 1,2-Dichloroethane-d4	96.3			70.0-130

Laboratory Control Sample (LCS)

(LCS) R4061842-1 04/24/24 09:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.120	96.0	70.0-123	
Toluene	0.125	0.120	96.0	75.0-121	
Ethylbenzene	0.125	0.128	102	74.0-126	
Xylenes, Total	0.375	0.366	97.6	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.103	82.4	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.0996	79.7	73.0-127	
(S) Toluene-d8			104	75.0-131	
(S) 4-Bromofluorobenzene			98.3	67.0-138	
(S) 1,2-Dichloroethane-d4			99.7	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4061179-1 04/23/24 11:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	54.8			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4061179-2 04/23/24 11:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	39.5	79.0	50.0-150	
(S) o-Terphenyl			58.0	18.0-148	

L1727255-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727255-01 04/23/24 15:09 • (MS) R4061179-3 04/23/24 15:23 • (MSD) R4061179-4 04/23/24 15:35

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	47.1	ND	41.5	44.1	79.7	84.8	1	50.0-150			6.07	20
(S) o-Terphenyl					53.0	54.9		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4061570-2 04/23/24 12:17

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	83.5			23.0-120
(S) Nitrobenzene-d5	86.2			14.0-149
(S) 2-Fluorobiphenyl	84.3			34.0-125

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4061570-1 04/23/24 11:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0609	76.1	50.0-120	
Anthracene	0.0800	0.0693	86.6	50.0-126	
Benzo(a)anthracene	0.0800	0.0703	87.9	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0557	69.6	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0514	64.3	49.0-125	
Benzo(a)pyrene	0.0800	0.0542	67.8	42.0-120	
Chrysene	0.0800	0.0688	86.0	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0547	68.4	47.0-125	
Fluoranthene	0.0800	0.0746	93.3	49.0-129	
Fluorene	0.0800	0.0781	97.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0534	66.8	46.0-125	
1-Methylnaphthalene	0.0800	0.0699	87.4	51.0-121	
2-Methylnaphthalene	0.0800	0.0690	86.3	50.0-120	
Naphthalene	0.0800	0.0660	82.5	50.0-120	
Pyrene	0.0800	0.0672	84.0	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4061570-1 04/23/24 11:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
(S) p-Terphenyl-d14			89.1	23.0-120	
(S) Nitrobenzene-d5			95.1	14.0-149	
(S) 2-Fluorobiphenyl			88.2	34.0-125	

L1726235-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1726235-07 04/23/24 12:35 • (MS) R4061570-3 04/23/24 12:52 • (MSD) R4061570-4 04/23/24 13:10

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	0.0788	ND	0.0436	0.0508	55.3	64.5	1	14.0-127			15.3	27
Anthracene	0.0788	ND	0.0530	0.0553	67.3	70.2	1	10.0-145			4.25	30
Benzo(a)anthracene	0.0788	ND	0.0570	0.0573	72.3	72.7	1	10.0-139			0.525	30
Benzo(b)fluoranthene	0.0788	ND	0.0432	0.0475	54.8	60.3	1	10.0-140			9.48	36
Benzo(k)fluoranthene	0.0788	ND	0.0408	0.0462	51.8	58.6	1	10.0-137			12.4	31
Benzo(a)pyrene	0.0788	ND	0.0471	0.0470	59.8	59.6	1	10.0-141			0.213	31
Chrysene	0.0788	ND	0.0548	0.0567	69.5	72.0	1	10.0-145			3.41	30
Dibenz(a,h)anthracene	0.0788	ND	0.0529	0.0509	67.1	64.6	1	10.0-132			3.85	31
Fluoranthene	0.0788	ND	0.0580	0.0569	73.6	72.2	1	10.0-153			1.91	33
Fluorene	0.0788	ND	0.0505	0.0611	64.1	77.5	1	11.0-130			19.0	29
Indeno(1,2,3-cd)pyrene	0.0788	ND	0.0510	0.0488	64.7	61.9	1	10.0-137			4.41	32
1-Methylnaphthalene	0.0788	ND	0.0576	0.0603	73.1	76.5	1	10.0-142			4.58	28
2-Methylnaphthalene	0.0788	ND	0.0555	0.0590	70.4	74.9	1	10.0-137			6.11	28
Naphthalene	0.0788	ND	0.0563	0.0590	71.4	74.9	1	10.0-135			4.68	27
Pyrene	0.0788	ND	0.0529	0.0509	67.1	64.6	1	10.0-148			3.85	35
(S) p-Terphenyl-d14					73.7	66.5		23.0-120				
(S) Nitrobenzene-d5					83.3	83.9		14.0-149				
(S) 2-Fluorobiphenyl					67.4	81.0		34.0-125				

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

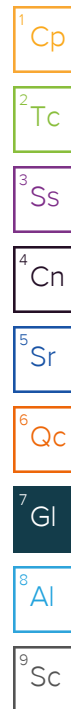
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

Abbreviations and Definitions

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

Qualifier Description

B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.



ACCREDITATIONS & LOCATIONS

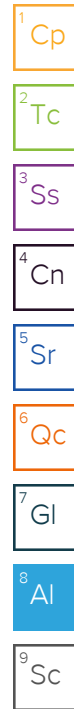
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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



[illegible]

[illegible]

Caerus Oil and Gas

Sample Delivery Group: L1727206
Samples Received: 04/18/2024
Project Number:
Description: H26 596 Flowline (06A)

Report To: Jake J. / Brett M. / Blair R. / Andy V.
143 Diamond Avenue
Parachute, CO 81635

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

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

SAMPLE SUMMARY

20240417-NPRBG-(H26-SW)@1 L1727206-02 Solid				Collected by MR / GG	Collected date/time 04/17/24 13:00	Received date/time 04/18/24 09:00	<div>1Cp</div> <div>2Tc</div> <div>3Ss</div> <div>4Cn</div> <div>5Sr</div> <div>6Qc</div> <div>7Gl</div> <div>8Al</div> <div>9Sc</div>
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location	
Calculated Results	WG2271330	1	04/22/24 09:42	04/22/24 09:42	ZSA	Mt. Juliet, TN	
Wet Chemistry by Method 7199	WG2268647	1	04/19/24 11:53	04/22/24 12:24	SET	Mt. Juliet, TN	
Wet Chemistry by Method 9045D	WG2270291	1	04/19/24 08:28	04/19/24 22:10	KRB	Mt. Juliet, TN	
Wet Chemistry by Method 9050AMod	WG2270855	1	04/19/24 19:14	04/21/24 13:48	BJM	Mt. Juliet, TN	
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2271332	1	04/21/24 08:09	04/21/24 16:30	ZSA	Mt. Juliet, TN	
Metals (ICPMS) by Method 6020	WG2270379	5	04/20/24 13:57	04/23/24 20:29	LD	Mt. Juliet, TN	

CASE NARRATIVE

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



Chris Ward
Project Manager

Report Revision History

Level II Report - Version 1: 04/25/24 15:39
Level II Report - Version 2: 04/29/24 12:05
Level II Report - Version 3: 04/29/24 12:53
Level II Report - Version 4: 04/29/24 13:16

Project Narrative

Version A



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.0754		1	04/22/2024 09:42	WG2271330

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	04/22/2024 12:24	WG2268647

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.65	T8	1	04/19/2024 22:10	WG2270291

Sample Narrative:
L1727206-02 WG2270291: 7.65 at 20.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	301		10.0	1	04/21/2024 13:48	WG2270855

Sample Narrative:
L1727206-02 WG2270855: at 25C

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		0.200	1	04/21/2024 16:30	WG2271332

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	12.5		1.00	5	04/23/2024 20:29	WG2270379
Barium	262		2.50	5	04/23/2024 20:29	WG2270379
Cadmium	ND		1.00	5	04/23/2024 20:29	WG2270379
Copper	17.5		5.00	5	04/23/2024 20:29	WG2270379
Lead	15.2		2.00	5	04/23/2024 20:29	WG2270379
Nickel	17.0		2.50	5	04/23/2024 20:29	WG2270379
Selenium	ND		2.50	5	04/23/2024 20:29	WG2270379
Silver	ND		0.500	5	04/23/2024 20:29	WG2270379
Zinc	52.6		25.0	5	04/23/2024 20:29	WG2270379

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4060490-1 04/22/24 09:35

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

L1727206-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1727206-08 04/22/24 13:01 • (DUP) R4060490-9 04/22/24 13:20

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	ND	ND	1	8.40		20

L1725676-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1725676-01 04/22/24 09:56 • (DUP) R4060490-3 04/22/24 10:02

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

Laboratory Control Sample (LCS)

(LCS) R4060490-2 04/22/24 09:43

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.0	100	80.0-120	

L1726938-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1726938-08 04/22/24 11:35 • (MS) R4060490-5 04/22/24 11:41 • (MSD) R4060490-6 04/22/24 11:47

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Hexavalent Chromium	20.0	ND	18.2	19.2	91.1	96.2	1	75.0-125			5.42	20

L1726938-08 Original Sample (OS) • Matrix Spike (MS)

(OS) L1726938-08 04/22/24 11:35 • (MS) R4060490-7 04/22/24 12:06

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	641	ND	677	106	50	75.0-125	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1726938-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1726938-06 04/19/24 22:10 • (DUP) R4060028-2 04/19/24 22:10

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.80	7.81	1	0.128		1

Sample Narrative:

OS: 7.8 at 20.1C

DUP: 7.81 at 20.5C

L1727206-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1727206-06 04/19/24 22:10 • (DUP) R4060028-3 04/19/24 22:10

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	pH	su		%		%
pH	8.33	8.33	1	0.000		1

Sample Narrative:

OS: 8.33 at 20.4C

DUP: 8.33 at 20.4C

Laboratory Control Sample (LCS)

(LCS) R4060028-1 04/19/24 22:10

	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: 10.01 at 20.4C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4060209-1 04/21/24 13:48

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

L1727196-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1727196-07 04/21/24 13:48 • (DUP) R4060209-3 04/21/24 13:48

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	8550	8360	1	2.25		20

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

L1727206-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1727206-08 04/21/24 13:48 • (DUP) R4060209-4 04/21/24 13:48

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	419	417	1	0.478		20

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

Laboratory Control Sample (LCS)

(LCS) R4060209-2 04/21/24 13:48

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	327	331	101	85.0-115	

Sample Narrative:
LCS: at 25C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4060569-1 04/21/24 15:59

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) R4060569-2 04/21/24 16:01 • (LCSD) R4060569-3 04/21/24 16:02

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	1.06	106	106	80.0-120			0.0866	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4061194-1 04/23/24 19:29

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
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R4061194-2 04/23/24 19:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	90.9	90.9	80.0-120	
Barium	100	89.9	89.9	80.0-120	
Cadmium	100	90.3	90.3	80.0-120	
Copper	100	90.9	90.9	80.0-120	
Lead	100	87.4	87.4	80.0-120	
Nickel	100	93.7	93.7	80.0-120	
Selenium	100	90.6	90.6	80.0-120	
Silver	20.0	18.0	90.2	80.0-120	
Zinc	100	86.4	86.4	80.0-120	

L1727016-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727016-06 04/23/24 19:36 • (MS) R4061194-5 04/23/24 19:46 • (MSD) R4061194-6 04/23/24 19:49

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	2.32	83.2	82.1	80.8	79.8	5	75.0-125			1.30	20
Barium	100	108	203	236	94.5	128	5	75.0-125		J5	15.1	20
Cadmium	100	ND	96.6	100	96.6	100	5	75.0-125			3.55	20
Copper	100	11.8	104	110	91.9	98.3	5	75.0-125			5.94	20
Lead	100	13.2	104	111	90.8	97.7	5	75.0-125			6.42	20
Nickel	100	12.0	94.4	94.4	82.3	82.4	5	75.0-125			0.0446	20
Selenium	100	ND	100	102	99.2	100	5	75.0-125			1.26	20
Silver	20.0	ND	19.8	19.7	99.2	98.4	5	75.0-125			0.822	20
Zinc	100	43.7	117	119	73.3	75.3	5	75.0-125	J6		1.69	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

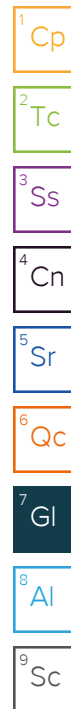
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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

J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
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 ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

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

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

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



[illegible]

[illegible]

Caerus Oil and Gas

Sample Delivery Group: L1728561
Samples Received: 04/23/2024
Project Number:
Description: H26 596 Flowline (06A)

Report To: Jake J. / Brett M. / Blair R. / Andy V.
143 Diamond Avenue
Parachute, CO 81635

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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20240422-NPRSOURCE-(H26-19024) L1728561-01 GW

Collected by
MR / GG

Collected date/time
04/22/24 10:15


Received date/time
04/23/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG2273299	1	04/25/24 08:28	04/25/24 08:28	SET	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2273773	1	04/24/24 19:30	04/24/24 19:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2276125	1	04/28/24 14:06	04/29/24 13:14	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2276333	5	04/29/24 08:56	04/29/24 14:38	SJM	Mt. Juliet, TN

¹Cp ${}^2\text{Tc}$ 3S_s ${}^4\text{Cn}$ ${}^5\text{Sr}$ ${}^6\text{Qc}$ ${}^7\text{Gf}$ ${}^8\text{Al}$ ${}^9\text{Sc}$

CASE NARRATIVE

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



Chris Ward
Project Manager

Sample Delivery Group (SDG) Narrative

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

Lab Sample ID	Project Sample ID	Method
L1728561-01	20240422-NPRSOURCE-(H26-19024)	7199

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Hexavalent Chromium	ND	T8	0.000500	1	04/25/2024 08:28	WG2273299

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	pH			date / time	
pH	6.92	T8	1	04/24/2024 19:30	WG2273773

Sample Narrative:
L1728561-01 WG2273773: 6.92 at 18.4C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Boron	5.76		0.200	1	04/29/2024 13:14	WG2276125

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND	J6 O1	0.0100	5	04/29/2024 14:38	WG2276333
Barium	40.8	O1 V	0.0100	5	04/29/2024 14:38	WG2276333
Cadmium	ND		0.00500	5	04/29/2024 14:38	WG2276333
Copper	ND	O1	0.0250	5	04/29/2024 14:38	WG2276333
Lead	ND		0.0100	5	04/29/2024 14:38	WG2276333
Nickel	ND	J6 O1	0.0100	5	04/29/2024 14:38	WG2276333
Selenium	ND		0.0100	5	04/29/2024 14:38	WG2276333
Silver	ND		0.0100	5	04/29/2024 14:38	WG2276333
Zinc	ND	J6 O1	0.125	5	04/29/2024 14:38	WG2276333

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4062027-1 04/25/24 07:55

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Hexavalent Chromium	U		0.000150	0.000500

L1728639-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1728639-01 04/25/24 08:39 • (DUP) R4062027-3 04/25/24 08:50

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Hexavalent Chromium	ND	ND	1	1.59		20

L1728653-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1728653-02 04/25/24 09:22 • (DUP) R4062027-4 04/25/24 09:33

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Hexavalent Chromium	0.00704	0.00702	1	0.248		20

Laboratory Control Sample (LCS)

(LCS) R4062027-2 04/25/24 08:06

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Hexavalent Chromium	0.00200	0.00208	104	90.0-110	

L1728711-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1728711-01 04/25/24 10:06 • (MS) R4062027-5 04/25/24 10:17

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Hexavalent Chromium	0.0500	ND	0.0496	99.2	1	90.0-110	

L1728774-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1728774-01 04/25/24 11:01 • (MS) R4062027-6 04/25/24 11:12 • (MSD) R4062027-7 04/25/24 11:23

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Hexavalent Chromium	0.0500	ND	0.0508	0.0508	101	101	1	90.0-110			0.125	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1727463-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1727463-01 04/24/24 19:30 • (DUP) R4061735-2 04/24/24 19:30

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	6.43	6.40	1	0.468		1

Sample Narrative:

OS: 6.43 at 19C

DUP: 6.4 at 19.3C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1728811-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1728811-01 04/24/24 19:30 • (DUP) R4061735-3 04/24/24 19:30

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.36	8.37	1	0.120		1

Sample Narrative:

OS: 8.36 at 19.2C

DUP: 8.37 at 19.2C

Laboratory Control Sample (LCS)

(LCS) R4061735-1 04/24/24 19:30

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

Sample Narrative:

LCS: 10 at 20.2C

Method Blank (MB)

(MB) R4063381-1 04/29/24 13:04

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Boron	U		0.0200	0.200

Laboratory Control Sample (LCS)

(LCS) R4063381-2 04/29/24 13:05

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Boron	1.00	0.971	97.1	80.0-120	

L1730228-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1730228-02 04/29/24 13:07 • (MS) R4063381-4 04/29/24 13:10 • (MSD) R4063381-5 04/29/24 13:12

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Boron	1.00	0.436	1.39	1.41	95.2	97.0	1	75.0-125			1.32	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4063407-1 04/29/24 13:19

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Arsenic	U		0.000180	0.00200
Barium	U		0.000381	0.00200
Cadmium	U		0.000150	0.00100
Copper	U		0.00151	0.00500
Lead	U		0.000849	0.00200
Nickel	U		0.000816	0.00200
Selenium	U		0.000300	0.00200
Silver	U		0.0000700	0.00200
Zinc	U		0.00302	0.0250

Laboratory Control Sample (LCS)

(LCS) R4063407-2 04/29/24 13:22

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	0.0500	0.0500	100	80.0-120	
Barium	0.0500	0.0489	97.7	80.0-120	
Cadmium	0.0500	0.0553	111	80.0-120	
Copper	0.0500	0.0543	109	80.0-120	
Lead	0.0500	0.0531	106	80.0-120	
Nickel	0.0500	0.0540	108	80.0-120	
Selenium	0.0500	0.0513	103	80.0-120	
Silver	0.0500	0.0506	101	80.0-120	
Zinc	0.0500	0.0490	98.0	80.0-120	

L1728561-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1728561-01 04/29/24 14:38 • (MS) R4063407-7 04/29/24 14:50 • (MSD) R4063407-8 04/29/24 14:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	0.0500	ND	0.0375	0.0358	72.7	69.4	5	75.0-125	J6	J6	4.45	20
Barium	0.0500	40.8	39.2	38.2	0.000	0.000	5	75.0-125	V	V	2.60	20
Cadmium	0.0500	ND	0.0490	0.0483	98.1	96.6	5	75.0-125			1.58	20
Copper	0.0500	ND	0.0413	0.0390	82.5	77.9	5	75.0-125			5.75	20
Lead	0.0500	ND	0.0492	0.0473	98.4	94.6	5	75.0-125			3.93	20
Nickel	0.0500	ND	0.0446	0.0429	74.2	70.7	5	75.0-125	J6	J6	3.98	20
Selenium	0.0500	ND	0.0525	0.0491	105	98.3	5	75.0-125			6.58	20
Silver	0.0500	ND	0.0484	0.0456	96.8	91.2	5	75.0-125			5.95	20
Zinc	0.0500	ND	0.154	0.149	70.9	61.1	5	75.0-125	J6	J6	3.23	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

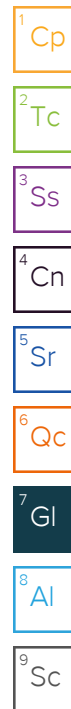
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.



ACCREDITATIONS & LOCATIONS

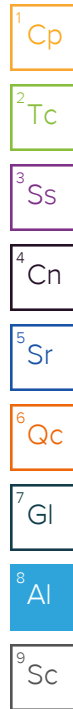
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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



[illegible]

Caerus Oil and Gas

Sample Delivery Group: L1728558
Samples Received: 04/23/2024
Project Number:
Description: H26 596 Flowline (06A)

Report To: Jake J. / Brett M. / Blair R. / Andy V.
143 Diamond Avenue
Parachute, CO 81635

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

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

SAMPLE SUMMARY

20240422-NPRBG-(H26-SE)@1 L1728558-01 Solid

Collected by
MR / GG

Collected date/time
04/22/24 10:30

Received date/time
04/23/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2275228	1	04/27/24 10:43	04/27/24 10:43	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2275127	1	04/26/24 10:43	04/26/24 14:15	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2273878	1	04/24/24 22:22	04/25/24 12:00	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2273914	1	04/25/24 08:43	04/25/24 19:10	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2275225	1	04/26/24 12:35	04/27/24 11:26	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2274167	5	04/25/24 14:54	04/28/24 20:03	LD	Mt. Juliet, TN

20240422-NPRBG-(H26-N)@1 L1728558-02 Solid

Collected by
MR / GG

Collected date/time
04/22/24 10:55

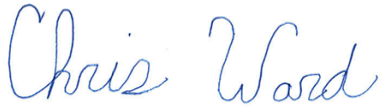
Received date/time
04/23/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2275228	1	04/27/24 10:45	04/27/24 10:45	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2275127	1	04/26/24 10:43	04/26/24 14:21	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2273878	1	04/24/24 22:22	04/25/24 12:00	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2273914	1	04/25/24 08:43	04/25/24 19:10	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2275225	1	04/26/24 12:35	04/27/24 11:31	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2274167	5	04/25/24 14:54	04/28/24 20:06	LD	Mt. Juliet, TN



CASE NARRATIVE

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



Chris Ward
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.151		1	04/27/2024 10:43	WG2275228

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	04/26/2024 14:15	WG2275127

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.93	T8	1	04/25/2024 12:00	WG2273878

Sample Narrative:
L1728558-01 WG2273878: 7.93 at 20C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	207		10.0	1	04/25/2024 19:10	WG2273914

Sample Narrative:
L1728558-01 WG2273914: at 25C

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.803		0.200	1	04/27/2024 11:26	WG2275225

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	10.3		1.00	5	04/28/2024 20:03	WG2274167
Barium	315		2.50	5	04/28/2024 20:03	WG2274167
Cadmium	ND		1.00	5	04/28/2024 20:03	WG2274167
Copper	19.1		5.00	5	04/28/2024 20:03	WG2274167
Lead	14.2		2.00	5	04/28/2024 20:03	WG2274167
Nickel	16.8		2.50	5	04/28/2024 20:03	WG2274167
Selenium	ND		2.50	5	04/28/2024 20:03	WG2274167
Silver	ND		0.500	5	04/28/2024 20:03	WG2274167
Zinc	65.4		25.0	5	04/28/2024 20:03	WG2274167

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.579		1	04/27/2024 10:45	WG2275228

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	04/26/2024 14:21	WG2275127

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.17	T8	1	04/25/2024 12:00	WG2273878

Sample Narrative:
L1728558-02 WG2273878: 8.17 at 20.1C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	155		10.0	1	04/25/2024 19:10	WG2273914

Sample Narrative:
L1728558-02 WG2273914: at 25C

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.430		0.200	1	04/27/2024 11:31	WG2275225

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	11.3		1.00	5	04/28/2024 20:06	WG2274167
Barium	176		2.50	5	04/28/2024 20:06	WG2274167
Cadmium	ND		1.00	5	04/28/2024 20:06	WG2274167
Copper	12.8		5.00	5	04/28/2024 20:06	WG2274167
Lead	10.3		2.00	5	04/28/2024 20:06	WG2274167
Nickel	11.9		2.50	5	04/28/2024 20:06	WG2274167
Selenium	ND		2.50	5	04/28/2024 20:06	WG2274167
Silver	ND		0.500	5	04/28/2024 20:06	WG2274167
Zinc	33.4		25.0	5	04/28/2024 20:06	WG2274167

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4062645-1 04/26/24 14:00

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

L1729185-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1729185-03 04/26/24 14:34 • (DUP) R4062645-3 04/26/24 14:40

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

Laboratory Control Sample (LCS)

(LCS) R4062645-2 04/26/24 14:09

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.6	106	80.0-120	

L1729185-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1729185-05 04/26/24 14:46 • (MS) R4062645-4 04/26/24 14:52 • (MSD) R4062645-5 04/26/24 14:58

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Hexavalent Chromium	20.0	ND	11.6	16.2	58.2	81.2	1	75.0-125	J6	J3	33.0	20

L1729185-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1729185-05 04/26/24 14:46 • (MS) R4062645-6 04/26/24 15:17

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	636	ND	669	105	50	75.0-125	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1728399-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1728399-01 04/25/24 12:00 • (DUP) R4062148-2 04/25/24 12:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.10	8.11	1	0.123		1

Sample Narrative:

OS: 8.1 at 20.4C

DUP: 8.11 at 20.4C

L1728604-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1728604-02 04/25/24 12:00 • (DUP) R4062148-3 04/25/24 12:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	5.39	5.36	1	0.558		1

Sample Narrative:

OS: 5.39 at 19.9C

DUP: 5.36 at 19.9C

Laboratory Control Sample (LCS)

(LCS) R4062148-1 04/25/24 12:00

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

Sample Narrative:

LCS: 9.99 at 20.5C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4062274-1 04/25/24 19:10

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

L1728505-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1728505-12 04/25/24 19:10 • (DUP) R4062274-3 04/25/24 19:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	762	757	1	0.658		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1728553-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1728553-01 04/25/24 19:10 • (DUP) R4062274-4 04/25/24 19:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	4260	4250	1	0.235		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4062274-2 04/25/24 19:10

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	327	336	103	85.0-115	

Sample Narrative:

LCS: at 25C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4062903-1 04/27/24 11:11

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) R4062903-2 04/27/24 11:13 • (LCSD) R4062903-3 04/27/24 11:15

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	0.930	1.08	93.0	108	80.0-120			14.9	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R4063106-1 04/28/24 18:29

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	0.155	U	0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R4063106-2 04/28/24 18:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	96.1	96.1	80.0-120	
Barium	100	95.3	95.3	80.0-120	
Cadmium	100	98.6	98.6	80.0-120	
Copper	100	101	101	80.0-120	
Lead	100	99.8	99.8	80.0-120	
Nickel	100	99.1	99.1	80.0-120	
Selenium	100	96.4	96.4	80.0-120	
Silver	20.0	19.9	99.4	80.0-120	
Zinc	100	93.0	93.0	80.0-120	

L1722972-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1722972-16 04/28/24 18:35 • (MS) R4063106-5 04/28/24 18:45 • (MSD) R4063106-6 04/28/24 18:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	99.7	4.30	97.0	93.9	92.7	89.6	5	75.0-125			3.30	20
Barium	99.7	515	634	521	119	6.04	5	75.0-125		V	19.5	20
Cadmium	99.7	ND	99.8	96.3	99.7	96.2	5	75.0-125			3.60	20
Copper	99.7	8.42	109	101	101	92.4	5	75.0-125			7.85	20
Lead	99.7	12.8	123	106	111	93.5	5	75.0-125			14.8	20
Nickel	99.7	18.0	113	109	94.6	91.2	5	75.0-125			3.09	20
Selenium	99.7	ND	92.4	90.5	92.0	90.2	5	75.0-125			1.97	20
Silver	20.0	ND	19.7	19.1	98.3	95.4	5	75.0-125			3.03	20
Zinc	99.7	38.5	121	117	82.9	78.5	5	75.0-125			3.74	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

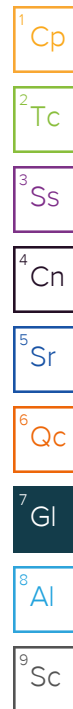
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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



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