February 16, 2023

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Report of Work Completed – Release Investigation

COGCC Location Name (ID)	BAXTER PASS SOUTH UNIT (12449)
Operator Location Name	Garden Gulch 8”
COGCC Remediation Project	24488
Legal Description	SWSE Sec. 32 T5S-R96W
Coordinates (Lat/Long)	39.566968/-108.183634
County	Garfield County, Colorado

Mr. Rollins,

Confluence Compliance Companies, LLC (Confluence) prepared this Report of Work Completed (ROWC) for Caerus Oil & Gas LLC (Caerus) to document remedial investigation activities associated with the release of produced water along the Garden Gulch 8 inch (”) to Latham Pipeline (Location). The Location is 10.2 miles northwest of Parachute, Colorado, in Garfield County as illustrated in the attached Topographic Map. Additional information on the Location and the associated remediation project is provided in the title block above, the attached Site Diagrams, and laboratory analytical reports. This ROWC provides background on the Location, methods used to complete the spill investigation, results of the investigation, and recommendations for how to proceed with this information.

Background

On March 22, 2022, produced water was observed surfacing at the adjacent Latham Laydown Yard. It is estimated that approximately 30 barrels of produced water were released due to the flowline failure. The failed portion of flowline was exposed, and standing fluids were recovered via hydro vacuum truck. The release was reported in a Colorado Oil and Gas Conservation Commission (COGCC) Form 19 Document 402993777. Subsequently, COGCC Form 27 Document 403106734 was submitted, and Remediation Project 24488 was issued.

On March 22 through March 24, 2022, Confluence coordinated and oversaw initial site investigation activities associated with the release at the Location. The faulty portion of the flowline was exposed by trenching and was inspected for point(s) of failure. One soil sample was collected beneath the point of release (POR) and a second soil sample was collected from the west sidewall of the excavation to characterize potential soil impacts. Additionally, two surface water samples were collected from House Log Gulch: one upgradient of the POR and one downgradient of the POR. A waste characterization sample was also collected of the produced water from the POR before the pipeline repair was completed. A stockpile was generated by excavation activities and two composite samples were collected: one from the north portion of the stockpile and one from the south portion. Analytical results from the event exceeded COGCC Table 915-1 Protection of Groundwater Soil Screening Levels for various organic constituents, Soil Suitability for Reclamation (SSR) standards, and metals.

Confluence returned to the site from April 7 to June 3, 2022, to perform additional remedial investigation. During the surface water evaluation, visual impacts were discovered in the silt traps at the Latham Laydown Yard adjacent to the Garden Gulch 8” Pipeline POR. A hydro vacuum truck was used to remove material from five silt traps and from the release excavation over the course of several investigation events. The point of release excavation was expanded to measure 35 feet by 20 feet. The excavation could not be advanced further due to impervious lithology at 8 feet bgs. Approximately 1 to 2 feet of soil was removed from the base of the silt traps. Soil samples were collected from the base of five silt traps and from the base and sidewalls of the release excavation to delineate the vertical and horizontal extents of soil impacts. Several background samples were collected on April 28. Analytical results from the samplings event exceeded COGCC Table 915-1 Protection of Groundwater Soil Screening Levels for various organic constituents, SSRs, and metals.

Methodology

On July 19, 2022, Confluence returned to the Location to collect additional surface water samples from House Log Gulch, immediately adjacent to the Location. Samples were collected from the same upgradient and downgradient locations identified on March 22, 2022. One spring sample was also collected from the unnamed spring located approximately 40 feet west of House Log Gulch. No hydrocarbon odor or sheen were observed in these samples.

On August 22 through 25, 2022, Confluence coordinated and oversaw the advancement of soil borings at the Location to delineate soil impacts, further characterize native levels of inorganic constituents, and install groundwater monitoring wells within House Log Gulch. Using a drill rig equipped with a combination of solid stem augers and air core rotary, eight soil borings were advanced to depths ranging from 6 to 20 feet bgs. During drilling activities, soil samples were collected, characterized, and field screened approximately every 2 to 5 feet of auger advancement. Soil conditions, observations, and field screening results are recorded in the attached Soil Boring Logs. Soil borings SB01 through SB04 were completed as groundwater monitoring wells MW01 through MW04, with SB04/MW04 being advanced 0.08 miles upgradient of the release area to characterize native levels of soil and groundwater inorganic constituents. SB05 was advanced approximately 0.07 miles upgradient of the release area to characterize native levels of soil inorganic constituents. SB06 through SB08 were completed to characterize and delineate impacts associated with the pipeline release. MW01 and MW02 were developed and sampled on August 23, 2023.

Confluence returned to the Location on September 19, 2023, to develop MW03 and MW04, sample all monitoring wells, and collect sample surface water and spring water associated with House Log Gulch for the third quarter of 2022. No hydrocarbon odor or sheen were observed in these samples.

Confluence returned to the Location on October 31, 2023, to collect fourth quarter 2022 water samples. Groundwater samples were collected from MW01 through MW04, surface water samples were collected from upgradient and downgradient on House Log Gulch and one spring sample collected from the unnamed spring. No hydrocarbon odor or sheen were observed in these samples.

All samples were collected in laboratory provided jars, immediately placed on ice, and shipped to a laboratory. Characterization and delineation soil samples were submitted for analysis of COGCC Table 915-1 soil constituents of concern. Background soil samples were submitted for analysis of Soil Suitability for Reclamation (SSR) constituents and arsenic. Water samples were submitted for analysis of COGCC Table 915-1 water constituents of concern. Soil and water sample locations are presented in the attached Site Diagrams.

Results

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

Collected spatial data are depicted in the attached Site Diagrams. Laboratory analytical reports are attached and summarized in the Laboratory Results Summary Table.

Lithology and Hydrogeology

Lithology at the Location is characterized by clayey sand with gravel. Groundwater expected to flow northeast along the unnamed tributary in House Gulch and ultimately to the Colorado River, located 11.08 miles southeast of the Location. Depth to groundwater at the POR is estimated to be approximately 27 feet bgs based on depth to water observations within the installed groundwater monitoring wells.

Soil Boring Assessment

Field screening results of soil boring samples did not indicate soil impacts with the exception of hydrocarbon odor and staining observed in SB07. Photoionization detector (PID) measurements ranged from 0.0 to 14.7 parts per million (ppm). PID readings could not be collected from SB01, SB02, SB07, or SB08.

Analytical results of soil borings SB01 through SB03 and SB06 through SB08 indicate compliance with COGCC Table 915-1 Protection of Groundwater Soil Screening Levels except for total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, xylene (BTEX), 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 1- Methylnaphthalene, naphthalene, pH, arsenic, barium, cadmium, hexavalent chromium, cooper, lead, and nickel. TPH exceedances range between 1107 to 2909 milligrams per kilogram (mg/kg). Benzene exceedances range between 0.0472 and 3.14 mg/kg. Toluene exceedances range between 0.854 and 51.4 mg/kg. Ethylbenzene and xylene exceedances were reported at 4.53 mg/kg and 118 mg/k, respectively. Exceedances of 1,2,4-trimethylbenzene range between 0.0305 to 14.3 mg/kg. Exceedances of 1,3,5-trimethylbenzene range between 0.0272 to 15.7 mg/kg. Exceedances of 1- Methylnaphthalene range between 0.0200 and 0.537 mg/kg. Exceedances of 2-Methylnaphthalene range between 0.348 to 1.96 mg/kg. Naphthalene exceedances range between 0.139 to 1.04 mg/kg. The exceedance of pH was reported at 8.32. Arsenic exceedances range between 6.69 to 66.6 mg/kg. Barium exceedances range between 151 to 2420 mg/kg. Cadmium exceedances range between 0.607 to 0.976 mg/kg. Hexavalent chromium exceedances ranged between 1.47 to 2.64 mg/kg. Copper exceedances range between 52.6 to 58.9 mg/kg. Lead exceedances range between 16.4 to 40.1 mg/kg. Nickel exceedances range between 28.0 to 39.2 mg/kg

Background Sampling

Analytical results of background soil samples collected from SB04 and SB05 exceeded COGCC Table 915-1 Protection of Groundwater Soil Screening Levels except for pH, arsenic, barium, cadmium, hexavalent chromium, lead, nickel, and selenium. Results indicate a peak pH value of 8.48, arsenic of 54.3 mg/kg, barium of 616 mg/kg, cadmium of 0.707 mg/kg, hexavalent chromium of 4.45 mg/kg, lead of 22.1 mg/kg, nickel of 32.4 mg/kg, and selenium of 2.44 mg/kg.

Analytical results of groundwater samples collected from MW04 did not exceed COGCC Table 915-1 Groundwater Standards for organic constituents. Analytical results of inorganic compounds with the groundwater background samples at MW05 indicate a peak total dissolved solids (TDS) result of 442 milligrams per liter (mg/L). Using COGCC Table 915-1 Footnote 4, alternative allowable groundwater limits can be established for TDS, with a concentration of 552.5 mg/L.

Surface and Groundwater Results

Field screening results did not indicate groundwater impacts with no sheen or odor observed. Analytical results of third and fourth quarter groundwater samples MW01 through MW05 are compliant with COGCC Table 915-1 Groundwater Standards except for TDS. TDS concentrations range from 509 to 728 mg/L, exceeding the alternative allowable limit.

Field screening results did not indicate impacts to surface water with no sheen or odor observed. Analytical results of third and fourth quarter surface water samples are compliant with COGCC Table 915-1 Groundwater Standards.

Analysis and Recommendations

Although levels of pH, arsenic, and hexavalent chromium elevated above COGCC Table 915-1 Groundwater Protection Soil Screening Levels remain in the release area, background sample data indicate native levels of these constituents elevated above allowable limits exist at the Location. Analytical results indicate a peak native pH value of 8.58, arsenic of 54.3, and hexavalent chromium 4.45 mg/kg. Based on COGCC Table 915-1 Footnote 1, Confluence recommends that Caerus request alternative allowable limits for pH of 8.58, and hexavalent chromium of 4.45 mg/kg. Additionally, Confluence also recommends that Caerus request consideration of Footnote 11 to establish an alternative allowable limit for arsenic of 67.8 mg/kg.

Assuming the proposed alternative allowable limits are accepted, levels of organic, inorganic, and metal constituents of concern exceeding COGCC Table 915-1 Protection of Groundwater Soil Screening Levels remain undelineated in the release area. Confluence recommends additional site investigation to delineate the extent of soil impacts vertically and horizontally. Prior to additional site investigation, Confluence recommends requesting a reduced analyte list of TPH, benzene, toluene, ethylbenzene, xylenes, 1,2,4 trimethylbenzene, 1,3,5 trimethylbenzene, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, electrical conductivity (EC), sodium adsorption ratio (SAR), barium, cadmium, copper, lead, nickel, and selenium. Confluence also recommends to continue quarterly sampling of the groundwater monitoring wells, and surface water locations associated with House Log Gulch.

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

Regards,

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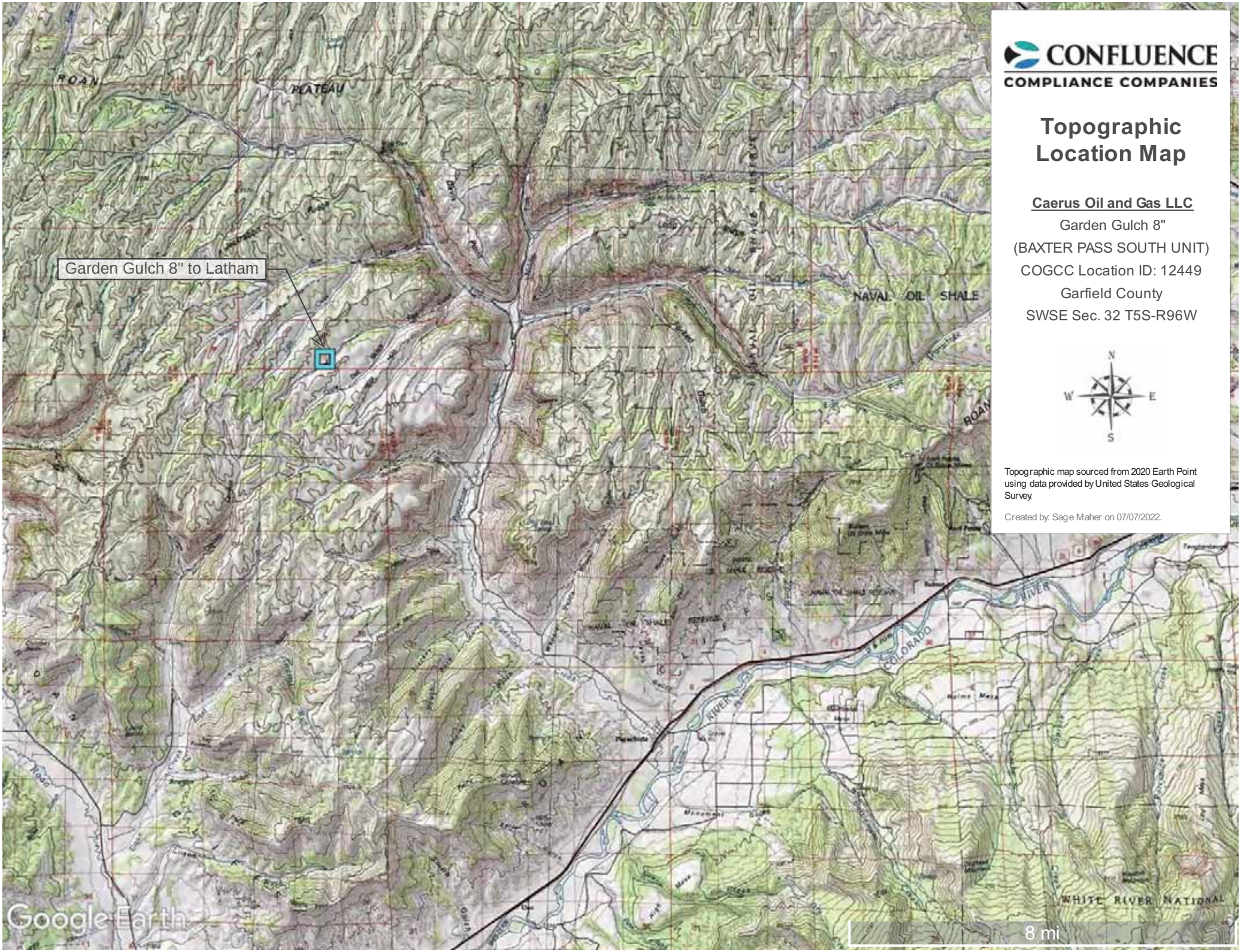
Attachments

- Topographic Location Diagram
- Site Diagram – Overview
- Site Diagram – Soil Samples
- Site Diagram – Soil Stockpile
- Site Diagram – Water Samples
- Site Diagram – Background Locations
- Analytical Results Summary Table – Soil
- Analytical Results Summary Table – Water
- Soil Boring Logs
- Laboratory Reports



CONFLUENCE
COMPLIANCE COMPANIES

Topographic Location Map

Caerus Oil and Gas LLC

Garden Gulch 8"

(BAXTER PASS SOUTH UNIT)

COGCC Location ID: 12449

Garfield County

SWSE Sec. 32 T5S-R96W

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

Created by: Sage Maher on 07/07/2022.

CONFLUENCE
COMPLIANCE COMPANIES

Site Diagram Overview

Caerus Oil and Gas LLC
Garden Gulch 8" Pipeline
Latham Laydown Yard
(MOC Water Storage Facility)
COGCC Location ID: 425128
Garfield County
SWSE Sec. 32 T5S-R96W

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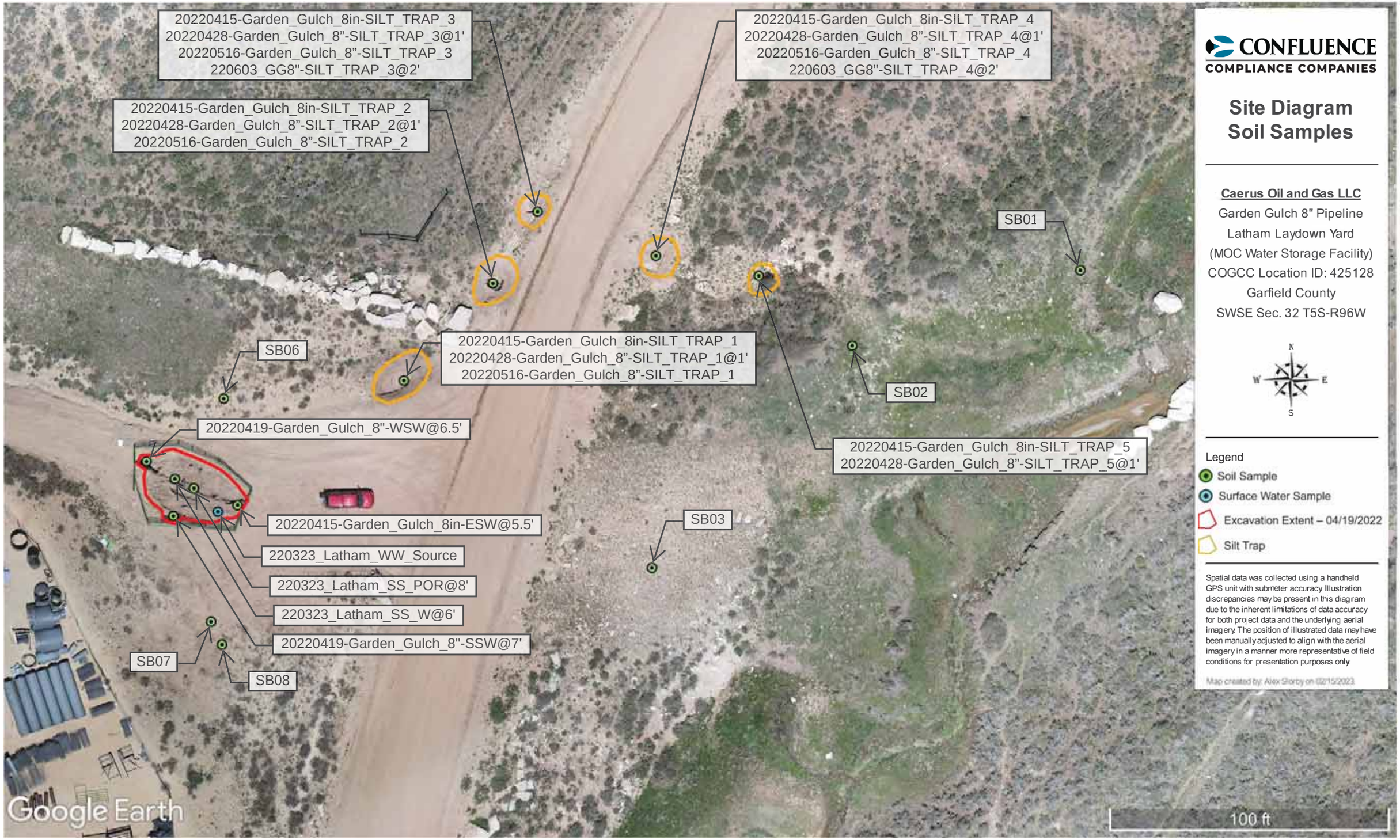
Legend

- Monitoring Well
- Excavation Extent – 04/19/2022
- Silt Trap
- Soil Stockpile – 03/24/2022

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

Map created by: Alex Storby on 03/13/2023.



CONFLUENCE
COMPLIANCE COMPANIES

Site Diagram
Soil Samples

Caerus Oil and Gas LLC
Garden Gulch 8" Pipeline
Latham Laydown Yard
(MOC Water Storage Facility)
COGCC Location ID: 425128
Garfield County
SWSE Sec. 32 T5S-R96W

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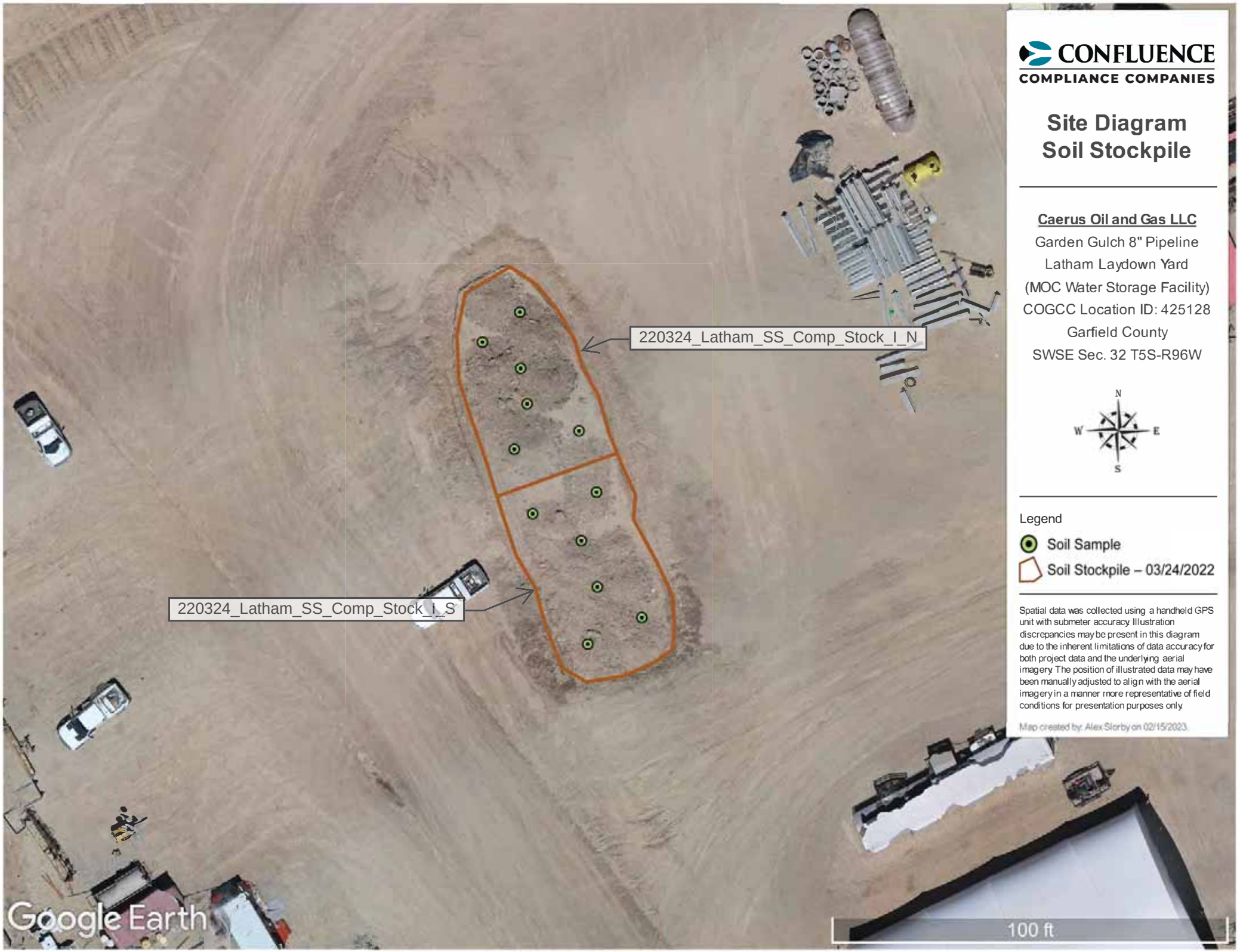
Legend
- Soil Sample
- Surface Water Sample
- Excavation Extent – 04/19/2022
- Silt Trap

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

Map created by: Alex Shorby on 02/15/2023.



CONFLUENCE
COMPLIANCE COMPANIES

Site Diagram
Soil Stockpile

Caerus Oil and Gas LLC
Garden Gulch 8" Pipeline
Latham Laydown Yard
(MOC Water Storage Facility)
COGCC Location ID: 425128
Garfield County
SWSE Sec. 32 T5S-R96W

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Legend

- Soil Sample
- Soil Stockpile – 03/24/2022

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

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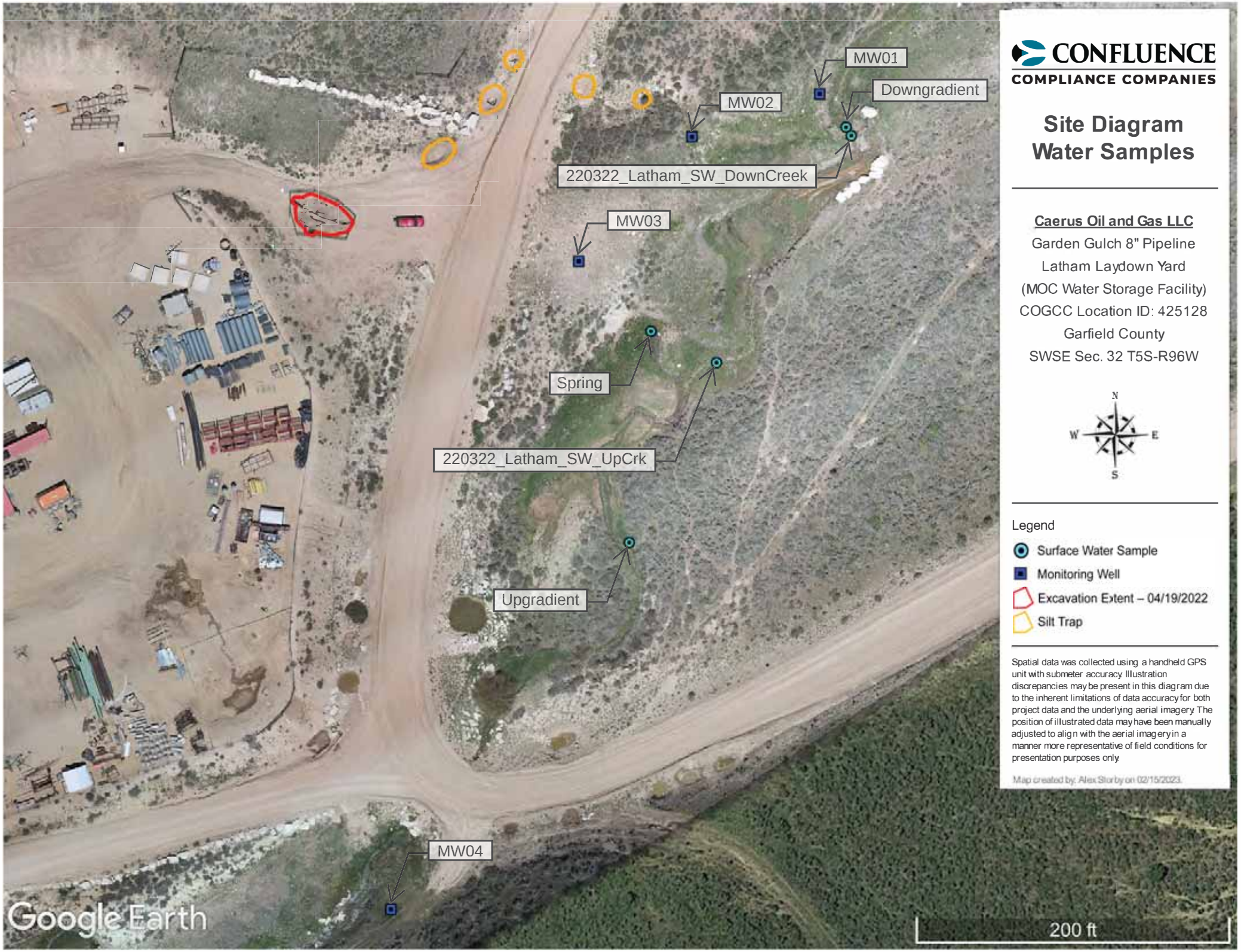

CONFLUENCE
COMPLIANCE COMPANIES

Site Diagram
Water Samples

Caerus Oil and Gas LLC
Garden Gulch 8" Pipeline
Latham Laydown Yard
(MOC Water Storage Facility)
COGCC Location ID: 425128
Garfield County
SWSE Sec. 32 T5S-R96W

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Legend

- Surface Water Sample
- Monitoring Well
- Excavation Extent – 04/19/2022
- Silt Trap

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

Map created by: Alex Storby on 02/15/2023.

CONFLUENCE
COMPLIANCE COMPANIES

Site Diagram Background Locations

Caerus Oil and Gas LLC
Garden Gulch 8" Pipeline
Latham Laydown Yard
(MOC Water Storage Facility)
COGCC Location ID: 425128
Garfield County
SWSE Sec. 32 T5S-R96W

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Legend

- Background Soil Sample
- Excavation Extent – 04/19/2022
- Silt Trap

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

Map created by: Alex Skorbyon 02/15/2023

Sample Date	Solid/Soil Source (Equipment) [Vault/Sump, Separator, Tank Battery, Dump Line, Pit, Cuttings, Background, etc.]	Depth - Z (feet) (NEGATIVE VALUE) below ground surface (bgs)	Sample ID	PID (ppm)	TPH (total volatile and extractable petroleum hydrocarbons) (GRO+DRO+ORO)	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C28) High Fraction	TPH-ORO (C28-C36) High Fraction	Benzene	Toluene	Ethylbenzene	Xylenes - total (sum of o-, m-, p- isomers)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Acenaphthene	Anthracene	Benzo(A)anthracene	Benzo(A)pyrene	Benzo(B)fluoranthene	Benzo(K)fluoranthene	Chrysene	Dibenz(A,H)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3,C,D)pyrene	1- Methylnaphthalene	2- Methylnaphthalene	Naphthalene	Pyrene
Soil Screening and Remediation Limits					Organic Compounds (mg/kg [ppm])																								
			COGCC Table 915-1 Groundwater Protection -->	NA	500	NA	NA	NA	0.0026	0.69	0.78	9.9	0.0081	0.0087	0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	0.006	0.019	0.0038	1.3
8/25/2022	Pipeline	-7	20220825-GG8"-SB07@5'-7'	NA	2909	1790	636	483	3.14	51.4	4.53	118	14.3	15.7	0.0153	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	0.0414	<0.00600	0.537	1.96	1.04	<0.00600
8/25/2022	Pipeline	-9	20220825-GG8"-SB07@9'	NA	484	484	NA	NA	0.133	2.25	0.362	9.68	1.83	2.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/25/2022	Pipeline	-6.5	20220825-GG8"-SB08@5'-6.5'	NA	470	9.08	190	271	0.0472	0.854	0.0706	1.57	0.0735	0.0965	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	0.00675	<0.00600	0.0987	0.348	0.139	<0.00600
8/25/2022	Pipeline	-8	20220825-GG8"-SB08@6.5'-8'	NA	18.5	5.01	<4.00	13.5	0.438	12.1	0.158	2.58	0.0305	0.0272	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
8/24/2022	Pipeline	-7	20220824-GG8"-SB06@5'-7'	3.1	48.0	<0.100	7.21	40.8	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
8/24/2022	Pipeline	-11	20220824-GG8"-SB06@10'-11'	14.7	1107	0.448	340	767	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	0.0103	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	0.0200	<0.0200	<0.0200	0.00650
8/23/2022	Pipeline	-4	20220823-GG8"-SB03@2'-4'	0.0	280	<0.100	85.1	195	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
8/23/2022	Pipeline	-9.5	20220823-GG8"-SB03@7.5'-9.5'	0.0	126	<0.100	24.2	102	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
8/23/2022	Pipeline	-13.5	20220823-GG8"-SB03@12'-13.5'	0.0	54.4	<0.100	11.5	42.9	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
8/23/2022	Pipeline	-15.5	20220823-GG8"-SB03@15'-15.5'	0.0	104.4	<0.100	28.0	76.4	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
8/22/2022	Pipeline	-2	20220822-GG8"-SB01@0' - 2'	NA	56.2	0.121	10.1	46.0	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
8/22/2022	Pipeline	-4	20220822-GG8"-SB01@2' - 4'	NA	16.1	<0.100	5.20	10.9	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
8/22/2022	Pipeline	-6	20220822-GG8"-SB01@4' - 6'	NA	196	<0.100	44.6	151	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
8/22/2022	Pipeline	-2	20220822-GG8"-SB02@0'-2'	NA	426	<0.100	152	274	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
6/3/2022	Pipeline	-2	220603_GG8"-SILT_TRAP_3@2'	NA	273	<0.100	31.3	242	<0.00100	<0.00500	<0.00250	0.0119	<0.00500	0.00775	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
6/3/2022	Pipeline	-2	220603_GG8"-SILT_TRAP_4@2'	NA	194	<0.100	45.9	148	<0.00100	0.00598	<0.00250	0.00668	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
5/16/2022	Pipeline	0	20220516-Garden_Gulch_8"-SILT_TRAP_1	1.4	83.1	<0.100	<20.0	83.1	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
5/16/2022	Pipeline	0	20220516-Garden_Gulch_8"-SILT_TRAP_2	0.8	35.5	<0.100	<20.0	35.5	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
5/16/2022	Pipeline	0	20220516-Garden_Gulch_8"-SILT_TRAP_3	1.6	52.5	<0.100	<20.0	52.5	0.00121	0.0134	<0.00250	0.0310	<0.00500	0.00713	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
5/16/2022	Pipeline	0	20220516-Garden_Gulch_8"-SILT_TRAP_4	2.0	22.5	<0.100	6.65	15.8	0.00270	0.0174	<0.00250	0.0840	0.0104	0.0211	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
4/28/2022	Pipeline	-1	20220428-Garden_Gulch_8"-SILT_TRAP_1@1'	1.7	187	0.115	66.6	120	0.00285	0.0244	<0.00250	0.0209	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
4/28/2022	Pipeline	-1	20220428-Garden_Gulch_8"-SILT_TRAP_2@1'	1.1	34.5	1.27	9.41	23.8	0.0324	0.292	0.0184	0.336	0.0215	0.0232	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
4/28/2022	Pipeline	-1	20220428-Garden_Gulch_8"-SILT_TRAP_3@1'	10.8	115.1	2.24	21.1	91.8	0.110	0.665	0.0463	1.50	0.101	0.122	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
4/28/2022	Pipeline	-1	20220428-Garden_Gulch_8"-SILT_TRAP_4@1'	3.1	134	0.204	31.8	102	0.00570	0.0527	0.00380	0.0696	0.00617	0.0116	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
4/28/2022	Pipeline	-1	20220428-Garden_Gulch_8"-SILT_TRAP_5@1'	1	130	<0.100	22.0	108	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
4/19/2022	Pipeline	-7	20220419-Garden_Gulch_8"-SSW@7'	2.5	97.2	<0.100	18.8	78.4	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	0.0213	<0.00600
4/19/2022	Pipeline	-6.5	20220419-Garden_Gulch_8"-WSW@6.5'	2.2	7.87	<0.100	<4.00	7.87	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
4/15/2022	Pipeline	-5.5	20220415-Garden_Gulch_8in-ESW@5.5	6.9	ND	<10.0	<10.0	<10.0	<0.0250	<0.0250	<0.0250	<0.0750	<0.0250	<0.0250	<0.040	<0.017	<0.023	<0.018	<0.019	<0.016	<0.017	<0.019	<0.019	<0.014	<0.017	<0.016	<0.023	<0.015	<0.013
4/15/2022	Pipeline	0	20220415-Garden_Gulch_8in-SILT_TRAP_5	1.1	ND	<10.0	<10.0	<10.0	<0.0250	0.108	<0.0250	0.489	0.0828	0.336	<0.024	<0.017	<0.023	<0.018	<0.019	<0.016	<0.017	<0.019	<0.019	<0.014	<0.017	<0.016	<0.023	<0.015	<0.013
4/15/2022	Pipeline	0	20220415-Garden_Gulch_8in-SILT_TRAP_4	26.8	ND	<10.0	<10.0	<10.0	0.471	2.04	0.0846	1.69	0.193	0.239	<0.024	<0.017	<0.023	<0.018	<0.019	<0.016	<0.017	<0.019	<0.019	<0.014	<0.017	0.017	0.039	0.027	<0.013
4/15/2022	Pipeline	0	20220415-Garden_Gulch_8in-SILT_TRAP_1	2.6	39.1	<10.0	39.1	<10.0	<0.0250	0.0295	<0.0250	<0.0750	<0.0250	<0.0250	<0.024	<0.017	<0.023	<0.018	<0.019	<0.016	<0.017	<0.019	<0.019	0.014	<0.017	<0.016	0.027	<0.015	<0.013
4/15/2022	Pipeline	0	20220415-Garden_Gulch_8in-SILT_TRAP_3	38	ND	<10.0	<10.0	<10.0	0.0971	0.314	<0.0250	0.105	<0.0250	<0.0250	<0.024	<0.017	<0.040	<0.018	<0.019	<0.016	<0.017	<0.019	<0.019	<0.014	<0.017	<0.016	<0.023	<0.015	<0.013
4/15/2022	Pipeline	0	20220415-Garden_Gulch_8in-SILT_TRAP_2	22.4	ND	<10.0	<10.0	<10.0	0.211	0.168	<0.0250	<0.0750	<0.0250	<0.0250	<0.024	<0.017	<0.023	<0.018	<0.019	<0.016	<0.017	<0.019	<0.019	<0.014	<0.017	<0.016	<0.023	<0.015	<0.013
3/24/2022	Pipeline	0	220324_Latham_SS_Comp_Stock_I_N	NA	1269	709	414	146	0.508	7.28	1.10	19.3	3.59	3.90	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	0.0171	<0.00600	0.216	0.735	0.337	<0.00600
3/24/2022	Pipeline	0	220324_Latham_SS_Comp_Stock_I_S	NA	554	390	89.3	74.7	0.427	12.6	1.32	30.5	6.52	7.22	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	0.0128	<0.00600	0.145	0.489	0.217	<0.00600
3/23/2022	Pipeline	-8	220323_Latham_SS_POR@8'	NA	746	608	124	14.2	3.08	33.3	2.21	40.1	4.46	4.85	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	0.00721	<0.00600	0.0974	0.317	0.185	<0.00600
3/23/2022	Pipeline	-6	220323_Latham_SS_W@6'	NA	38.2	8.52	7.48	22.2	0.0378	0.168	0.0108	0.207	0.0181	0.0185	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200	<0.0200	<0.00600
8/24/2022	Background	-5	20220824-GG8"-SB05@ 0'-5'	8.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/24/2022	Background	-10	20220824-GG8"-SB05@ 5'-10'	6.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/24/2022	Background	-15	20220824-GG8"-SB05@ 10'-15'	11.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/24/2022	Background	-20	20220824-GG8"-SB05@ 15'-20'	2.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/23/2022	Background	-5	20220823-GG8"-SB04@3-5	15.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/23/2022	Background	-10	20220823-GG8"-SB04@8-10	6.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_1@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_1@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_1@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_1@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_1@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_2@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_2@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_2@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_2@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_2@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-1	20220428-GARDEN_GULCH_8"-BG_3@1'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-1	20220428-GARDEN_GULCH_8"-BG_3@1'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-1	20220428-GARDEN_GULCH_8"-BG_3@1'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-1	20220428-GARDEN_GULCH_8"-BG_3@1'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-1	20220428-GARDEN_GULCH_8"-BG_3@1'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_4@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_4@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_4@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_4@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_4@0.5'	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Blue Fill = Exceedance
Dark Gray Italics = Below Reporting Detection Limit (RDL)
"NA" = Not Analyzed
mg/kg = milligrams per kilogram / parts per million

Laboratory Results Summary Table - Soil
Garden Gulch 8"

Soil Screening and Remediation Limits				Soil Suitability for Reclamation				Metals (mg/kg [ppm])											
COGCC Table 915-1 Groundwater Protection -->				4	6	6-8.3	2	0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
Sample Date	Soil/Soil Source (Equipment) (Vac Truck, Separator, Tank Battery, Dump Line, Pit, Cuttings, Background, etc.)	Depth - Z (feet) (NEGATIVE VALUE) below ground surface (bgs)	Sample ID	EC (Specific Conductance) (millimhos/centimeter) (by saturated paste method)	SAR (Sodium Adsorption Ratio) (calculation) (by saturated paste method)	pH (pH Units) (by saturated paste method)	Boron - Hot Water Soluble (mg/L)	Arsenic	Barium	Cadmium (mg/kg)	Chromium (VI)	Copper	Lead	Nickel	Selenium	Silver	Zinc
8/25/2022	Pipeline	-7	20220825-GG8"-SB07@5'-7'	0.184	0.185	7.83	<0.200	66.6	2420	0.976	1.47	58.9	25.4	38.7	<2.00	<1.00	75.8
8/25/2022	Pipeline	-9	20220825-GG8"-SB07@9'	0.266	0.226	7.95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/25/2022	Pipeline	-6.5	20220825-GG8"-SB08@5'-6.5'	0.132	0.348	7.59	<0.200	29.6	839	0.877	1.69	37.1	25.4	39.2	<2.00	<1.00	73.9
8/25/2022	Pipeline	-8	20220825-GG8"-SB08@6.5'-8'	0.110	0.163	7.65	<0.200	32.5	556	0.702	1.83	52.6	23.7	31.7	<2.00	<1.00	47.1
8/24/2022	Pipeline	-7	20220824-GG8"-SB06@5'-7'	0.273	0.670	8.19	<0.200	21.7	1120	<0.500	<1.00	28.2	16.4	25.5	<2.00	<1.00	69.6
8/24/2022	Pipeline	-11	20220824-GG8"-SB06@10'-11'	0.333	0.783	8.22	<0.200	43.4	1450	<0.500	<1.00	23.3	26.0	7.19	<2.00	<1.00	31.7
8/23/2022	Pipeline	-4	20220823-GG8"-SB03@2'-4'	0.133	0.0895	8.32	<0.200	10.0	873	0.677	<1.00	41.3	24.1	28.6	<2.00	<1.00	74.8
8/23/2022	Pipeline	-9.5	20220823-GG8"-SB03@7.5'-9.5'	0.0456	0.0755	7.98	<0.200	20.4	343	0.751	1.62	41.4	23.4	28.0	<2.00	<1.00	77.4
8/23/2022	Pipeline	-13.5	20220823-GG8"-SB03@12'-13.5'	0.112	0.358	8.25	<0.200	6.69	165	<0.500	1.91	22.8	18.4	16.8	<2.00	<1.00	64.9
8/23/2022	Pipeline	-15.5	20220823-GG8"-SB03@15'-15.5'	0.237	0.447	8.19	<0.200	8.43	192	0.751	1.53	37.8	20.4	23.2	<2.00	<1.00	76.6
8/22/2022	Pipeline	-2	20220822-GG8"-SB01@0' - 2'	0.643	1.25	7.81	0.448	17.6	275	<0.500	<1.00	24.7	17.7	22.2	<2.00	<1.00	65.8
8/22/2022	Pipeline	-4	20220822-GG8"-SB01@2' - 4'	0.173	1.74	7.83	<0.200	10.2	151	<0.500	2.10	21.1	17.1	18.2	<2.00	<1.00	62.0
8/22/2022	Pipeline	-6	20220822-GG8"-SB01@4' - 6'	0.223	1.56	7.88	<0.200	26.5	215	<0.500	2.64	18.0	40.1	21.3	<2.00	<1.00	68.7
8/22/2022	Pipeline	-2	20220822-GG8"-SB02@0'-2'	0.162	0.687	8.25	<0.200	19.8	218	0.607	2.54	19.8	17.7	31.7	<2.00	<1.00	51.3
6/3/2022	Pipeline	-2	220603_GG8"-SILT_TRAP_3@2'	0.862	11.8	7.90	<0.200	69.9	876	0.896	1.64	55.0	26.4	39.8	2.14	<1.00	56.2
6/3/2022	Pipeline	-2	220603_GG8"-SILT_TRAP_4@2'	0.352	4.58	8.20	0.363	8.11	410	0.527	2.12	38.4	25.6	24.8	<2.00	<1.00	75.7
5/16/2022	Pipeline	0	20220516-Garden_Gulch_8"-SILT_TRAP_1	0.172	0.674	7.83	0.378	25.3	677	<0.500	<1.00	26.4	20.4	22.5	<2.00	<1.00	34.2
5/16/2022	Pipeline	0	20220516-Garden_Gulch_8"-SILT_TRAP_2	0.249	0.642	7.63	0.204	14.9	467	<0.500	2.53	30.4	18.9	25.0	<2.00	<1.00	50.4
5/16/2022	Pipeline	0	20220516-Garden_Gulch_8"-SILT_TRAP_3	0.564	6.56	7.92	0.407	60.9	924	2.54	1.95	50.3	24.6	55.9	<2.00	<1.00	44.7
5/16/2022	Pipeline	0	20220516-Garden_Gulch_8"-SILT_TRAP_4	0.506	2.78	8.46	0.405	9.43	361	<0.500	<1.00	20.8	13.7	19.2	<2.00	<1.00	61.8
4/28/2022	Pipeline	-1	20220428-Garden_Gulch_8"-SILT_TRAP_1@1'	0.200	0.718	7.97	0.430	9.84	362	<0.500	<1.00	19.7	13.2	21.0	<2.00	<1.00	47.8
4/28/2022	Pipeline	-1	20220428-Garden_Gulch_8"-SILT_TRAP_2@1'	0.239	0.754	7.97	0.235	8.91	263	0.502	<1.00	19.3	12.8	21.4	<2.00	<1.00	53.5
4/28/2022	Pipeline	-1	20220428-Garden_Gulch_8"-SILT_TRAP_3@1'	2.490	2.43	7.03	0.330	84.6	887	2.98	2.89	62.6	28.2	67.9	3.95	<1.00	60.2
4/28/2022	Pipeline	-1	20220428-Garden_Gulch_8"-SILT_TRAP_4@1'	0.429	3.89	8.55	1.22	8.43	403	0.577	<1.00	29.6	16.3	24.5	<2.00	<1.00	66
4/28/2022	Pipeline	-1	20220428-Garden_Gulch_8"-SILT_TRAP_5@1'	0.302	2.00	8.28	0.969	7.97	336	0.653	<1.00	22.7	15.0	21.4	<2.00	<1.00	57.2
4/19/2022	Pipeline	-7	20220419-Garden_Gulch_8"-SSW@7'	0.103	0.874	7.69	0.204	50.4	634	0.674	2.94	50.2	29.3	37.1	<2.00	<1.00	62.9
4/19/2022	Pipeline	-6.5	20220419-Garden_Gulch_8"-WSW@6.5'	0.402	0.983	7.66	<0.200	7.32	208	<0.500	<1.00	16.5	13.3	19.1	<2.00	<1.00	52.7
4/15/2022	Pipeline	-5.5	20220415-Garden_Gulch_Bin-ESW@5.5	1.570	1.23	7.22	<1.20	22.2	379	<5.00	<0.250	17.6	16.5	23.7	<20.0	<1.00	56.5
4/15/2022	Pipeline	0	20220415-Garden_Gulch_Bin-SILT_TRAP_5	1.110	9.14	8.05	1.79	14.4	411	<5.00	<0.250	23.6	18.1	27.6	<20.0	<1.00	78.7
4/15/2022	Pipeline	0	20220415-Garden_Gulch_Bin-SILT_TRAP_4	1.260	11	8.27	2.33	11.8	378	<5.00	0.298	16.4	13.2	22.7	<20.0	<1.00	65.1
4/15/2022	Pipeline	0	20220415-Garden_Gulch_Bin-SILT_TRAP_1	0.517	1.59	7.81	<1.20	11.7	343	<5.00	0.267	17.0	15.2	23.4	<20.0	<1.00	58.2
4/15/2022	Pipeline	0	20220415-Garden_Gulch_Bin-SILT_TRAP_3	1.980	12.4	7.70	1.85	67.1	1180	5.74	<0.250	45.9	26.1	50.3	<20.0	<1.00	83.6
4/15/2022	Pipeline	0	20220415-Garden_Gulch_Bin-SILT_TRAP_2	7.350	5.60	7.73	<1.20	13.4	392	<5.00	<0.250	19.3	14.6	26.4	<20.0	<1.00	84.0
3/24/2022	Pipeline	0	220324_Latham_SS_Comp_Stock_I_N	2.380	13.6	7.74	1.15	13.7	369	<0.500	<1.00	17.5	14.5	19.3	<2.00	<1.00	53.5
3/24/2022	Pipeline	0	220324_Latham_SS_Comp_Stock_I_S	2.160	14.0	7.65	0.641	8.58	450	<0.735	<1.00	19.9	13.8	22.4	<2.94	<1.47	52.9
3/23/2022	Pipeline	-8	220323_Latham_SS_POR@8'	4.950	39.3	7.45	3.34	9.56	295	<0.500	<1.00	17.2	14.7	23.7	<2.00	<1.00	56.2
3/23/2022	Pipeline	-6	220323_Latham_SS_W@6'	2.390	17.4	7.90	0.740	9.32	329	<0.500	<1.00	14.6	14.6	24.7	<2.00	<1.00	48.3
8/24/2022	Background	-5	20220824-GG8"-SB05@ 0'-5'	1.130	0.483	7.91	<0.200	54.3	616	<0.500	<1.00	38.9	19.1	23.0	<2.00	<1.00	52.9
8/24/2022	Background	-10	20220824-GG8"-SB05@ 5'-10'	0.244	0.949	8.48	<0.200	34.2	433	0.619	<1.00	35.6	21.5	25.1	2.44	<1.00	59.6
8/24/2022	Background	-15	20220824-GG8"-SB05@ 10'-15'	0.326	0.679	8.32	<0.200	35.5	540	0.707	<1.00	38.0	22.1	27.2	<2.00	<1.00	66.3
8/24/2022	Background	-20	20220824-GG8"-SB05@ 15'-20'	0.113	0.704	8.26	<0.200	15.5	239	<0.500	4.45	30.5	18.1	32.4	<2.00	<1.00	78.5
8/23/2022	Background	-5	20220823-GG8"-SB04@3-5	0.343	1.00	8.32	0.230	33.3	410	0.373	<1.00	30.6	14.8	19.4	1.51	<1.00	48.1
8/23/2022	Background	-10	20220823-GG8"-SB04@8-10	0.323	1.22	8.20	0.221	31.4	468	0.393	<1.00	31.5	14.9	19.3	2.05	<1.00	46.7
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_1@0.5'	0.0855	0.0731	7.66	0.111	15.9	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_1@0.5'	0.0866	0.0852	7.93	NA	19.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_1@0.5'	0.0784	0.0826	7.63	NA	23.8	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_1@0.5'	0.0781	0.0807	7.73	NA	18.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_1@0.5'	0.0799	0.0804	8.01	NA	18.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_2@0.5'	0.146	0.0718	7.79	0.196	21.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_2@0.5'	0.155	0.0718	8.26	NA	13.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_2@0.5'	0.144	0.0701	8.15	NA	17.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_2@0.5'	0.159	0.0673	7.80	NA	19.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_2@0.5'	0.154	0.0635	7.88	NA	22.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-1	20220428-GARDEN_GULCH_8"-BG_3@1'	0.160	1.91	8.36	0.0827	11.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-1	20220428-GARDEN_GULCH_8"-BG_3@1'	0.173	1.92	8.58	NA	8.48	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-1	20220428-GARDEN_GULCH_8"-BG_3@1'	0.173	2.11	8.34	NA	9.97	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-1	20220428-GARDEN_GULCH_8"-BG_3@1'	0.171	1.93	8.39	NA	8.90	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-1	20220428-GARDEN_GULCH_8"-BG_3@1'	0.167	1.93	8.44	NA	11.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_4@0.5'	0.134	0.0936	7.92	0.344	8.36	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_4@0.5'	0.143	0.0899	7.94	NA	9.53	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_4@0.5'	0.142	0.0823	8.01	NA	20.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_4@0.5'	0.150	0.0910	7.98	NA	9.22	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2022	Background	-0.5	20220428-GARDEN_GULCH_8"-BG_4@0.5'	0.139	0.0929	7.98	NA	8.76	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Dark Gray Italics = Below Reporting Detection Limit (RDL)
"NA" = Not Analyzed
mg/kg = milligrams per kilogram / parts per million

CONFLUENCE

Laboratory Results Summary Table - Water
Garden Gulch 8"

4/4/2023

			Organic Compounds (µg/L)							Inorganics (mg/L)		
	COGCC Allowable Concentration (915-Groundwater)		5	560-1,000	700	1,400-10,000	140	67	67	1.25xBG	250 or 1.25xBG	250 or 1.25xBG
Sample Date	Depth - Z (feet) below ground surface (bgs)	Sample ID	Benzene	Toluene	Ethylbenzene	Xylenes - total	Naphthalene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	TDS 1.25 x background	Chlorides 1.25 x background	Sulfates 1.25 x background
10/31/22	-9.18	**20221031-GG8"-MW-01**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**556**	**70.9**	**50.7**
10/31/22	-12.08	**20221031-GG8"-MW-02**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**594**	**117**	**69.8**
10/31/22	-22.16	**20221031-GG8"-MW-03**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**509**	**30.4**	**41.6**
10/31/22	-12.12	**20221031-GG8"-MW-04**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**410**	**3.39**	**37.5**
10/31/22	0	**20221031-GG8"-Upgradient**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**281**	**4.85**	**29.6**
10/31/22	0	**20221031-GG8"-Spring**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**393**	**13.2**	**40.2**
10/31/22	0	**20221031-GG8"-Downgradient**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**361**	**11.5**	**39.7**
9/19/22	-9.18	**20220919-GG8"-MW-01**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**604**	**102**	**67.3**
9/19/22	-12.08	**20220919-GG8"-MW-02**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**649**	**99.2**	**79.0**
9/19/22	-22.16	**20220919-GG8"-MW-03**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**674**	**28.9**	**43.0**
9/19/22	-12.13	**20220919-GG8"-MW-04**	**0.137**	**0.460**	**0.308**	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**442**	**5.20**	**37.0**
9/19/22	NA	**20220919-GG8"-Upgradient**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**395**	**4.86**	**44.3**
9/19/22	NA	**20220919-GG8"-Spring**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**427**	**22.6**	**42.5**
9/19/22	NA	**20220919-GG8"-Downgradient**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**374**	**10.7**	**40.9**
8/23/22	-6.09	**20220823-GG8"-MW-01**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**728**	**95.3**	**146**
8/23/22	-7.38	**20220823-GG8"-MW-02**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**724**	**119**	**160**
7/19/22	0.00	**(220719-GG8"-UPGRADIENT_SW**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**370**	**1.90**	**25.8**
7/19/22	0.00	**(220719-GG8"-SPRING_SW**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**430**	**15.5**	**41.4**
7/19/22	0.00	**220719-GG8"-DOWNGRADIENT_SW**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**372**	**7.77**	**36.8**
3/23/22	NA	**220323_Latham_WW_Source**	**18700**	**29600**	*<5000*	*<15000*	*<25000*	*<5000*	*<5000*	**8640**	**5690**	**6.38**
3/22/22	NA	**220322_Latham_SW_DownCreek**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**405**	**20.0**	**45.3**
3/22/22	NA	**220322_Latham_SW_UpCrk**	*<1.00*	*<1.00*	*<1.00*	*<3.00*	*<5.00*	*<1.00*	*<1.00*	**409**	**19.8**	**46.7**

Blue Fill = Exceedance
Dark Gray Italics = Below Reporting Detection Limit (RDL)
"NA" = Not Analyzed
mg/kg = milligrams per kilogram / parts per million

Confluence Compliance Companies, LLC
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Project Name: Garden Gulch 8" (Laytham)				CONFLUENCE COMPLIANCE COMPANIES
Location: Garden Gulch 8" (Laytham)				
Lat/Long: 39.567165/-108.182364			Project Number:	
Boring Number: SB-01	Scope: Ground Water Well Install			Geologist: Andrew Smith
Date: 08/22/2022	Start Time: 1120	Finish Time: 1155	DTW: -----	Drilling Equipment: MST-700
Drilling Method: 4" Solid Stem		Drilling Contractor: CO Drilling & Sampling		Driller: Scott McKracken

Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
						Range
0 - 2	1145	80%	3-6-4-2	OH	Clayey loam. Brown to dark brown. Medium fine grain. Moist. No odor. No stain.	NA
2 - 4	1150	100%	4-4-4-7	OH	Clayey loam. Brown to dark brown. Medium fine grain. Wet. No odor. No stain.	NA
4 - 6	1155	100%	6-8-6-4	CH	Sandy clay. Tan to dark brown. Medium fine grain. Wet. No odor. No stain. MW-01 installed.	NA
					Screen: 2' - 6'. Blank: 2' - 3' All. Sand: 1.5' - 6'. Bentonite: 1.5' - Surface. Metal cover installed.	

Total Depth of Boring: 6 feet	Samples Collected: 0' - 2' 4' - 6' 2' - 4'	MW - 01 Installed

Project Name: Garden Gulch 8" (Laytham)						CONFLUENCE COMPLIANCE COMPANIES
Location: Garden Gulch 8" (Laytham)						
Lat/Long: 39.567091/-108.182653					Project Number: COG0130.0013	
Boring Number: SB-02		Scope: Ground Water Well Install			Geologist: Andrew Smith	
Date: 08/22/2022	Start Time: 1330		Finish Time: 1425	DTW: -----	Drilling Equipment: MST-700	
Drilling Method: 4" Solid Stem/Air Core			Drilling Contractor: CO Drilling & Sampling		Driller: Scott McKracken	

Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
						Range
0 - 2	1335	90%	4-4-6-4	OH	Clayey - Loam. Fractured shale. Brown to dark brown. Organic material. Moist. No odor. No stain.	NA
4	--	--	--	--	Auger refusal @4'. Switched to air core.	NA
4 - 9	1425	90%	--	--	Solid bedrock/sandstone cannot break apart. Very fine grain. Cannot collect sample. We are installing well to attempt to collect ground water from a small (1/2") seam of fractrued/wet rock @approximately 6.5' BGS. Screen: 4' - 9'/Blank Sand: 3' - 9'/4' - 3' AGL ??? Bentonite: surface - 3' Metal cover installed	NA

Total Depth of Boring: 9 feet	Samples Collected: 0' - 2'	MW - 02 Installed

Project Name: Garden Gulch 8" (Laytham)					CONFLUENCE COMPLIANCE COMPANIES
Location: Garden Gulch 8" (Laytham)					
Lat/Long: 39.566874/-108.182907				Project Number: COG0130.0013	
Boring Number: SB-03	Scope: Ground Water Well Install			Geologist: Andrew Smith	
Date: 08/23/2022	Start Time: 0850	Finish Time: 1120	DTW: -----	Drilling Equipment: MST-700	
Drilling Method: 4" Solid Stem/Air Core		Drilling Contractor: CO Drilling & Sampling		Driller: Scott McKracken	

Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
						Range
0 - 2	0855	85%	7-28-3-3	OH/ CL	0 - 1": Organic Clayey-Loam. With Fractured shale. Medium fine grain. Well graded. No Odor. No stain. 1"- 2": Weathered mudstone. Very fine grain. Shale stone present. Very stiff. Easily fractured.	0.1
2 - 4	0915	100%	16-16-16-20	CL	1"- 2": Weathered mudstone. Very fine grain. Shale stone present. Very stiff. Easily fractured. Slightly moist. It does have some black streaking that appears natural.	0.0
5.5 - 7.5	0925	100%	10-8-6-16	CH	1"- 2": Weathered mudstone. Very fine grain. Shale stone present. Very stiff. Easily fractured. Slightly moist. It does have some black streaking that appears natural. Softer and Moist. Not enough water for a well. Color variations. Tan to red to grey. Very fine grain.	0.0
7.5 - 9.5	0940	100%	16-13-11-14	CH	1"- 2": Weathered mudstone. Very fine grain. Shale stone present. Very stiff. Easily fractured. Slightly moist. Very fine grained mudstone.	0.0
10 - 11.5	1000	100%	13-16-19	CH	1"- 2": Weathered mudstone. Very fine grain. Shale stone present. Very stiff. Easily fractured. Slightly moist but not wet.	0.0
12 - 13.5	1015	100%	14-16-22	CH	1"- 2": Weathered mudstone. Very fine grain. Shale stone present. Very stiff. Easily fractured. Drier. Potential iron bands. Red coloration.	0.0
15 - 15.5	1030	100%	30-50/2"	CH/ CL	1"- 2": Weathered mudstone. Very fine grain. Shale stone present. Very stiff. Easily fractured. Turning into solid bedrock past 15.5'. Switching to air core. Small band of wet soil @15.2'.	0.0
15.5 - 20	1120	80%		SC	Solid rock, can't sample it. Shale, color varying grey, brown to red. Water injection during drilling made the entire sample wet. Can't tell if there is any flowing. Shale is highly fractured. Water confirmed and is filling up in boring. Well will be installed. Blank: 10'-3' AGL Screen: 10'-20' Sand: 9'-20' Bentonite: 5'-9' Metal casing installed	

Total Depth of Boring: 20 feet	Samples Collected: 2' - 4' 7.5' - 9.5' 12' - 13.5' 15' - 15.5'	MW - 03 Installed

Project Name: Garden Gulch 8" (Laytham)					CONFLUENCE COMPLIANCE COMPANIES
Location: Garden Gulch 8" (Laytham)					
Lat/Long: 39.565743/-108.183334				Project Number: COG0130.0013	
Boring Number: SB-04		Scope: Ground Water Well Install			Geologist: Andrew Smith
Date: 08/23/2022	Start Time: 1240	Finish Time: 1305	DTW: -----		Drilling Equipment: MST-700
Drilling Method: 4" Solid Stem		Drilling Contractor: CO Drilling & Sampling			Driller: Scott McKracken

Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
						Range
0 - 3	1245	--	--	OH	Dark brown loam. Augering to 5'. Did not collect sample. Bedrock at 3'.	NA
3 - 5	1250	--	0	CL	Sampled slough. Sandy clay. Heavy shale. Fractured medium grain. Crushed up weathered bedrock. Slight plastic.	15.7
--	---	--	--	CL	Moist soil at 6'.	NA
8 - 10	1300		0	CH	Sampled slough. Moist soil at 6'. Saturated with water. MW - 04 Installed Screen: 5' - 10' Blank: 5' - 3' AGL Sand: 4' - 10' Bentonite: 2' - 4' Metal Cover installed.	6.4

Total Depth of Boring: 10 feet	Samples Collected: 3' - 5' 8' - 10'	MW - 04 Installed

Project Name: Garden Gulch 8" (Laytham)					CONFLUENCE COMPLIANCE COMPANIES	
Location: Garden Gulch 8" (Laytham)						
Lat/Long: 39.566167/-108.182666				Project Number:		
Boring Number: SB-05		Scope: Background Soil			Geologist: Andrew Smith	
Date: 08/24/22	Start Time: 0815	Finish Time: 1010		DTW: -----	Drilling Equipment: MST-700	
Drilling Method: 4" Solid Stem		Drilling Contractor: CO Drilling & Sampling			Driller: Scott McKracken	

Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
						Range
5	0835	0%	50/2"	-	No recovery. Too hard for augers. Switching to Air Core.	NA
5	0840	--	--	SC	0-5' Sample collected from auger slough. Dry, powdered. Shale and clay. Brown. No odor. No stain.	8.7
5 - 10	0915	100%	--	SC	Solid rock. Going to attempt to crush it. Shale, color variation grey. Tan to brown. Sample can't be crushed, it just fractures. No sample collected.	NA
5 - 10	0920	--	--	SC	5-10' sample collected from auger slough. Dry powdered. Shale and clay. No stain. No odor.	6.8
10 - 15	0930	60%	--	SC	Sample collected from auger slough. Dry powdered. Shale and clay. A little bit of red coloration. Collected sample from slough with a little bit of soft core mixed in. No stain. No odor.	11.5
15 - 19	1000	50%	--	SC/CH	Thin band of sandy clay @18'-18.5 with a bit of red. Sample collected @18'-18.5'. The rest is solid shale. Sample collected from auger slough. Dry powdered. Shale and clay. A little bit of red coloration. No stain. No odor.	2.7

Total Depth of Boring: 19 feet	Samples Collected: 0' - 5'	Boring backfilled with surrounding soil.

Project Name: Garden Gulch 8" (Laytham)				CONFLUENCE COMPLIANCE COMPANIES
Location: Garden Gulch 8" (Laytham)				
Lat/Long: 39.567039/-108.183451			Project Number:	
Boring Number: SB-06	Scope: Delineation Soil Sampling			Geologist: Andrew Smith
Date: 08/24/2022	Start Time: 1055	Finish Time: 1400	DTW: -----	Drilling Equipment: MST-700
Drilling Method: 4" Solid Stem		Drilling Contractor: CO Drilling & Sampling		Driller: Scott McKracken

Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
						Range
5 - 7	1105	100%	4-9-14-22	CL	Silty clay (weathered mudstone). Very fine grained. Color varying grey. Brown red to dark brown. No odor. No staining. Red striations. Sample collected.	3.1
10 - 11	1120	100%	21-21/3-50/3	CH	Sandy clay. Solid red band @11'. Color varying. Brown red to dark brown. But with red band, with well graded shale gravel. No odor. No staining.	14.7
15 - 20	1145	0	50/0	--	2" spoon didn't work. Switching to air core.	
					Solid rock. Cannot sample.	

Total Depth of Boring: 20 feet	Samples Collected: 5' - 7' 10' - 11'	

Project Name: Garden Gulch 8" (Laytham)				CONFLUENCE COMPLIANCE COMPANIES
Location: Garden Gulch 8" (Laytham)				
Lat/Long: 39.566821/-108.183467			Project Number:	
Boring Number: SB-07	Scope: Delineation			Geologist: Andrew Smith
Date: 08/25/2022	Start Time: 0805	Finish Time: 0835	DTW: -----	Drilling Equipment: MST-700
Drilling Method: 4" Solid Stem		Drilling Contractor: CO Drilling & Sampling		Driller: Scott McKracken

Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
						Range
5 - 7	0815	100%	14-13-10-6	CH	Clay with shale. Fine grain. Brown to red. Plastic. Odor and stain noted.	NA
8	----	----	----	--	Shale (Bedrock begins)	NA
9	0835	100%	50/1"	CH/ SC	Auger refusal. Shale bedrock with clay. No odor. No stain. Spoon refusal.	NA

Total Depth of Boring: 9 feet	Samples Collected: 5' - 7' 9'	No PID

Project Name: Garden Gulch 8" (Laytham)				CONFLUENCE COMPLIANCE COMPANIES
Location: Garden Gulch 8" (Laytham)				
Lat/Long: 39.566798/-108.183453			Project Number:	
Boring Number: SB-08	Scope: Delinate			Geologist: Andrew Smith
Date: 08/25/2022	Start Time: 0900	Finish Time: 0915	DTW: -----	Drilling Equipment: MST-700
Drilling Method: 4" Solid Stem		Drilling Contractor: CO Drilling & Sampling		Driller: Scott McKracken

Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
						Range
5 - 6.5	0905	100%	4-6-14	CH	Clay with shale stone. Fine grain. Plastic. Brown to red. No odor. No stain.	NA
6.5 - 8	0915	100%	5-5-14-50/0"	CH	Clay with shale stone. Fine grain. Plastic. Brown to red. Auger and spoon refusal @8'. No odor. No stain.	NA

Total Depth of Boring: 8 feet	Samples Collected: 5' - 6.5' 6.5' - 8'	No PID

ANALYTICAL REPORT

January 09, 2023

Revised Report

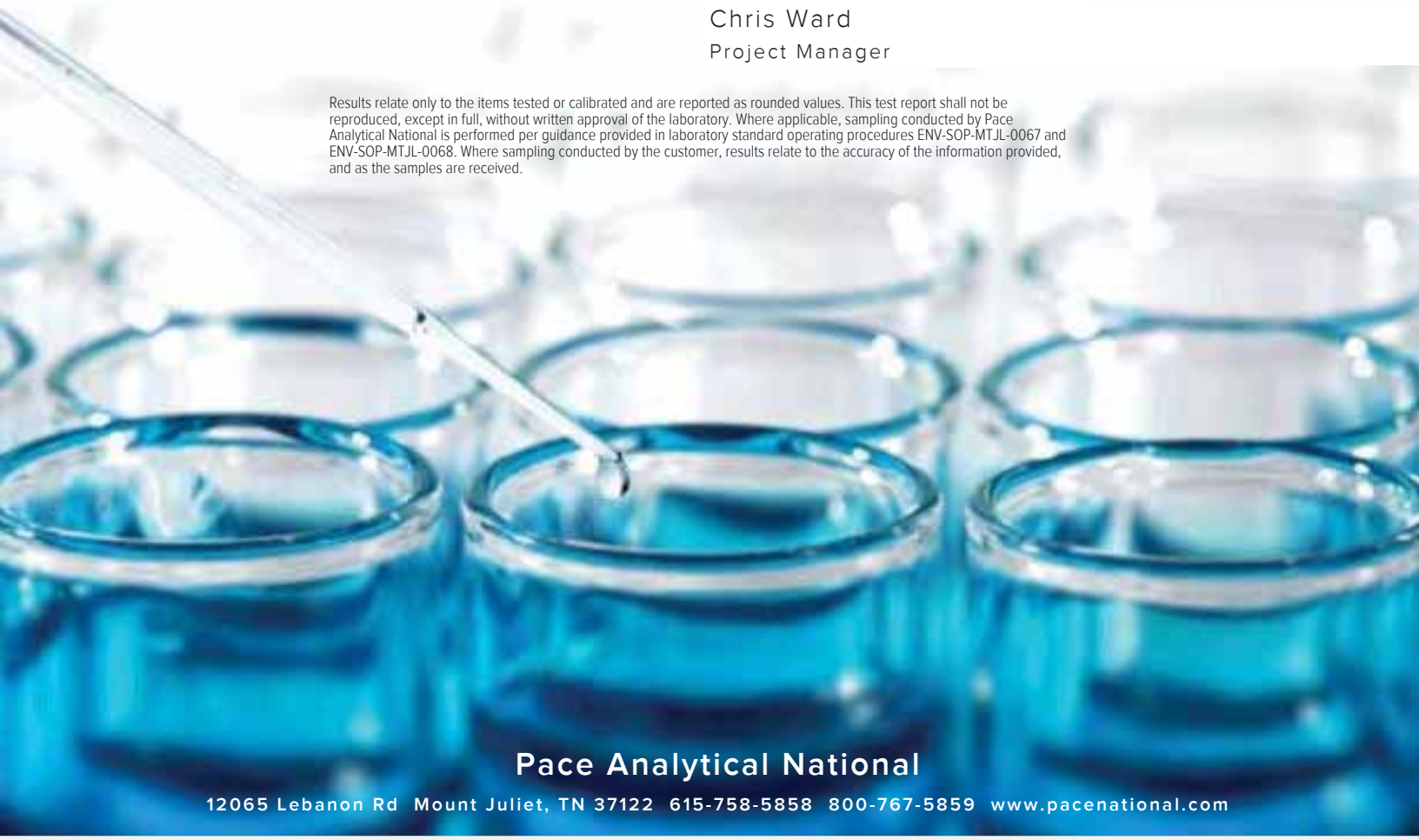
Caerus Oil and Gas

Sample Delivery Group:	L1517240
Samples Received:	07/21/2022
Project Number:	
Description:	Garden Gulch 8' Surface Water
Site:	LATHAM LAYDOWN YARD
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward

Project Manager



Pace Analytical National

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

TABLE OF CONTENTS

SAMPLE SUMMARY

(220719-GG8"-DOWNGRADIENT_SW L1517240-01 GW

Collected by: Andrew Smith | Collected date/time: 07/19/22 10:45 | Received date/time: 07/21/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1899985	1	07/24/22 15:12	07/24/22 16:25	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1899820	1	07/23/22 15:42	07/23/22 15:42	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899752	1	07/23/22 14:31	07/23/22 14:31	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1898856	1	07/21/22 20:54	07/25/22 16:10	HLJ	Mt. Juliet, TN

(220719-GG8"-SPRING_SW L1517240-02 GW

Collected by: Andrew Smith | Collected date/time: 07/19/22 10:55 | Received date/time: 07/21/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1900950	1	07/26/22 11:33	07/26/22 15:32	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1899820	1	07/23/22 17:03	07/23/22 17:03	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899752	1	07/23/22 14:52	07/23/22 14:52	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1898856	1	07/21/22 20:54	07/25/22 16:36	HLJ	Mt. Juliet, TN

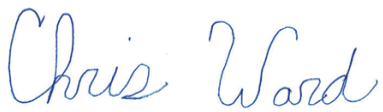
(220719-GG8"-UPGRADIENT_SW L1517240-03 GW

Collected by: Andrew Smith | Collected date/time: 07/19/22 11:05 | Received date/time: 07/21/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1899985	1	07/24/22 15:12	07/24/22 16:25	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1899820	1	07/23/22 17:16	07/23/22 17:16	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1899752	1	07/23/22 15:14	07/23/22 15:14	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1898856	1	07/21/22 20:54	07/26/22 14:47	HLJ	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: 08/04/22 15:25

Project Narrative

Report reisued to add sample prefixes

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	372		10.0	1	07/24/2022 16:25	WG1899985

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	7.77		1.00	1	07/23/2022 15:42	WG1899820
Sulfate	36.8		5.00	1	07/23/2022 15:42	WG1899820

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/23/2022 14:31	WG1899752
Toluene	ND		0.00100	1	07/23/2022 14:31	WG1899752
Ethylbenzene	ND		0.00100	1	07/23/2022 14:31	WG1899752
Xylenes, Total	ND		0.00300	1	07/23/2022 14:31	WG1899752
Naphthalene	ND		0.00500	1	07/23/2022 14:31	WG1899752
1,2,4-Trimethylbenzene	ND		0.00100	1	07/23/2022 14:31	WG1899752
1,3,5-Trimethylbenzene	ND		0.00100	1	07/23/2022 14:31	WG1899752
(S) Toluene-d8	*104*		*80.0-120*		*07/23/2022 14:31*	WG1899752
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*07/23/2022 14:31*	WG1899752
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*07/23/2022 14:31*	WG1899752

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
C10-C28 Diesel Range	ND		0.100	1	07/25/2022 16:10	WG1898856
(S) o-Terphenyl	*93.2*		*52.0-156*		*07/25/2022 16:10*	WG1898856

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	430		10.0	1	07/26/2022 15:32	WG1900950

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	15.5		1.00	1	07/23/2022 17:03	WG1899820
Sulfate	41.4		5.00	1	07/23/2022 17:03	WG1899820

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/23/2022 14:52	WG1899752
Toluene	ND		0.00100	1	07/23/2022 14:52	WG1899752
Ethylbenzene	ND		0.00100	1	07/23/2022 14:52	WG1899752
Xylenes, Total	ND		0.00300	1	07/23/2022 14:52	WG1899752
Naphthalene	ND		0.00500	1	07/23/2022 14:52	WG1899752
1,2,4-Trimethylbenzene	ND		0.00100	1	07/23/2022 14:52	WG1899752
1,3,5-Trimethylbenzene	ND		0.00100	1	07/23/2022 14:52	WG1899752
(S) Toluene-d8	*101*		*80.0-120*		*07/23/2022 14:52*	WG1899752
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*07/23/2022 14:52*	WG1899752
(S) 1,2-Dichloroethane-d4	*98.2*		*70.0-130*		*07/23/2022 14:52*	WG1899752

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
C10-C28 Diesel Range	ND		0.100	1	07/25/2022 16:36	WG1898856
(S) o-Terphenyl	*82.6*		*52.0-156*		*07/25/2022 16:36*	WG1898856

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	370		10.0	1	07/24/2022 16:25	WG1899985

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	1.90		1.00	1	07/23/2022 17:16	WG1899820
Sulfate	25.8		5.00	1	07/23/2022 17:16	WG1899820

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/23/2022 15:14	WG1899752
Toluene	ND		0.00100	1	07/23/2022 15:14	WG1899752
Ethylbenzene	ND		0.00100	1	07/23/2022 15:14	WG1899752
Xylenes, Total	ND		0.00300	1	07/23/2022 15:14	WG1899752
Naphthalene	ND		0.00500	1	07/23/2022 15:14	WG1899752
1,2,4-Trimethylbenzene	ND		0.00100	1	07/23/2022 15:14	WG1899752
1,3,5-Trimethylbenzene	ND		0.00100	1	07/23/2022 15:14	WG1899752
(S) Toluene-d8	*100*		*80.0-120*		*07/23/2022 15:14*	WG1899752
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*07/23/2022 15:14*	WG1899752
(S) 1,2-Dichloroethane-d4	*98.0*		*70.0-130*		*07/23/2022 15:14*	WG1899752

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
C10-C28 Diesel Range	ND		0.100	1	07/26/2022 14:47	WG1898856
(S) o-Terphenyl	*97.9*		*52.0-156*		*07/26/2022 14:47*	WG1898856

Method Blank (MB)

(MB) R3821252-1 07/24/22 16:25

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1516184-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1516184-01 07/24/22 16:25 • (DUP) R3821252-3 07/24/22 16:25

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	668	701	1	4.87		5

L1516184-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1516184-02 07/24/22 16:25 • (DUP) R3821252-4 07/24/22 16:25

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	767	809	1	5.41	J3	5

Laboratory Control Sample (LCS)

(LCS) R3821252-2 07/24/22 16:25

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	7520	85.5	77.3-123	

Method Blank (MB)

(MB) R3822746-1 07/26/22 15:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1516604-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1516604-01 07/26/22 15:32 • (DUP) R3822746-3 07/26/22 15:32

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	10.0	10.0	1	0.000		5

L1516798-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1516798-01 07/26/22 15:32 • (DUP) R3822746-4 07/26/22 15:32

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	721	704	1	2.43		5

Laboratory Control Sample (LCS)

(LCS) R3822746-2 07/26/22 15:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	7550	85.8	77.3-123	

QUALITY CONTROL SUMMARY

L1517240-01,02,03

Method Blank (MB)

(MB) R3819145-1 07/23/22 10:48

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Sulfate	U		0.594	5.00

L1517240-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1517240-01 07/23/22 15:42 • (DUP) R3819145-3 07/23/22 16:23

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	7.77	7.57	1	2.54		15
Sulfate	36.8	37.1	1	0.862		15

L1517984-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1517984-01 07/23/22 20:37 • (DUP) R3819145-6 07/23/22 20:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	23.2	23.1	1	0.475		15
Sulfate	15.2	15.0	1	0.979		15

Laboratory Control Sample (LCS)

(LCS) R3819145-2 07/23/22 11:01

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.5	98.7	80.0-120	
Sulfate	40.0	39.9	99.8	80.0-120	

L1517240-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1517240-01 07/23/22 15:42 • (MS) R3819145-4 07/23/22 16:36 • (MSD) R3819145-5 07/23/22 16:49

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 %
Chloride	50.0	7.77	57.8	58.4	100	101	1	80.0-120			0.866	15
Sulfate	50.0	36.8	87.1	87.6	101	102	1	80.0-120			0.581	15

L1517984-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1517984-01 07/23/22 20:37 • (MS) R3819145-7 07/23/22 21:04

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	23.2	75.2	104	1	80.0-120	
Sulfate	50.0	15.2	68.7	107	1	80.0-120	

Method Blank (MB)

(MB) R3818947-2 07/23/22 08:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Xylenes, Total	U		0.000174	0.00300
Naphthalene	U		0.00100	0.00500
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
(S) Toluene-d8	*103*			*80.0-120*
(S) 4-Bromofluorobenzene	*107*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*99.6*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3818947-1 07/23/22 07:20

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.00500	0.00509	102	70.0-123	
Toluene	0.00500	0.00490	98.0	79.0-120	
Ethylbenzene	0.00500	0.00464	92.8	79.0-123	
Xylenes, Total	0.0150	0.0141	94.0	79.0-123	
Naphthalene	0.00500	0.00328	65.6	54.0-135	
1,2,4-Trimethylbenzene	0.00500	0.00510	102	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00529	106	76.0-122	
(S) Toluene-d8			*101*	*80.0-120*	
(S) 4-Bromofluorobenzene			*104*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*100*	*70.0-130*	

Method Blank (MB)

(MB) R3818702-1 07/23/22 00:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
C10-C28 Diesel Range	U		0.0222	0.100
(S) o-Terphenyl	*126*			*52.0-156*

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

(LCS) R3818702-2 07/23/22 01:17 • (LCSD) R3818702-3 07/23/22 01:43

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 %
C10-C28 Diesel Range	1.50	1.81	1.60	121	107	50.0-150			12.3	20
(S) o-Terphenyl				*118*	*86.5*	*52.0-156*				

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
J3	The associated batch QC was outside the established quality control range for precision.

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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

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

C195

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: Info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: Garden Gulch 8" Surface Water	State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET

Container Preservative Type **

Lab Project Manager:

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

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

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	BTEX	Naphthalene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	TDS	Chloride, Sulfate	TPH- High Fraction	Lab Sample # / Comments
20220719-GG8"-Downgradient_SW	GW	G	7/19/2022	1045				5	G/P	X	X	X	X	X	X	X	L1517240-01
20220719-GG8"-SPRING_SW	GW	G	7/19/2022	1055				5	G/P	X	X	X	X	X	X	X	-02
20220719-GG8"-Upgradient_SW	GW	G	7/19/2022	1105				6	G/P	X	X	X	X	X	X	X	-03

Lab Profile/Line:

Lab Sample Receipt Checklist:

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

LAB USE ONLY:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#: _____

Cooler 1 Temp Upon Receipt: ___oC

Cooler 1 Therm Corr. Factor: ___oC

Cooler 1 Corrected Temp: ___oC

Comments:

Relinquished by/Company: (Signature) AS	Date/Time: 7/20/22 1200	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time: 7/20/22 1700	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature) P. Rambley	Date/Time: 7-21-22 0915

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ___ of: ___

ANALYTICAL REPORT

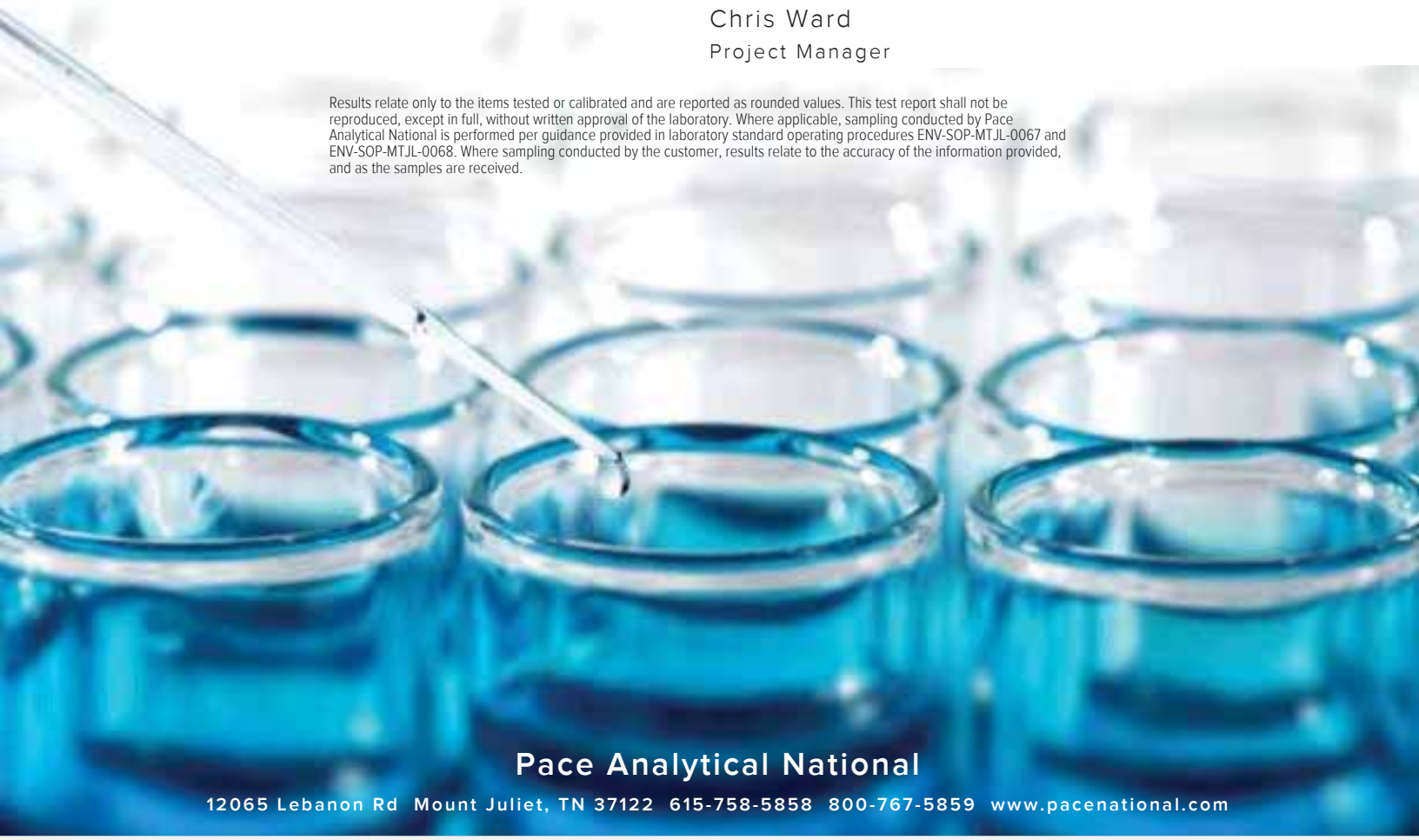
September 13, 2022

Caerus Oil and Gas

Sample Delivery Group:	L1528633
Samples Received:	08/24/2022
Project Number:	GARDEN GULCH 8" LATH
Description:	Garden Gulch 8" Latham Laydown Yard
Site:	GARDEN GULCH 8" (LATHAM)
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager



Pace Analytical National

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

TABLE OF CONTENTS

SAMPLE SUMMARY

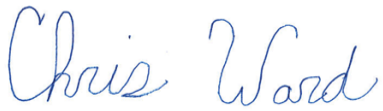
20220822-GG8"-SB02@0'-2' L1528633-01 Solid

Collected by: Andrew Smith
Collected date/time: 08/22/22 13:35
Received date/time: 08/24/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1916178	1	08/30/22 23:34	08/30/22 23:34	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1917380	1	09/02/22 03:26	09/02/22 06:34	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1917505	1	08/31/22 09:00	08/31/22 11:00	SGB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923611	1	09/09/22 16:10	09/13/22 13:30	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1916940	1	08/29/22 16:28	08/30/22 17:43	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1916176	1	08/28/22 19:09	08/30/22 12:45	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1916966	5	08/29/22 16:57	08/29/22 22:46	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1916852	1	08/25/22 18:24	08/27/22 22:18	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1917108	1	08/25/22 18:24	08/26/22 14:37	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1916428	10	08/27/22 10:33	08/27/22 16:38	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1917197	1	08/26/22 17:42	08/27/22 18:12	AMG	Mt. Juliet, TN

CASE NARRATIVE

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



Chris Ward
Project Manager

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.687		1	08/30/2022 23:34	WG1916178

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	2.54		1.00	1	09/02/2022 06:34	WG1917380

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.25	T8	1	08/31/2022 11:00	WG1917505

Sample Narrative:

L1528633-01 WG1917505: 8.25 at 20.7C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	162		10.0	1	09/13/2022 13:30	WG1923611

Sample Narrative:

L1528633-01 WG1923611: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	218		0.500	1	08/30/2022 17:43	WG1916940
Cadmium	0.607		0.500	1	08/30/2022 17:43	WG1916940
Copper	19.8		2.00	1	08/30/2022 17:43	WG1916940
Lead	17.7		0.500	1	08/30/2022 17:43	WG1916940
Nickel	31.7		2.00	1	08/30/2022 17:43	WG1916940
Selenium	ND		2.00	1	08/30/2022 17:43	WG1916940
Silver	ND		1.00	1	08/30/2022 17:43	WG1916940
Zinc	51.3		5.00	1	08/30/2022 17:43	WG1916940

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/l		mg/l			
Hot Water Sol. Boron	ND		0.200	1	08/30/2022 12:45	WG1916176

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	19.8		1.00	5	08/29/2022 22:46	WG1916966

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	ND		0.100	1	08/27/2022 22:18	WG1916852
(S) a,a,a-Trifluorotoluene(FID)	*103*		*77.0-120*		*08/27/2022 22:18*	WG1916852

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	08/26/2022 14:37	WG1917108
Toluene	ND		0.00500	1	08/26/2022 14:37	WG1917108
Ethylbenzene	ND		0.00250	1	08/26/2022 14:37	WG1917108
Xylenes, Total	ND		0.00650	1	08/26/2022 14:37	WG1917108
1,2,4-Trimethylbenzene	ND		0.00500	1	08/26/2022 14:37	WG1917108
1,3,5-Trimethylbenzene	ND		0.00500	1	08/26/2022 14:37	WG1917108
(S) Toluene-d8	*103*		*75.0-131*		*08/26/2022 14:37*	WG1917108
(S) 4-Bromofluorobenzene	*97.2*		*67.0-138*		*08/26/2022 14:37*	WG1917108
(S) 1,2-Dichloroethane-d4	*99.1*		*70.0-130*		*08/26/2022 14:37*	WG1917108

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	152		40.0	10	08/27/2022 16:38	WG1916428
C28-C36 Motor Oil Range	274		40.0	10	08/27/2022 16:38	WG1916428
(S) o-Terphenyl	*42.0*		*18.0-148*		*08/27/2022 16:38*	WG1916428

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	08/27/2022 18:12	WG1917197
Anthracene	ND		0.00600	1	08/27/2022 18:12	WG1917197
Benzo(a)anthracene	ND		0.00600	1	08/27/2022 18:12	WG1917197
Benzo(b)fluoranthene	ND		0.00600	1	08/27/2022 18:12	WG1917197
Benzo(k)fluoranthene	ND		0.00600	1	08/27/2022 18:12	WG1917197
Benzo(a)pyrene	ND		0.00600	1	08/27/2022 18:12	WG1917197
Chrysene	ND		0.00600	1	08/27/2022 18:12	WG1917197
Dibenz(a,h)anthracene	ND		0.00600	1	08/27/2022 18:12	WG1917197
Fluoranthene	ND		0.00600	1	08/27/2022 18:12	WG1917197
Fluorene	ND		0.00600	1	08/27/2022 18:12	WG1917197
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/27/2022 18:12	WG1917197
1-Methylnaphthalene	ND		0.0200	1	08/27/2022 18:12	WG1917197
2-Methylnaphthalene	ND		0.0200	1	08/27/2022 18:12	WG1917197
Naphthalene	ND		0.0200	1	08/27/2022 18:12	WG1917197
Pyrene	ND		0.00600	1	08/27/2022 18:12	WG1917197
(S) p-Terphenyl-d14	*58.1*		*23.0-120*		*08/27/2022 18:12*	WG1917197
(S) Nitrobenzene-d5	*56.5*		*14.0-149*		*08/27/2022 18:12*	WG1917197
(S) 2-Fluorobiphenyl	*57.4*		*34.0-125*		*08/27/2022 18:12*	WG1917197

L1528744-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1528744-02 08/31/22 11:00 • (DUP) R3832371-2 08/31/22 11:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.84	8.83	1	0.113		1

Sample Narrative:

OS: 8.84 at 20.7C

DUP: 8.83 at 20.8C

L1528876-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1528876-03 08/31/22 11:00 • (DUP) R3832371-3 08/31/22 11:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	10.2	10.1	1	0.394		1

Sample Narrative:

OS: 10.16 at 20.3C

DUP: 10.12 at 20.2C

Laboratory Control Sample (LCS)

(LCS) R3832371-1 08/31/22 11:00

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

Sample Narrative:

LCS: 9.92 at 20.7C

Method Blank (MB)

(MB) R3836553-1 09/13/22 13:30

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

L1528633-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1528633-01 09/13/22 13:30 • (DUP) R3836553-3 09/13/22 13:30

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	162	163	1	0.123		20

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

L1528794-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1528794-02 09/13/22 13:30 • (DUP) R3836553-4 09/13/22 13:30

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	283	286	1	1.16		20

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

Laboratory Control Sample (LCS)

(LCS) R3836553-2 09/13/22 13:30

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1110	99.2	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3832136-1 08/30/22 16:09

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

Laboratory Control Sample (LCS)

(LCS) R3832136-2 08/30/22 16:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	95.6	95.6	80.0-120	
Cadmium	100	92.0	92.0	80.0-120	
Copper	100	93.9	93.9	80.0-120	
Lead	100	91.7	91.7	80.0-120	
Nickel	100	92.5	92.5	80.0-120	
Selenium	100	93.8	93.8	80.0-120	
Silver	20.0	17.4	87.1	80.0-120	
Zinc	100	90.8	90.8	80.0-120	

L1528692-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1528692-03 08/30/22 16:15 • (MS) R3832136-5 08/30/22 16:24 • (MSD) R3832136-6 08/30/22 16:27

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	99.7	180	237	231	57.2	51.7	1	75.0-125	J6	J6	2.34	20
Cadmium	99.7	ND	92.6	87.2	92.4	87.0	1	75.0-125			5.91	20
Copper	99.7	42.6	138	133	95.3	90.2	1	75.0-125			3.77	20
Lead	99.7	11.6	108	105	96.8	92.9	1	75.0-125			3.68	20
Nickel	99.7	9.41	109	103	99.2	93.5	1	75.0-125			5.39	20
Selenium	99.7	ND	86.3	79.3	86.3	79.3	1	75.0-125			8.53	20
Silver	20.0	ND	17.4	16.3	87.0	81.6	1	75.0-125			6.46	20
Zinc	99.7	34.3	118	112	84.1	78.1	1	75.0-125			5.25	20

Method Blank (MB)

(MB) R3831989-1 08/30/22 12:22

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) R3831989-2 08/30/22 12:25 • (LCSD) R3831989-3 08/30/22 12:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.07	1.01	107	101	80.0-120			5.20	20

Method Blank (MB)

(MB) R3831693-1 08/29/22 21:22

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

Laboratory Control Sample (LCS)

(LCS) R3831693-2 08/29/22 21:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	85.7	85.7	80.0-120	

L1528692-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1528692-03 08/29/22 21:29 • (MS) R3831693-5 08/29/22 21:39 • (MSD) R3831693-6 08/29/22 21:42

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	1.11	77.8	71.5	76.7	70.4	5	75.0-125		J6	8.39	20

Method Blank (MB)

(MB) R3831667-2 08/27/22 16:04

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3831667-1 08/27/22 14:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.58	83.3	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*102*	*77.0-120*	

Method Blank (MB)

(MB) R3831891-3 08/26/22 11:49

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	*107*			*75.0-131*
(S) 4-Bromofluorobenzene	*92.8*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*

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

(LCS) R3831891-1 08/26/22 10:31 • (LCSD) R3831891-2 08/26/22 10:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.112	0.116	89.6	92.8	70.0-123			3.51	20
Toluene	0.125	0.107	0.106	85.6	84.8	75.0-121			0.939	20
Ethylbenzene	0.125	0.113	0.117	90.4	93.6	74.0-126			3.48	20
Xylenes, Total	0.375	0.327	0.340	87.2	90.7	72.0-127			3.90	20
1,2,4-Trimethylbenzene	0.125	0.114	0.118	91.2	94.4	70.0-126			3.45	20
1,3,5-Trimethylbenzene	0.125	0.113	0.115	90.4	92.0	73.0-127			1.75	20
(S) Toluene-d8				*101*	*101*	*75.0-131*				
(S) 4-Bromofluorobenzene				*103*	*100*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*116*	*112*	*70.0-130*				

L1528620-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1528620-04 08/26/22 14:18 • (MS) R3831891-4 08/26/22 19:50 • (MSD) R3831891-5 08/26/22 20:10

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 %
Benzene	0.125	ND	0.105	0.0690	84.0	55.2	1	10.0-149		J3	41.4	37
Toluene	0.125	ND	0.105	0.0626	84.0	50.1	1	10.0-156		J3	50.6	38
Ethylbenzene	0.125	ND	0.112	0.0680	89.6	54.4	1	10.0-160		J3	48.9	38
Xylenes, Total	0.375	ND	0.314	0.207	83.7	55.2	1	10.0-160		J3	41.1	38
1,2,4-Trimethylbenzene	0.125	ND	0.110	0.0748	88.0	59.8	1	10.0-160		J3	38.1	36
1,3,5-Trimethylbenzene	0.125	ND	0.102	0.0698	81.6	55.8	1	10.0-160			37.5	38
(S) Toluene-d8					*102*	*104*		*75.0-131*				
(S) 4-Bromofluorobenzene					*99.3*	*98.4*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*106*	*105*		*70.0-130*				

Method Blank (MB)

(MB) R3831331-2 08/27/22 14:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	0.311	J	0.274	4.00
(S) o-Terphenyl	*63.1*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3831331-1 08/27/22 14:36

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	37.4	74.8	50.0-150	
(S) o-Terphenyl			*70.9*	*18.0-148*	

L1528839-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1528839-01 08/27/22 18:00 • (MS) R3831331-3 08/27/22 18:14 • (MSD) R3831331-4 08/27/22 18:28

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	49.2	ND	28.9	30.6	54.0	57.5	1	50.0-150			5.71	20
(S) o-Terphenyl					*47.1*	*48.3*		*18.0-148*				

Method Blank (MB)

(MB) R3831964-2 08/27/22 11:15

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	*82.5*			*23.0-120*
(S) Nitrobenzene-d5	*67.0*			*14.0-149*
(S) 2-Fluorobiphenyl	*73.5*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3831964-1 08/27/22 10:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0535	66.9	50.0-120	
Anthracene	0.0800	0.0535	66.9	50.0-126	
Benzo(a)anthracene	0.0800	0.0568	71.0	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0490	61.3	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0479	59.9	49.0-125	
Benzo(a)pyrene	0.0800	0.0521	65.1	42.0-120	
Chrysene	0.0800	0.0531	66.4	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0482	60.3	47.0-125	
Fluoranthene	0.0800	0.0558	69.8	49.0-129	
Fluorene	0.0800	0.0556	69.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0527	65.9	46.0-125	
1-Methylnaphthalene	0.0800	0.0548	68.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0575	71.9	50.0-120	
Naphthalene	0.0800	0.0526	65.8	50.0-120	
Pyrene	0.0800	0.0517	64.6	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3831964-1 08/27/22 10:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*78.9*	*23.0-120*	
(S) Nitrobenzene-d5			*76.4*	*14.0-149*	
(S) 2-Fluorobiphenyl			*76.3*	*34.0-125*	

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
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.

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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

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

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

L1528633

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC

Billing Information: Info on file

Address: Info on file

Report To: Jake Janicek, Brett Middleton, Blair Rollins

Email To: info on file

Copy To: Chris McKisson, remediation@confluence-cc.com

Site Collection Info/Address:

Customer Project Name/Number: Garden Gulch 8" Latham Laydown Yard

State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET

Phone:
Email:

Site/Facility ID #: Garden Gulch 8" (Latham)

Compliance Monitoring? [ ] Yes [X] No

Collected By (print): Andrew Smith

Purchase Order #:
Quote #:

DW PWS ID #:
DW Location Code:

Collected By (signature):

Turnaround Date Required: Standard Turnaround

Immediately Packed on Ice: [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate
[ ] Return
[ ] Archive: _____
[ ] Hold: _____

Rush: (Expedite Charges Apply)
[ ] Same Day [ ] Next Day
[ ] 2 Day [X] 3 Day
[ ] 4 Day [ ] 5 Day

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: _____

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

Container Preservative Type **

Lab Project Manager:

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

Analyses

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Table 915-1 VOCs	TPH (ORO, GRO, DRO)	Table 915-1 Metal's	Table 915-1 PAHs	pH, EC, SAR	Boron (Hot Water Soluble Soil)				
20220822-GG8"-SB02@0' - 2'	SL	G	8/22/2022	1335				3	G	X	X	X	X	X	X				

Lab Profile/Line:

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

LAB USE ONLY:
Lab Sample # / Comments:

5755 8084 9348

F180

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: _____oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
	8/23/22 1215		8:45
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
	8/23/22 1500		8/24/22
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

ANALYTICAL REPORT

September 08, 2022

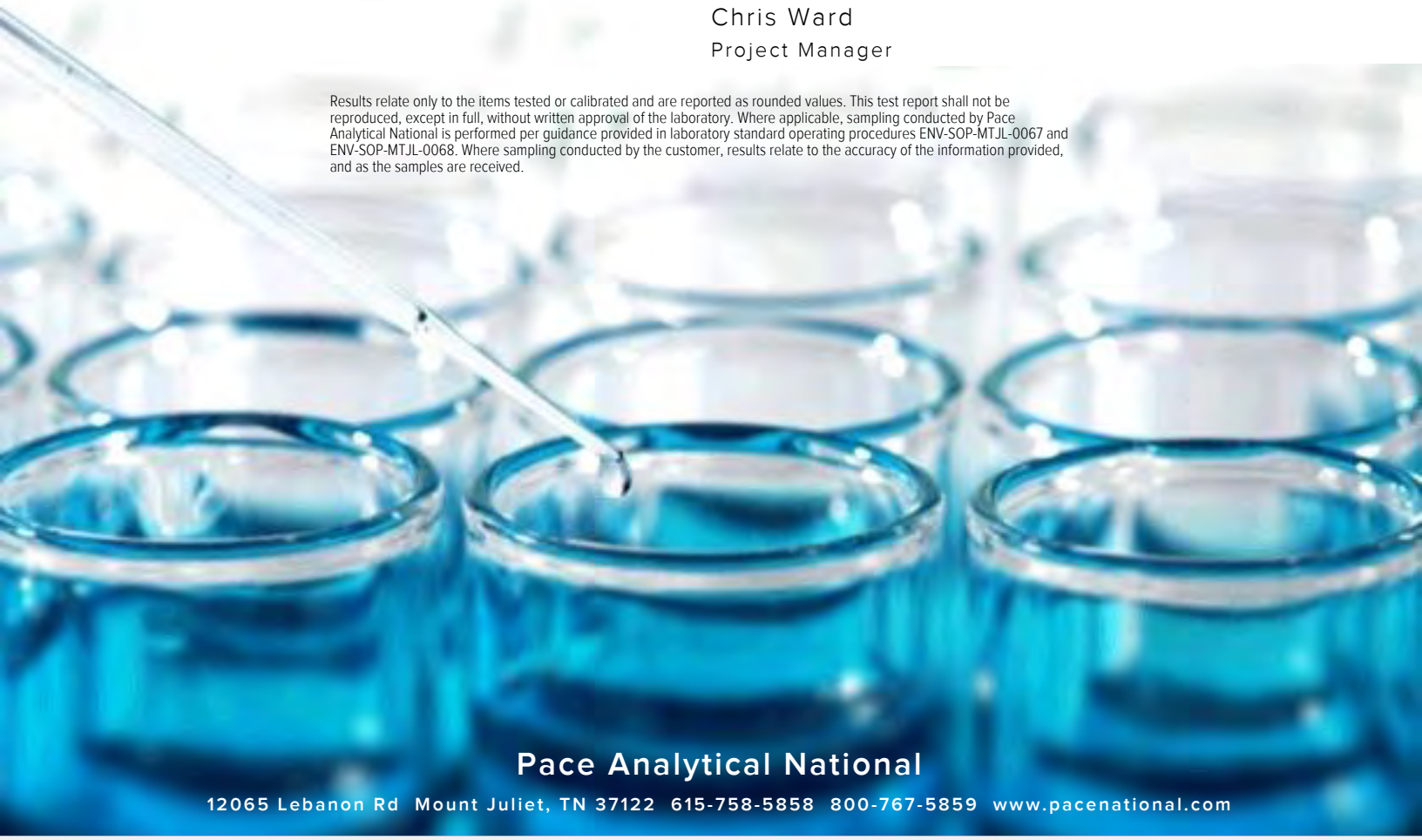
Caerus Oil and Gas

Sample Delivery Group:	L1528639
Samples Received:	08/24/2022
Project Number:	GARDEN GULCH 8" LATH
Description:	Garden Gulch 8" Latham Laydown Yard
Site:	GARDEN GULCH 8" (LATHAM)
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By: Chris Ward

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

TABLE OF CONTENTS

20220822-GG8"-SB01@0' - 2' L1528639-01 Solid

Collected by: Andrew Smith | Collected date/time: 08/22/22 11:45 | Received date/time: 08/24/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1916114	1	08/31/22 01:52	08/31/22 01:52	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1920932	1	09/06/22 13:48	09/07/22 10:50	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1916422	1	08/27/22 11:00	08/27/22 13:00	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1922189	1	09/07/22 07:31	09/08/22 13:26	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1916971	1	08/28/22 09:28	08/29/22 13:05	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1916176	1	08/28/22 19:09	08/30/22 12:48	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1916975	5	08/28/22 09:31	08/29/22 09:42	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1916212	1	08/24/22 21:04	08/25/22 14:32	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1916152	1	08/24/22 21:04	08/25/22 05:44	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1916082	1	08/25/22 09:14	08/25/22 16:41	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1916077	1	08/25/22 07:26	08/25/22 16:29	AMG	Mt. Juliet, TN

20220822-GG8"-SB01@2' - 4' L1528639-02 Solid

Collected by: Andrew Smith | Collected date/time: 08/22/22 11:50 | Received date/time: 08/24/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1916114	1	08/31/22 01:55	08/31/22 01:55	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1920932	1	09/06/22 13:48	09/07/22 10:56	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1916686	1	08/30/22 11:00	08/30/22 13:00	SGB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1922189	1	09/07/22 07:31	09/08/22 13:26	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1916971	1	08/28/22 09:28	08/29/22 13:07	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1916176	1	08/28/22 19:09	08/30/22 12:56	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1916975	5	08/28/22 09:31	08/29/22 09:46	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1916212	1	08/24/22 21:04	08/25/22 14:54	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1916152	1	08/24/22 21:04	08/25/22 06:03	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1916082	1	08/25/22 09:14	08/25/22 16:28	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1916077	1	08/25/22 07:26	08/25/22 15:53	AMG	Mt. Juliet, TN

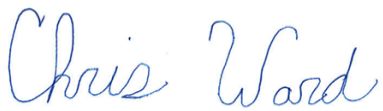
20220822-GG8"-SB01@4' - 6' L1528639-03 Solid

Collected by: Andrew Smith | Collected date/time: 08/22/22 11:55 | Received date/time: 08/24/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1916114	1	08/31/22 02:01	08/31/22 02:01	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1920932	1	09/06/22 13:48	09/07/22 11:01	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1916686	1	08/30/22 11:00	08/30/22 13:00	SGB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1922189	1	09/07/22 07:31	09/08/22 13:26	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1916971	1	08/28/22 09:28	08/29/22 13:10	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1916176	1	08/28/22 19:09	08/30/22 12:59	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1916975	5	08/28/22 09:31	08/29/22 09:49	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1916212	1	08/24/22 21:04	08/25/22 15:17	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1916152	1	08/24/22 21:04	08/25/22 06:22	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1916082	2	08/25/22 09:14	08/26/22 11:33	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1916077	1	08/25/22 07:26	08/25/22 16:47	AMG	Mt. Juliet, TN

CASE NARRATIVE

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



Chris Ward
Project Manager

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	1.25		1	08/31/2022 01:52	WG1916114

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	ND		1.00	1	09/07/2022 10:50	WG1920932

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	7.81	T8	1	08/27/2022 13:00	WG1916422

Sample Narrative:

L1528639-01 WG1916422: 7.81 at 22.2C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	643		10.0	1	09/08/2022 13:26	WG1922189

Sample Narrative:

L1528639-01 WG1922189: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	275		0.500	1	08/29/2022 13:05	WG1916971
Cadmium	ND		0.500	1	08/29/2022 13:05	WG1916971
Copper	24.7		2.00	1	08/29/2022 13:05	WG1916971
Lead	17.7		0.500	1	08/29/2022 13:05	WG1916971
Nickel	22.2		2.00	1	08/29/2022 13:05	WG1916971
Selenium	ND		2.00	1	08/29/2022 13:05	WG1916971
Silver	ND		1.00	1	08/29/2022 13:05	WG1916971
Zinc	65.8		5.00	1	08/29/2022 13:05	WG1916971

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/l		mg/l			
Hot Water Sol. Boron	0.448		0.200	1	08/30/2022 12:48	WG1916176

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	17.6		1.00	5	08/29/2022 09:42	WG1916975

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	0.121		0.100	1	08/25/2022 14:32	WG1916212
(S) a,a,a-Trifluorotoluene(FID)	*101*		*77.0-120*		*08/25/2022 14:32*	WG1916212

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	08/25/2022 05:44	WG1916152
Toluene	ND		0.00500	1	08/25/2022 05:44	WG1916152
Ethylbenzene	ND		0.00250	1	08/25/2022 05:44	WG1916152
Xylenes, Total	ND		0.00650	1	08/25/2022 05:44	WG1916152
1,2,4-Trimethylbenzene	ND		0.00500	1	08/25/2022 05:44	WG1916152
1,3,5-Trimethylbenzene	ND		0.00500	1	08/25/2022 05:44	WG1916152
(S) Toluene-d8	*102*		*75.0-131*		*08/25/2022 05:44*	WG1916152
(S) 4-Bromofluorobenzene	*94.8*		*67.0-138*		*08/25/2022 05:44*	WG1916152
(S) 1,2-Dichloroethane-d4	*99.9*		*70.0-130*		*08/25/2022 05:44*	WG1916152

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	10.1		4.00	1	08/25/2022 16:41	WG1916082
C28-C36 Motor Oil Range	46.0		4.00	1	08/25/2022 16:41	WG1916082
(S) o-Terphenyl	*53.0*		*18.0-148*		*08/25/2022 16:41*	WG1916082

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	08/25/2022 16:29	WG1916077
Anthracene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Benzo(a)anthracene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Benzo(b)fluoranthene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Benzo(k)fluoranthene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Benzo(a)pyrene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Chrysene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Dibenz(a,h)anthracene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Fluoranthene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Fluorene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/25/2022 16:29	WG1916077
1-Methylnaphthalene	ND		0.0200	1	08/25/2022 16:29	WG1916077
2-Methylnaphthalene	ND		0.0200	1	08/25/2022 16:29	WG1916077
Naphthalene	ND		0.0200	1	08/25/2022 16:29	WG1916077
Pyrene	ND		0.00600	1	08/25/2022 16:29	WG1916077
(S) p-Terphenyl-d14	*91.5*		*23.0-120*		*08/25/2022 16:29*	WG1916077
(S) Nitrobenzene-d5	*90.1*		*14.0-149*		*08/25/2022 16:29*	WG1916077
(S) 2-Fluorobiphenyl	*92.2*		*34.0-125*		*08/25/2022 16:29*	WG1916077

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.74		1	08/31/2022 01:55	WG1916114

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	2.10		1.00	1	09/07/2022 10:56	WG1920932

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.83	T8	1	08/30/2022 13:00	WG1916686

Sample Narrative:

L1528639-02 WG1916686: 7.83 at 22.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	173		10.0	1	09/08/2022 13:26	WG1922189

Sample Narrative:

L1528639-02 WG1922189: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	151		0.500	1	08/29/2022 13:07	WG1916971
Cadmium	ND		0.500	1	08/29/2022 13:07	WG1916971
Copper	21.1		2.00	1	08/29/2022 13:07	WG1916971
Lead	17.1		0.500	1	08/29/2022 13:07	WG1916971
Nickel	18.2		2.00	1	08/29/2022 13:07	WG1916971
Selenium	ND		2.00	1	08/29/2022 13:07	WG1916971
Silver	ND		1.00	1	08/29/2022 13:07	WG1916971
Zinc	62.0		5.00	1	08/29/2022 13:07	WG1916971

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	08/30/2022 12:56	WG1916176

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	10.2		1.00	5	08/29/2022 09:46	WG1916975

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	ND		0.100	1	08/25/2022 14:54	WG1916212
(S) a,a,a-Trifluorotoluene(FID)	*102*		*77.0-120*		*08/25/2022 14:54*	WG1916212

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	08/25/2022 06:03	WG1916152
Toluene	ND		0.00500	1	08/25/2022 06:03	WG1916152
Ethylbenzene	ND		0.00250	1	08/25/2022 06:03	WG1916152
Xylenes, Total	ND		0.00650	1	08/25/2022 06:03	WG1916152
1,2,4-Trimethylbenzene	ND		0.00500	1	08/25/2022 06:03	WG1916152
1,3,5-Trimethylbenzene	ND		0.00500	1	08/25/2022 06:03	WG1916152
(S) Toluene-d8	*103*		*75.0-131*		*08/25/2022 06:03*	WG1916152
(S) 4-Bromofluorobenzene	*100*		*67.0-138*		*08/25/2022 06:03*	WG1916152
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*08/25/2022 06:03*	WG1916152

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	5.20		4.00	1	08/25/2022 16:28	WG1916082
C28-C36 Motor Oil Range	10.9	B	4.00	1	08/25/2022 16:28	WG1916082
(S) o-Terphenyl	*41.7*		*18.0-148*		*08/25/2022 16:28*	WG1916082

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	08/25/2022 15:53	WG1916077
Anthracene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Benzo(a)anthracene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Benzo(b)fluoranthene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Benzo(k)fluoranthene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Benzo(a)pyrene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Chrysene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Dibenz(a,h)anthracene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Fluoranthene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Fluorene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/25/2022 15:53	WG1916077
1-Methylnaphthalene	ND		0.0200	1	08/25/2022 15:53	WG1916077
2-Methylnaphthalene	ND		0.0200	1	08/25/2022 15:53	WG1916077
Naphthalene	ND		0.0200	1	08/25/2022 15:53	WG1916077
Pyrene	ND		0.00600	1	08/25/2022 15:53	WG1916077
(S) p-Terphenyl-d14	*76.4*		*23.0-120*		*08/25/2022 15:53*	WG1916077
(S) Nitrobenzene-d5	*82.9*		*14.0-149*		*08/25/2022 15:53*	WG1916077
(S) 2-Fluorobiphenyl	*63.5*		*34.0-125*		*08/25/2022 15:53*	WG1916077

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	1.56		1	08/31/2022 02:01	WG1916114

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	2.64		1.00	1	09/07/2022 11:01	WG1920932

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	7.88	T8	1	08/30/2022 13:00	WG1916686

Sample Narrative:

L1528639-03 WG1916686: 7.88 at 22.3C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	223		10.0	1	09/08/2022 13:26	WG1922189

Sample Narrative:

L1528639-03 WG1922189: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	215		0.500	1	08/29/2022 13:10	WG1916971
Cadmium	ND		0.500	1	08/29/2022 13:10	WG1916971
Copper	18.0		2.00	1	08/29/2022 13:10	WG1916971
Lead	40.1		0.500	1	08/29/2022 13:10	WG1916971
Nickel	21.3		2.00	1	08/29/2022 13:10	WG1916971
Selenium	ND		2.00	1	08/29/2022 13:10	WG1916971
Silver	ND		1.00	1	08/29/2022 13:10	WG1916971
Zinc	68.7		5.00	1	08/29/2022 13:10	WG1916971

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/l		mg/l			
Hot Water Sol. Boron	ND		0.200	1	08/30/2022 12:59	WG1916176

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	26.5		1.00	5	08/29/2022 09:49	WG1916975

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	ND		0.100	1	08/25/2022 15:17	WG1916212
(S) a,a,a-Trifluorotoluene(FID)	*102*		*77.0-120*		*08/25/2022 15:17*	WG1916212

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	08/25/2022 06:22	WG1916152
Toluene	ND		0.00500	1	08/25/2022 06:22	WG1916152
Ethylbenzene	ND		0.00250	1	08/25/2022 06:22	WG1916152
Xylenes, Total	ND		0.00650	1	08/25/2022 06:22	WG1916152
1,2,4-Trimethylbenzene	ND		0.00500	1	08/25/2022 06:22	WG1916152
1,3,5-Trimethylbenzene	ND		0.00500	1	08/25/2022 06:22	WG1916152
(S) Toluene-d8	*103*		*75.0-131*		*08/25/2022 06:22*	WG1916152
(S) 4-Bromofluorobenzene	*98.9*		*67.0-138*		*08/25/2022 06:22*	WG1916152
(S) 1,2-Dichloroethane-d4	*99.0*		*70.0-130*		*08/25/2022 06:22*	WG1916152

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	44.6		8.00	2	08/26/2022 11:33	WG1916082
C28-C36 Motor Oil Range	151		8.00	2	08/26/2022 11:33	WG1916082
(S) o-Terphenyl	*61.3*		*18.0-148*		*08/26/2022 11:33*	WG1916082

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	08/25/2022 16:47	WG1916077
Anthracene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Benzo(a)anthracene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Benzo(b)fluoranthene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Benzo(k)fluoranthene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Benzo(a)pyrene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Chrysene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Dibenz(a,h)anthracene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Fluoranthene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Fluorene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/25/2022 16:47	WG1916077
1-Methylnaphthalene	ND		0.0200	1	08/25/2022 16:47	WG1916077
2-Methylnaphthalene	ND		0.0200	1	08/25/2022 16:47	WG1916077
Naphthalene	ND		0.0200	1	08/25/2022 16:47	WG1916077
Pyrene	ND		0.00600	1	08/25/2022 16:47	WG1916077
(S) p-Terphenyl-d14	*84.8*		*23.0-120*		*08/25/2022 16:47*	WG1916077
(S) Nitrobenzene-d5	*85.8*		*14.0-149*		*08/25/2022 16:47*	WG1916077
(S) 2-Fluorobiphenyl	*87.2*		*34.0-125*		*08/25/2022 16:47*	WG1916077

QUALITY CONTROL SUMMARY

L1528639-01,02,03

Method Blank (MB)

(MB) R3834633-1 09/07/22 09:27

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

L1527168-22 Original Sample (OS) • Duplicate (DUP)

(OS) L1527168-22 09/07/22 09:48 • (DUP) R3834633-3 09/07/22 09:53

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

L1529669-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1529669-04 09/07/22 11:21 • (DUP) R3834633-4 09/07/22 11:37

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

Laboratory Control Sample (LCS)

(LCS) R3834633-2 09/07/22 09:34

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

L1529669-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529669-05 09/07/22 11:42 • (MS) R3834633-5 09/07/22 11:47 • (MSD) R3834633-6 09/07/22 11:53

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	1.06	17.0	17.8	79.6	83.5	1	75.0-125			4.53	20

L1529669-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1529669-05 09/07/22 11:42 • (MS) R3834633-8 09/07/22 12:03

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	681	1.06	612	89.8	50	75.0-125	

L1526591-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1526591-02 08/27/22 13:00 • (DUP) R3831140-2 08/27/22 13:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.39	6.40	1	0.156		1

Sample Narrative:

OS: 6.39 at 22.4C

DUP: 6.4 at 22.6C

Laboratory Control Sample (LCS)

(LCS) R3831140-1 08/27/22 13:00

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

Sample Narrative:

LCS: 9.91 at 22.2C

L1528639-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1528639-03 08/30/22 13:00 • (DUP) R3831897-2 08/30/22 13:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	7.88	7.87	1	0.127		1

Sample Narrative:

OS: 7.88 at 22.3C

DUP: 7.87 at 22.3C

L1528793-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1528793-02 08/30/22 13:00 • (DUP) R3831897-3 08/30/22 13:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.02	7.99	1	0.375		1

Sample Narrative:

OS: 8.02 at 22C

DUP: 7.99 at 21.9C

Laboratory Control Sample (LCS)

(LCS) R3831897-1 08/30/22 13:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.90	99.0	99.0-101	

Sample Narrative:

LCS: 9.9 at 22.2C

Method Blank (MB)

(MB) R3835087-1 09/08/22 13:26

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

Sample Narrative:
BLANK: at 25C

L1528639-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1528639-02 09/08/22 13:26 • (DUP) R3835087-3 09/08/22 13:26

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	173	193	1	10.6		20

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

L1529669-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1529669-02 09/08/22 13:26 • (DUP) R3835087-4 09/08/22 13:26

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2110	2010	1	4.75		20

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

Laboratory Control Sample (LCS)

(LCS) R3835087-2 09/08/22 13:26

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1140	102	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3831610-1 08/29/22 12:28

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

Laboratory Control Sample (LCS)

(LCS) R3831610-2 08/29/22 12:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	92.5	92.5	80.0-120	
Cadmium	100	88.9	88.9	80.0-120	
Copper	100	90.6	90.6	80.0-120	
Lead	100	87.7	87.7	80.0-120	
Nickel	100	91.4	91.4	80.0-120	
Selenium	100	89.6	89.6	80.0-120	
Silver	20.0	16.3	81.3	80.0-120	
Zinc	100	89.9	89.9	80.0-120	

L1528508-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1528508-01 08/29/22 12:33 • (MS) R3831610-5 08/29/22 12:41 • (MSD) R3831610-6 08/29/22 12:43

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	180	238	235	58.3	55.1	1	75.0-125	J6	J6	1.32	20
Cadmium	100	ND	94.1	88.4	93.7	88.0	1	75.0-125			6.19	20
Copper	100	16.3	109	104	93.2	87.6	1	75.0-125			5.24	20
Lead	100	18.2	108	101	89.9	83.3	1	75.0-125			6.27	20
Nickel	100	22.2	115	108	93.2	85.4	1	75.0-125			7.03	20
Selenium	100	ND	95.6	90.0	94.7	89.1	1	75.0-125			6.09	20
Silver	20.0	ND	17.3	16.4	86.5	81.8	1	75.0-125			5.60	20
Zinc	100	81.1	157	147	76.2	65.8	1	75.0-125		J6	6.86	20

Method Blank (MB)

(MB) R3831989-1 08/30/22 12:22

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) R3831989-2 08/30/22 12:25 • (LCSD) R3831989-3 08/30/22 12:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.07	1.01	107	101	80.0-120			5.20	20

Method Blank (MB)

(MB) R3831367-1 08/29/22 09:19

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

Laboratory Control Sample (LCS)

(LCS) R3831367-2 08/29/22 09:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	88.9	88.9	80.0-120	

L1528508-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1528508-01 08/29/22 09:26 • (MS) R3831367-5 08/29/22 09:36 • (MSD) R3831367-6 08/29/22 09:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	6.87	93.0	88.9	86.1	82.0	5	75.0-125			4.51	20

Method Blank (MB)

(MB) R3830485-2 08/25/22 10:01

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3830485-1 08/25/22 09:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.11	111	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*77.0-120*	

Method Blank (MB)

(MB) R3830535-3 08/25/22 02:54

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*103*			*75.0-131*
(S) 4-Bromofluorobenzene	*94.7*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*

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

(LCS) R3830535-1 08/25/22 01:38 • (LCSD) R3830535-2 08/25/22 01:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.132	0.135	106	108	70.0-123			2.25	20
Toluene	0.125	0.122	0.132	97.6	106	75.0-121			7.87	20
Ethylbenzene	0.125	0.114	0.121	91.2	96.8	74.0-126			5.96	20
Xylenes, Total	0.375	0.332	0.369	88.5	98.4	72.0-127			10.6	20
1,2,4-Trimethylbenzene	0.125	0.117	0.127	93.6	102	70.0-126			8.20	20
1,3,5-Trimethylbenzene	0.125	0.117	0.127	93.6	102	73.0-127			8.20	20
(S) Toluene-d8				*101*	*102*	*75.0-131*				
(S) 4-Bromofluorobenzene				*101*	*99.4*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*113*	*113*	*70.0-130*				

Method Blank (MB)

(MB) R3830687-2 08/25/22 13:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	1.11	J	0.274	4.00
(S) o-Terphenyl	*59.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3830687-1 08/25/22 13:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	38.5	77.0	50.0-150	
(S) o-Terphenyl			*88.1*	*18.0-148*	

L1528302-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1528302-04 08/25/22 14:43 • (MS) R3830687-3 08/25/22 14:56 • (MSD) R3830687-4 08/25/22 15:09

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	48.3	ND	22.0	25.8	45.5	53.2	1	50.0-150	J6		15.9	20
(S) o-Terphenyl					*54.0*	*50.3*		*18.0-148*				

Method Blank (MB)

(MB) R3830787-2 08/25/22 11:07

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	*86.0*			*23.0-120*
(S) Nitrobenzene-d5	*78.5*			*14.0-149*
(S) 2-Fluorobiphenyl	*84.8*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3830787-1 08/25/22 10:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0736	92.0	50.0-120	
Anthracene	0.0800	0.0699	87.4	50.0-126	
Benzo(a)anthracene	0.0800	0.0718	89.8	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0757	94.6	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0714	89.3	49.0-125	
Benzo(a)pyrene	0.0800	0.0759	94.9	42.0-120	
Chrysene	0.0800	0.0764	95.5	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0712	89.0	47.0-125	
Fluoranthene	0.0800	0.0741	92.6	49.0-129	
Fluorene	0.0800	0.0732	91.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0716	89.5	46.0-125	
1-Methylnaphthalene	0.0800	0.0698	87.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0725	90.6	50.0-120	
Naphthalene	0.0800	0.0695	86.9	50.0-120	
Pyrene	0.0800	0.0845	106	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3830787-1 08/25/22 10:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*83.7*	*23.0-120*	
(S) Nitrobenzene-d5			*85.7*	*14.0-149*	
(S) 2-Fluorobiphenyl			*87.2*	*34.0-125*	

L1528318-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1528318-05 08/25/22 11:25 • (MS) R3830787-3 08/25/22 11:43 • (MSD) R3830787-4 08/25/22 12:00

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0788	ND	0.0618	0.0468	78.4	60.0	1	14.0-127		J3	27.6	27
Anthracene	0.0788	ND	0.0541	0.0423	68.7	54.2	1	10.0-145			24.5	30
Benzo(a)anthracene	0.0788	ND	0.0553	0.0436	70.2	55.9	1	10.0-139			23.7	30
Benzo(b)fluoranthene	0.0788	ND	0.0565	0.0441	71.7	56.5	1	10.0-140			24.7	36
Benzo(k)fluoranthene	0.0788	ND	0.0563	0.0465	71.4	59.6	1	10.0-137			19.1	31
Benzo(a)pyrene	0.0788	ND	0.0625	0.0506	79.3	64.9	1	10.0-141			21.0	31
Chrysene	0.0788	ND	0.0612	0.0497	77.7	63.7	1	10.0-145			20.7	30
Dibenz(a,h)anthracene	0.0788	ND	0.0571	0.0467	72.5	59.9	1	10.0-132			20.0	31
Fluoranthene	0.0788	ND	0.0567	0.0441	72.0	56.5	1	10.0-153			25.0	33
Fluorene	0.0788	ND	0.0571	0.0457	72.5	58.6	1	11.0-130			22.2	29
Indeno(1,2,3-cd)pyrene	0.0788	ND	0.0571	0.0445	72.5	57.1	1	10.0-137			24.8	32
1-Methylnaphthalene	0.0788	ND	0.0633	0.0479	80.0	61.1	1	10.0-142			27.7	28
2-Methylnaphthalene	0.0788	ND	0.0603	0.0447	76.5	57.3	1	10.0-137		J3	29.7	28
Naphthalene	0.0788	ND	0.0630	0.0471	79.9	60.4	1	10.0-135		J3	28.9	27
Pyrene	0.0788	ND	0.0655	0.0510	83.1	65.4	1	10.0-148			24.9	35
(S) p-Terphenyl-d14					*73.9*	*53.5*		*23.0-120*				
(S) Nitrobenzene-d5					*81.6*	*58.9*		*14.0-149*				
(S) 2-Fluorobiphenyl					*83.6*	*57.7*		*34.0-125*				

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.
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.

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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

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

L1528639

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: Garden Gulch 8" Latham Laydown Yard	State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: / Email:	Site/Facility ID #: Garden Gulch 8" (Latham) / Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Andrew Smith	Purchase Order # : / Quote #: / DW PWS ID #: / DW Location Code:
Collected By (signature):	Turnaround Date Required: **RUSH (3-Day for TPH and BTEX)** Standard Turnaround for remaining / Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [X] 3 Day [ ] 4 Day [ ] 5 Day / Field Filtered (if applicable): [ ] Yes [ ] No / Analysis: _____

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Table 915-1 VOCs	TPH (ORO, GRO, DRO)	Table 915-1 Metal's	Table 915-1 PAHs	pH, EC, SAR	Boron (Hot Water Soluble Soil)	TPH (ORO, GRO, DRO) RUSH 3-Day	BTEX (RUSH 3-Day)			Lab Sample # / Comments:
20220822-GG8"-SB01@0' - 2'	SL	G	8/22/2022	1145				3	G	X		X	X	X	X	X	X			-01
20220822-GG8"-SB01@2' - 4'	SL	G	8/22/2022	1150				3	G	X		X	X	X	X	X	X			-02
20220822-GG8"-SB01@4' - 6'	SL	G	8/22/2022	1155				3	G/P	X		X	X	X	X	X	X			-03

Container Preservative Type **

Lab Project Manager:

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

Analyses

Lab Profile/Line:

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

LAB USE ONLY:
Lab Sample # / Comments:

F181

5765 8084 9348

Customer Remarks / Special Conditions / Possible Hazards: **Please provide a RUSH turnaround time (3-Day) for TPH and BTEX) & Standard Turnaround for remaining analysis.**

Type of Ice Used: (Wet) Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: ___oC
Cooler 1 Therm Corr. Factor: ___oC
Cooler 1 Corrected Temp: ___oC
Comments:

Relinquished by/Company: (Signature)	Date/Time: 8/23/22 1215	Received by/Company: (Signature)	Date/Time: 8:45
Relinquished by/Company: (Signature)	Date/Time: 8/23/22 1500	Received by/Company: (Signature)	Date/Time: 8/24/22
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y (N) NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

ALL BOLD OUTLINED AREAS ARE FOR LAB USE ONLY

ANALYTICAL REPORT

August 29, 2022

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

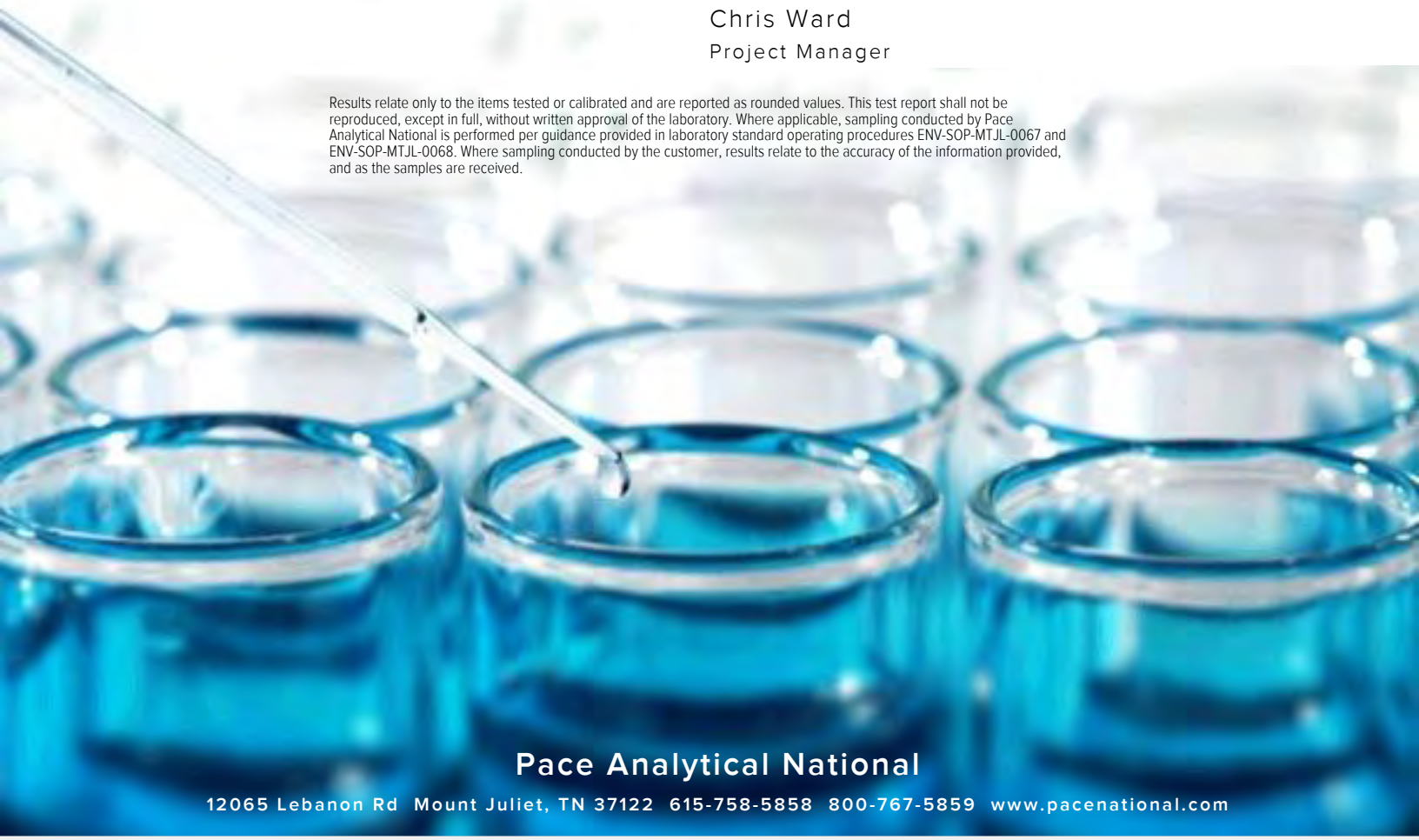
Caerus Oil and Gas

Sample Delivery Group:	L1528639
Samples Received:	08/24/2022
Project Number:	GARDEN GULCH 8" LATH
Description:	Garden Gulch 8" Latham Laydown Yard
Site:	GARDEN GULCH 8" (LATHAM)
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By:

[Preliminary Report]

Chris Ward
Project Manager



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

TABLE OF CONTENTS

SAMPLE SUMMARY

20220822-GG8"-SB01@0' - 2' L1528639-01 Solid

Collected by: Andrew Smith | Collected date/time: 08/22/22 11:45 | Received date/time: 08/24/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9045D	WG1916422	1	08/27/22 11:00	08/27/22 13:00	NTG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1916975	5	08/28/22 09:31	08/29/22 09:42	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1916212	1	08/24/22 21:04	08/25/22 14:32	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1916152	1	08/24/22 21:04	08/25/22 05:44	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1916082	1	08/25/22 09:14	08/25/22 16:41	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1916077	1	08/25/22 07:26	08/25/22 16:29	AMG	Mt. Juliet, TN

20220822-GG8"-SB01@2' - 4' L1528639-02 Solid

Collected by: Andrew Smith | Collected date/time: 08/22/22 11:50 | Received date/time: 08/24/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1916975	5	08/28/22 09:31	08/29/22 09:46	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1916212	1	08/24/22 21:04	08/25/22 14:54	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1916152	1	08/24/22 21:04	08/25/22 06:03	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1916082	1	08/25/22 09:14	08/25/22 16:28	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1916077	1	08/25/22 07:26	08/25/22 15:53	AMG	Mt. Juliet, TN

20220822-GG8"-SB01@4' - 6' L1528639-03 Solid

Collected by: Andrew Smith | Collected date/time: 08/22/22 11:55 | Received date/time: 08/24/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1916975	5	08/28/22 09:31	08/29/22 09:49	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1916212	1	08/24/22 21:04	08/25/22 15:17	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1916152	1	08/24/22 21:04	08/25/22 06:22	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1916082	2	08/25/22 09:14	08/26/22 11:33	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1916077	1	08/25/22 07:26	08/25/22 16:47	AMG	Mt. Juliet, TN

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.

[Preliminary Report]

Chris Ward
Project Manager

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	pH			date / time	
pH	7.81	T8	1	08/27/2022 13:00	WG1916422

Sample Narrative:

L1528639-01 WG1916422: 7.81 at 22.2C

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	17.6		1.00	5	08/29/2022 09:42	WG1916975

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.121		0.100	1	08/25/2022 14:32	WG1916212
(S) a,a,a-Trifluorotoluene(FID)	*101*		*77.0-120*		*08/25/2022 14:32*	WG1916212

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00100	1	08/25/2022 05:44	WG1916152
Toluene	ND		0.00500	1	08/25/2022 05:44	WG1916152
Ethylbenzene	ND		0.00250	1	08/25/2022 05:44	WG1916152
Xylenes, Total	ND		0.00650	1	08/25/2022 05:44	WG1916152
1,2,4-Trimethylbenzene	ND		0.00500	1	08/25/2022 05:44	WG1916152
1,3,5-Trimethylbenzene	ND		0.00500	1	08/25/2022 05:44	WG1916152
(S) Toluene-d8	*102*		*75.0-131*		*08/25/2022 05:44*	WG1916152
(S) 4-Bromofluorobenzene	*94.8*		*67.0-138*		*08/25/2022 05:44*	WG1916152
(S) 1,2-Dichloroethane-d4	*99.9*		*70.0-130*		*08/25/2022 05:44*	WG1916152

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	10.1		4.00	1	08/25/2022 16:41	WG1916082
C28-C36 Motor Oil Range	46.0		4.00	1	08/25/2022 16:41	WG1916082
(S) o-Terphenyl	*53.0*		*18.0-148*		*08/25/2022 16:41*	WG1916082

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acenaphthene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Anthracene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Benzo(a)anthracene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Benzo(b)fluoranthene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Benzo(k)fluoranthene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Benzo(a)pyrene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Chrysene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Dibenz(a,h)anthracene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Fluoranthene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Fluorene	ND		0.00600	1	08/25/2022 16:29	WG1916077
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/25/2022 16:29	WG1916077
1-Methylnaphthalene	ND		0.0200	1	08/25/2022 16:29	WG1916077
2-Methylnaphthalene	ND		0.0200	1	08/25/2022 16:29	WG1916077
Naphthalene	ND		0.0200	1	08/25/2022 16:29	WG1916077

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Pyrene	ND		0.00600	1	08/25/2022 16:29	WG1916077
(S) p-Terphenyl-d14	*91.5*		*23.0-120*		*08/25/2022 16:29*	WG1916077
(S) Nitrobenzene-d5	*90.1*		*14.0-149*		*08/25/2022 16:29*	WG1916077
(S) 2-Fluorobiphenyl	*92.2*		*34.0-125*		*08/25/2022 16:29*	WG1916077

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	10.2		1.00	5	08/29/2022 09:46	WG1916975

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	ND		0.100	1	08/25/2022 14:54	WG1916212
(S) a,a,a-Trifluorotoluene(FID)	*102*		*77.0-120*		*08/25/2022 14:54*	WG1916212

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	08/25/2022 06:03	WG1916152
Toluene	ND		0.00500	1	08/25/2022 06:03	WG1916152
Ethylbenzene	ND		0.00250	1	08/25/2022 06:03	WG1916152
Xylenes, Total	ND		0.00650	1	08/25/2022 06:03	WG1916152
1,2,4-Trimethylbenzene	ND		0.00500	1	08/25/2022 06:03	WG1916152
1,3,5-Trimethylbenzene	ND		0.00500	1	08/25/2022 06:03	WG1916152
(S) Toluene-d8	*103*		*75.0-131*		*08/25/2022 06:03*	WG1916152
(S) 4-Bromofluorobenzene	*100*		*67.0-138*		*08/25/2022 06:03*	WG1916152
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*08/25/2022 06:03*	WG1916152

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	5.20		4.00	1	08/25/2022 16:28	WG1916082
C28-C36 Motor Oil Range	10.9	B	4.00	1	08/25/2022 16:28	WG1916082
(S) o-Terphenyl	*41.7*		*18.0-148*		*08/25/2022 16:28*	WG1916082

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	08/25/2022 15:53	WG1916077
Anthracene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Benzo(a)anthracene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Benzo(b)fluoranthene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Benzo(k)fluoranthene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Benzo(a)pyrene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Chrysene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Dibenz(a,h)anthracene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Fluoranthene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Fluorene	ND		0.00600	1	08/25/2022 15:53	WG1916077
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/25/2022 15:53	WG1916077
1-Methylnaphthalene	ND		0.0200	1	08/25/2022 15:53	WG1916077
2-Methylnaphthalene	ND		0.0200	1	08/25/2022 15:53	WG1916077
Naphthalene	ND		0.0200	1	08/25/2022 15:53	WG1916077
Pyrene	ND		0.00600	1	08/25/2022 15:53	WG1916077
(S) p-Terphenyl-d14	*76.4*		*23.0-120*		*08/25/2022 15:53*	WG1916077
(S) Nitrobenzene-d5	*82.9*		*14.0-149*		*08/25/2022 15:53*	WG1916077
(S) 2-Fluorobiphenyl	*63.5*		*34.0-125*		*08/25/2022 15:53*	WG1916077

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	26.5		1.00	5	08/29/2022 09:49	WG1916975

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	ND		0.100	1	08/25/2022 15:17	WG1916212
(S) a,a,a-Trifluorotoluene(FID)	*102*		*77.0-120*		*08/25/2022 15:17*	WG1916212

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	08/25/2022 06:22	WG1916152
Toluene	ND		0.00500	1	08/25/2022 06:22	WG1916152
Ethylbenzene	ND		0.00250	1	08/25/2022 06:22	WG1916152
Xylenes, Total	ND		0.00650	1	08/25/2022 06:22	WG1916152
1,2,4-Trimethylbenzene	ND		0.00500	1	08/25/2022 06:22	WG1916152
1,3,5-Trimethylbenzene	ND		0.00500	1	08/25/2022 06:22	WG1916152
(S) Toluene-d8	*103*		*75.0-131*		*08/25/2022 06:22*	WG1916152
(S) 4-Bromofluorobenzene	*98.9*		*67.0-138*		*08/25/2022 06:22*	WG1916152
(S) 1,2-Dichloroethane-d4	*99.0*		*70.0-130*		*08/25/2022 06:22*	WG1916152

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	44.6		8.00	2	08/26/2022 11:33	WG1916082
C28-C36 Motor Oil Range	151		8.00	2	08/26/2022 11:33	WG1916082
(S) o-Terphenyl	*61.3*		*18.0-148*		*08/26/2022 11:33*	WG1916082

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	08/25/2022 16:47	WG1916077
Anthracene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Benzo(a)anthracene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Benzo(b)fluoranthene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Benzo(k)fluoranthene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Benzo(a)pyrene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Chrysene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Dibenz(a,h)anthracene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Fluoranthene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Fluorene	ND		0.00600	1	08/25/2022 16:47	WG1916077
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/25/2022 16:47	WG1916077
1-Methylnaphthalene	ND		0.0200	1	08/25/2022 16:47	WG1916077
2-Methylnaphthalene	ND		0.0200	1	08/25/2022 16:47	WG1916077
Naphthalene	ND		0.0200	1	08/25/2022 16:47	WG1916077
Pyrene	ND		0.00600	1	08/25/2022 16:47	WG1916077
(S) p-Terphenyl-d14	*84.8*		*23.0-120*		*08/25/2022 16:47*	WG1916077
(S) Nitrobenzene-d5	*85.8*		*14.0-149*		*08/25/2022 16:47*	WG1916077
(S) 2-Fluorobiphenyl	*87.2*		*34.0-125*		*08/25/2022 16:47*	WG1916077

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

ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
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.
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.
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.
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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

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

L1528639

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: Garden Gulch 8" Latham Laydown Yard	State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: / Email:	Site/Facility ID #: Garden Gulch 8" (Latham) / Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Andrew Smith	Purchase Order # : / Quote #: / DW PWS ID #: / DW Location Code:
Collected By (signature):	Turnaround Date Required: **RUSH (3-Day for TPH and BTEX)** Standard Turnaround for remaining / Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [X] 3 Day [ ] 4 Day [ ] 5 Day / Field Filtered (if applicable): [ ] Yes [ ] No / Analysis: _____

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Table 915-1 VOCs	TPH (ORO, GRO, DRO)	Table 915-1 Metal's	Table 915-1 PAHs	pH, EC, SAR	Boron (Hot Water Soluble Soil)	TPH (ORO, GRO, DRO) RUSH 3-Day	BTEX (RUSH 3-Day)			Lab Sample # / Comments:
20220822-GG8"-SB01@0' - 2'	SL	G	8/22/2022	1145				3	G	X		X	X	X	X	X	X			-01
20220822-GG8"-SB01@2' - 4'	SL	G	8/22/2022	1150				3	G	X		X	X	X	X	X	X			-02
20220822-GG8"-SB01@4' - 6'	SL	G	8/22/2022	1155				3	G/P	X		X	X	X	X	X	X			-03

Container Preservative Type **

Lab Project Manager:

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

Analyses

Lab Profile/Line:

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

LAB USE ONLY:
Lab Sample # / Comments:

F181

5765 8084 9348

Customer Remarks / Special Conditions / Possible Hazards: **Please provide a RUSH turnaround time (3-Day) for TPH and BTEX) & Standard Turnaround for remaining analysis.**

Type of Ice Used: (Wet) Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: ___oC
Cooler 1 Therm Corr. Factor: ___oC
Cooler 1 Corrected Temp: ___oC
Comments:

Relinquished by/Company: (Signature)	Date/Time: 8/23/22 1215	Received by/Company: (Signature)	Date/Time: 8:45
Relinquished by/Company: (Signature)	Date/Time: 8/23/22 1500	Received by/Company: (Signature)	Date/Time: 8/24/22
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y (N) NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

ALL BOLD OUTLINED AREAS ARE FOR LAB USE ONLY

ANALYTICAL REPORT

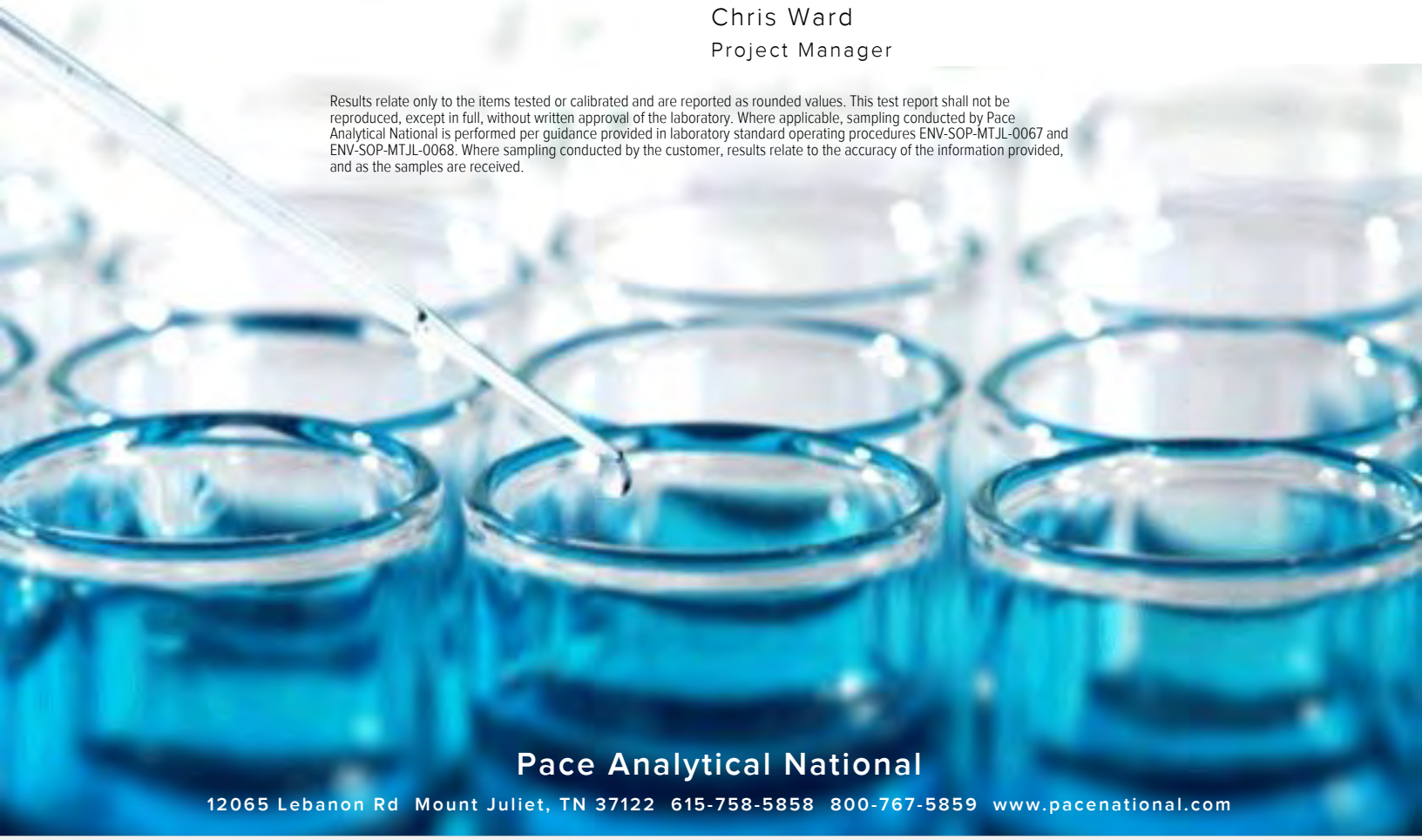
September 19, 2022

Caerus Oil and Gas

Sample Delivery Group:	L1529291
Samples Received:	08/25/2022
Project Number:	
Description:	Garden Gulch 8" (Latham Laydown) Release
Site:	LATHAM LAYDOWN YARD
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager



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

TABLE OF CONTENTS

20220823-GG8"-SB03 @ 2'-4' L1529291-01 Solid

Collected by: Andrew Smith | Collected date/time: 08/23/22 09:15 | Received date/time: 08/25/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1916909	1	08/30/22 16:50	08/30/22 16:50	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1920916	1	09/07/22 19:43	09/14/22 11:55	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1920025	1	09/01/22 16:00	09/01/22 18:00	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923754	1	09/10/22 15:00	09/13/22 12:40	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1918579	1	08/31/22 15:35	09/01/22 10:48	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1917807	1	08/29/22 10:52	09/01/22 13:03	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1918583	5	08/31/22 15:36	09/01/22 00:39	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1917881	1	08/27/22 23:16	08/30/22 00:22	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1918054	1	08/27/22 23:16	08/29/22 12:41	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1918085	5	08/30/22 05:45	08/30/22 15:55	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1918108	1	08/29/22 13:17	08/29/22 23:35	JMB	Mt. Juliet, TN

20220823-GG8"-SB03 @ 7.5'-9.5' L1529291-02 Solid

Collected by: Andrew Smith | Collected date/time: 08/23/22 09:40 | Received date/time: 08/25/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1916909	1	08/30/22 16:52	08/30/22 16:52	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1920916	1	09/07/22 19:43	09/14/22 12:00	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1920025	1	09/01/22 16:00	09/01/22 18:00	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923754	1	09/10/22 15:00	09/13/22 12:40	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1918579	1	08/31/22 15:35	09/01/22 10:51	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1917807	1	08/29/22 10:52	09/01/22 13:06	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1918583	5	08/31/22 15:36	09/01/22 00:43	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1917881	1	08/27/22 23:16	08/30/22 00:43	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1918054	1	08/27/22 23:16	08/29/22 13:00	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1918085	1	08/30/22 05:45	08/30/22 14:14	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1918108	1	08/29/22 13:17	08/29/22 23:55	JMB	Mt. Juliet, TN

20220823-GG8"-SB03 @ 12'-13.5' L1529291-03 Solid

Collected by: Andrew Smith | Collected date/time: 08/23/22 10:15 | Received date/time: 08/25/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1916909	1	08/30/22 16:55	08/30/22 16:55	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1920916	1	09/07/22 19:43	09/14/22 12:05	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1920025	1	09/01/22 16:00	09/01/22 18:00	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923754	1	09/10/22 15:00	09/13/22 12:40	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1918579	1	08/31/22 15:35	09/01/22 10:54	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1917807	1	08/29/22 10:52	09/01/22 13:09	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1918583	5	08/31/22 15:36	09/01/22 00:46	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1917881	1	08/27/22 23:16	08/30/22 01:05	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1918054	1	08/27/22 23:16	08/29/22 13:20	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1918085	1	08/30/22 05:45	08/30/22 13:29	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1918108	1	08/29/22 13:17	08/29/22 22:55	JMB	Mt. Juliet, TN

20220823-GG8"-SB03 @ 15'-15.5' L1529291-04 Solid

Collected by: Andrew Smith | Collected date/time: 08/23/22 10:30 | Received date/time: 08/25/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1916909	1	08/30/22 17:04	08/30/22 17:04	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1920916	1	09/07/22 19:43	09/14/22 12:10	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1920025	1	09/01/22 16:00	09/01/22 18:00	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923754	1	09/10/22 15:00	09/13/22 12:40	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1918579	1	08/31/22 15:35	09/01/22 11:03	ABL	Mt. Juliet, TN

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

SAMPLE SUMMARY

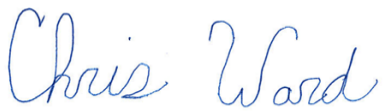
20220823-GG8"-SB03 @ 15'-15.5' L1529291-04 Solid

Collected by: Andrew Smith
Collected date/time: 08/23/22 10:30
Received date/time: 08/25/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1917807	1	08/29/22 10:52	09/01/22 13:12	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1918583	5	08/31/22 15:36	09/01/22 00:56	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1917881	1	08/27/22 23:16	08/30/22 01:27	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1918054	1	08/27/22 23:16	08/29/22 13:39	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1918085	1	08/30/22 05:45	08/30/22 14:01	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1918108	1	08/29/22 13:17	08/30/22 00:14	JMB	Mt. Juliet, TN

CASE NARRATIVE

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



Chris Ward
Project Manager

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.0895		1	08/30/2022 16:50	WG1916909

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	ND		1.00	1	09/14/2022 11:55	WG1920916

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.32	T8	1	09/01/2022 18:00	WG1920025

Sample Narrative:

L1529291-01 WG1920025: 8.32 at 20.4C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	133		10.0	1	09/13/2022 12:40	WG1923754

Sample Narrative:

L1529291-01 WG1923754: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	873		0.500	1	09/01/2022 10:48	WG1918579
Cadmium	0.677		0.500	1	09/01/2022 10:48	WG1918579
Copper	41.3		2.00	1	09/01/2022 10:48	WG1918579
Lead	24.1		0.500	1	09/01/2022 10:48	WG1918579
Nickel	28.6		2.00	1	09/01/2022 10:48	WG1918579
Selenium	ND		2.00	1	09/01/2022 10:48	WG1918579
Silver	ND		1.00	1	09/01/2022 10:48	WG1918579
Zinc	74.8		5.00	1	09/01/2022 10:48	WG1918579

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/l		mg/l			
Hot Water Sol. Boron	ND		0.200	1	09/01/2022 13:03	WG1917807

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	10.0		1.00	5	09/01/2022 00:39	WG1918583

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	ND		0.100	1	08/30/2022 00:22	WG1917881
(S) a,a,a-Trifluorotoluene(FID)	*105*		*77.0-120*		*08/30/2022 00:22*	WG1917881

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	08/29/2022 12:41	WG1918054
Toluene	ND		0.00500	1	08/29/2022 12:41	WG1918054
Ethylbenzene	ND		0.00250	1	08/29/2022 12:41	WG1918054
Xylenes, Total	ND		0.00650	1	08/29/2022 12:41	WG1918054
1,2,4-Trimethylbenzene	ND		0.00500	1	08/29/2022 12:41	WG1918054
1,3,5-Trimethylbenzene	ND		0.00500	1	08/29/2022 12:41	WG1918054
(S) Toluene-d8	*101*		*75.0-131*		*08/29/2022 12:41*	WG1918054
(S) 4-Bromofluorobenzene	*87.4*		*67.0-138*		*08/29/2022 12:41*	WG1918054
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*08/29/2022 12:41*	WG1918054

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	85.1		20.0	5	08/30/2022 15:55	WG1918085
C28-C36 Motor Oil Range	195		20.0	5	08/30/2022 15:55	WG1918085
(S) o-Terphenyl	*52.9*		*18.0-148*		*08/30/2022 15:55*	WG1918085

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	08/29/2022 23:35	WG1918108
Anthracene	ND		0.00600	1	08/29/2022 23:35	WG1918108
Benzo(a)anthracene	ND		0.00600	1	08/29/2022 23:35	WG1918108
Benzo(b)fluoranthene	ND		0.00600	1	08/29/2022 23:35	WG1918108
Benzo(k)fluoranthene	ND		0.00600	1	08/29/2022 23:35	WG1918108
Benzo(a)pyrene	ND		0.00600	1	08/29/2022 23:35	WG1918108
Chrysene	ND		0.00600	1	08/29/2022 23:35	WG1918108
Dibenz(a,h)anthracene	ND		0.00600	1	08/29/2022 23:35	WG1918108
Fluoranthene	ND		0.00600	1	08/29/2022 23:35	WG1918108
Fluorene	ND		0.00600	1	08/29/2022 23:35	WG1918108
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/29/2022 23:35	WG1918108
1-Methylnaphthalene	ND		0.0200	1	08/29/2022 23:35	WG1918108
2-Methylnaphthalene	ND		0.0200	1	08/29/2022 23:35	WG1918108
Naphthalene	ND		0.0200	1	08/29/2022 23:35	WG1918108
Pyrene	ND		0.00600	1	08/29/2022 23:35	WG1918108
(S) p-Terphenyl-d14	*73.7*		*23.0-120*		*08/29/2022 23:35*	WG1918108
(S) Nitrobenzene-d5	*72.6*		*14.0-149*		*08/29/2022 23:35*	WG1918108
(S) 2-Fluorobiphenyl	*75.9*		*34.0-125*		*08/29/2022 23:35*	WG1918108

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.0755		1	08/30/2022 16:52	WG1916909

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	1.62		1.00	1	09/14/2022 12:00	WG1920916

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	7.98	T8	1	09/01/2022 18:00	WG1920025

Sample Narrative:

L1529291-02 WG1920025: 7.98 at 20.7C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	45.6		10.0	1	09/13/2022 12:40	WG1923754

Sample Narrative:

L1529291-02 WG1923754: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	343		0.500	1	09/01/2022 10:51	WG1918579
Cadmium	0.751		0.500	1	09/01/2022 10:51	WG1918579
Copper	41.4		2.00	1	09/01/2022 10:51	WG1918579
Lead	23.4		0.500	1	09/01/2022 10:51	WG1918579
Nickel	28.0		2.00	1	09/01/2022 10:51	WG1918579
Selenium	ND		2.00	1	09/01/2022 10:51	WG1918579
Silver	ND		1.00	1	09/01/2022 10:51	WG1918579
Zinc	77.4		5.00	1	09/01/2022 10:51	WG1918579

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/l		mg/l			
Hot Water Sol. Boron	ND		0.200	1	09/01/2022 13:06	WG1917807

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	20.4		1.00	5	09/01/2022 00:43	WG1918583

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	ND		0.100	1	08/30/2022 00:43	WG1917881
(S) a,a,a-Trifluorotoluene(FID)	*113*		*77.0-120*		*08/30/2022 00:43*	WG1917881

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	08/29/2022 13:00	WG1918054
Toluene	ND		0.00500	1	08/29/2022 13:00	WG1918054
Ethylbenzene	ND		0.00250	1	08/29/2022 13:00	WG1918054
Xylenes, Total	ND		0.00650	1	08/29/2022 13:00	WG1918054
1,2,4-Trimethylbenzene	ND		0.00500	1	08/29/2022 13:00	WG1918054
1,3,5-Trimethylbenzene	ND		0.00500	1	08/29/2022 13:00	WG1918054
(S) Toluene-d8	*105*		*75.0-131*		*08/29/2022 13:00*	WG1918054
(S) 4-Bromofluorobenzene	*77.4*		*67.0-138*		*08/29/2022 13:00*	WG1918054
(S) 1,2-Dichloroethane-d4	*98.4*		*70.0-130*		*08/29/2022 13:00*	WG1918054

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	24.2		4.00	1	08/30/2022 14:14	WG1918085
C28-C36 Motor Oil Range	102		4.00	1	08/30/2022 14:14	WG1918085
(S) o-Terphenyl	*51.1*		*18.0-148*		*08/30/2022 14:14*	WG1918085

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	08/29/2022 23:55	WG1918108
Anthracene	ND		0.00600	1	08/29/2022 23:55	WG1918108
Benzo(a)anthracene	ND		0.00600	1	08/29/2022 23:55	WG1918108
Benzo(b)fluoranthene	ND		0.00600	1	08/29/2022 23:55	WG1918108
Benzo(k)fluoranthene	ND		0.00600	1	08/29/2022 23:55	WG1918108
Benzo(a)pyrene	ND		0.00600	1	08/29/2022 23:55	WG1918108
Chrysene	ND		0.00600	1	08/29/2022 23:55	WG1918108
Dibenz(a,h)anthracene	ND		0.00600	1	08/29/2022 23:55	WG1918108
Fluoranthene	ND		0.00600	1	08/29/2022 23:55	WG1918108
Fluorene	ND		0.00600	1	08/29/2022 23:55	WG1918108
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/29/2022 23:55	WG1918108
1-Methylnaphthalene	ND		0.0200	1	08/29/2022 23:55	WG1918108
2-Methylnaphthalene	ND		0.0200	1	08/29/2022 23:55	WG1918108
Naphthalene	ND		0.0200	1	08/29/2022 23:55	WG1918108
Pyrene	ND		0.00600	1	08/29/2022 23:55	WG1918108
(S) p-Terphenyl-d14	*69.4*		*23.0-120*		*08/29/2022 23:55*	WG1918108
(S) Nitrobenzene-d5	*69.4*		*14.0-149*		*08/29/2022 23:55*	WG1918108
(S) 2-Fluorobiphenyl	*69.5*		*34.0-125*		*08/29/2022 23:55*	WG1918108

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.358		1	08/30/2022 16:55	WG1916909

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	1.91		1.00	1	09/14/2022 12:05	WG1920916

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.25	T8	1	09/01/2022 18:00	WG1920025

Sample Narrative:

L1529291-03 WG1920025: 8.25 at 20.2C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	112		10.0	1	09/13/2022 12:40	WG1923754

Sample Narrative:

L1529291-03 WG1923754: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	165		0.500	1	09/01/2022 10:54	WG1918579
Cadmium	ND		0.500	1	09/01/2022 10:54	WG1918579
Copper	22.8		2.00	1	09/01/2022 10:54	WG1918579
Lead	18.4		0.500	1	09/01/2022 10:54	WG1918579
Nickel	16.8		2.00	1	09/01/2022 10:54	WG1918579
Selenium	ND		2.00	1	09/01/2022 10:54	WG1918579
Silver	ND		1.00	1	09/01/2022 10:54	WG1918579
Zinc	64.9		5.00	1	09/01/2022 10:54	WG1918579

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/l		mg/l			
Hot Water Sol. Boron	ND		0.200	1	09/01/2022 13:09	WG1917807

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	6.69		1.00	5	09/01/2022 00:46	WG1918583

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	ND		0.100	1	08/30/2022 01:05	WG1917881
(S) a,a,a-Trifluorotoluene(FID)	*112*		*77.0-120*		*08/30/2022 01:05*	WG1917881

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	08/29/2022 13:20	WG1918054
Toluene	ND		0.00500	1	08/29/2022 13:20	WG1918054
Ethylbenzene	ND		0.00250	1	08/29/2022 13:20	WG1918054
Xylenes, Total	ND		0.00650	1	08/29/2022 13:20	WG1918054
1,2,4-Trimethylbenzene	ND		0.00500	1	08/29/2022 13:20	WG1918054
1,3,5-Trimethylbenzene	ND		0.00500	1	08/29/2022 13:20	WG1918054
(S) Toluene-d8	*107*		*75.0-131*		*08/29/2022 13:20*	WG1918054
(S) 4-Bromofluorobenzene	*82.1*		*67.0-138*		*08/29/2022 13:20*	WG1918054
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*08/29/2022 13:20*	WG1918054

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	11.5		4.00	1	08/30/2022 13:29	WG1918085
C28-C36 Motor Oil Range	42.9		4.00	1	08/30/2022 13:29	WG1918085
(S) o-Terphenyl	*46.6*		*18.0-148*		*08/30/2022 13:29*	WG1918085

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	08/29/2022 22:55	WG1918108
Anthracene	ND		0.00600	1	08/29/2022 22:55	WG1918108
Benzo(a)anthracene	ND		0.00600	1	08/29/2022 22:55	WG1918108
Benzo(b)fluoranthene	ND		0.00600	1	08/29/2022 22:55	WG1918108
Benzo(k)fluoranthene	ND		0.00600	1	08/29/2022 22:55	WG1918108
Benzo(a)pyrene	ND		0.00600	1	08/29/2022 22:55	WG1918108
Chrysene	ND		0.00600	1	08/29/2022 22:55	WG1918108
Dibenz(a,h)anthracene	ND		0.00600	1	08/29/2022 22:55	WG1918108
Fluoranthene	ND		0.00600	1	08/29/2022 22:55	WG1918108
Fluorene	ND		0.00600	1	08/29/2022 22:55	WG1918108
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/29/2022 22:55	WG1918108
1-Methylnaphthalene	ND		0.0200	1	08/29/2022 22:55	WG1918108
2-Methylnaphthalene	ND		0.0200	1	08/29/2022 22:55	WG1918108
Naphthalene	ND		0.0200	1	08/29/2022 22:55	WG1918108
Pyrene	ND		0.00600	1	08/29/2022 22:55	WG1918108
(S) p-Terphenyl-d14	*74.8*		*23.0-120*		*08/29/2022 22:55*	WG1918108
(S) Nitrobenzene-d5	*71.7*		*14.0-149*		*08/29/2022 22:55*	WG1918108
(S) 2-Fluorobiphenyl	*73.8*		*34.0-125*		*08/29/2022 22:55*	WG1918108

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.447		1	08/30/2022 17:04	WG1916909

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	1.53		1.00	1	09/14/2022 12:10	WG1920916

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.19	T8	1	09/01/2022 18:00	WG1920025

Sample Narrative:

L1529291-04 WG1920025: 8.19 at 20.1C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	237		10.0	1	09/13/2022 12:40	WG1923754

Sample Narrative:

L1529291-04 WG1923754: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	192		0.500	1	09/01/2022 11:03	WG1918579
Cadmium	0.751		0.500	1	09/01/2022 11:03	WG1918579
Copper	37.8		2.00	1	09/01/2022 11:03	WG1918579
Lead	20.4		0.500	1	09/01/2022 11:03	WG1918579
Nickel	23.2		2.00	1	09/01/2022 11:03	WG1918579
Selenium	ND		2.00	1	09/01/2022 11:03	WG1918579
Silver	ND		1.00	1	09/01/2022 11:03	WG1918579
Zinc	76.6		5.00	1	09/01/2022 11:03	WG1918579

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/l		mg/l			
Hot Water Sol. Boron	ND		0.200	1	09/01/2022 13:12	WG1917807

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	8.43		1.00	5	09/01/2022 00:56	WG1918583

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	ND		0.100	1	08/30/2022 01:27	WG1917881
(S) a,a,a-Trifluorotoluene(FID)	*109*		*77.0-120*		*08/30/2022 01:27*	WG1917881

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	08/29/2022 13:39	WG1918054
Toluene	ND		0.00500	1	08/29/2022 13:39	WG1918054
Ethylbenzene	ND		0.00250	1	08/29/2022 13:39	WG1918054
Xylenes, Total	ND		0.00650	1	08/29/2022 13:39	WG1918054
1,2,4-Trimethylbenzene	ND		0.00500	1	08/29/2022 13:39	WG1918054
1,3,5-Trimethylbenzene	ND		0.00500	1	08/29/2022 13:39	WG1918054
(S) Toluene-d8	*108*		*75.0-131*		*08/29/2022 13:39*	WG1918054
(S) 4-Bromofluorobenzene	*82.4*		*67.0-138*		*08/29/2022 13:39*	WG1918054
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*08/29/2022 13:39*	WG1918054

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	28.0		4.00	1	08/30/2022 14:01	WG1918085
C28-C36 Motor Oil Range	76.4		4.00	1	08/30/2022 14:01	WG1918085
(S) o-Terphenyl	*54.1*		*18.0-148*		*08/30/2022 14:01*	WG1918085

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	08/30/2022 00:14	WG1918108
Anthracene	ND		0.00600	1	08/30/2022 00:14	WG1918108
Benzo(a)anthracene	ND		0.00600	1	08/30/2022 00:14	WG1918108
Benzo(b)fluoranthene	ND		0.00600	1	08/30/2022 00:14	WG1918108
Benzo(k)fluoranthene	ND		0.00600	1	08/30/2022 00:14	WG1918108
Benzo(a)pyrene	ND		0.00600	1	08/30/2022 00:14	WG1918108
Chrysene	ND		0.00600	1	08/30/2022 00:14	WG1918108
Dibenz(a,h)anthracene	ND		0.00600	1	08/30/2022 00:14	WG1918108
Fluoranthene	ND		0.00600	1	08/30/2022 00:14	WG1918108
Fluorene	ND		0.00600	1	08/30/2022 00:14	WG1918108
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/30/2022 00:14	WG1918108
1-Methylnaphthalene	ND		0.0200	1	08/30/2022 00:14	WG1918108
2-Methylnaphthalene	ND		0.0200	1	08/30/2022 00:14	WG1918108
Naphthalene	ND		0.0200	1	08/30/2022 00:14	WG1918108
Pyrene	ND		0.00600	1	08/30/2022 00:14	WG1918108
(S) p-Terphenyl-d14	*72.7*		*23.0-120*		*08/30/2022 00:14*	WG1918108
(S) Nitrobenzene-d5	*80.4*		*14.0-149*		*08/30/2022 00:14*	WG1918108
(S) 2-Fluorobiphenyl	*71.7*		*34.0-125*		*08/30/2022 00:14*	WG1918108

Method Blank (MB)

(MB) R3838211-1 09/14/22 10:35

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

L1528876-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1528876-05 09/14/22 10:52 • (DUP) R3838211-3 09/14/22 10:58

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	ND	ND	1	3.79		20

L1529292-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1529292-06 09/14/22 13:14 • (DUP) R3838211-8 09/14/22 13:19

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

Laboratory Control Sample (LCS)

(LCS) R3838211-2 09/14/22 10:42

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

L1529292-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529292-01 09/14/22 12:15 • (MS) R3838211-4 09/14/22 12:21 • (MSD) R3838211-5 09/14/22 12:26

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 %
Hexavalent Chromium	20.0	ND	21.1	21.8	105	109	1	75.0-125			3.13	20

L1529292-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1529292-01 09/14/22 12:15 • (MS) R3838211-7 09/14/22 12:47

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	641	ND	762	119	50	75.0-125	

L1529291-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1529291-02 09/01/22 18:00 • (DUP) R3833117-2 09/01/22 18:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	7.98	7.95	1	0.377		1

Sample Narrative:

OS: 7.98 at 20.7C

DUP: 7.95 at 20.9C

L1529302-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1529302-01 09/01/22 18:00 • (DUP) R3833117-3 09/01/22 18:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.61	8.61	1	0.000		1

Sample Narrative:

OS: 8.61 at 20.2C

DUP: 8.61 at 20.3C

Laboratory Control Sample (LCS)

(LCS) R3833117-1 09/01/22 18:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.90	99.0	99.0-101	

Sample Narrative:

LCS: 9.9 at 20.9C

Method Blank (MB)

(MB) R3836523-1 09/13/22 12:40

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

L1528876-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1528876-07 09/13/22 12:40 • (DUP) R3836523-3 09/13/22 12:40

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	176	173	1	1.55		20

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

L1529291-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1529291-04 09/13/22 12:40 • (DUP) R3836523-4 09/13/22 12:40

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	237	237	1	0.0421		20

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

Laboratory Control Sample (LCS)

(LCS) R3836523-2 09/13/22 12:40

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1120	99.6	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3832955-1 09/01/22 10:29

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

Laboratory Control Sample (LCS)

(LCS) R3832955-2 09/01/22 10:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	100	100	80.0-120	
Cadmium	100	95.5	95.5	80.0-120	
Copper	100	98.6	98.6	80.0-120	
Lead	100	97.8	97.8	80.0-120	
Nickel	100	96.8	96.8	80.0-120	
Selenium	100	97.8	97.8	80.0-120	
Silver	20.0	19.2	95.8	80.0-120	
Zinc	100	94.3	94.3	80.0-120	

L1530091-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530091-01 09/01/22 10:34 • (MS) R3832955-5 09/01/22 10:42 • (MSD) R3832955-6 09/01/22 10:45

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	119	188	220	68.9	101	1	75.0-125	J6		15.7	20
Cadmium	100	ND	95.1	96.0	94.8	95.6	1	75.0-125			0.922	20
Copper	100	12.6	114	114	101	101	1	75.0-125			0.137	20
Lead	100	16.6	113	113	96.0	96.6	1	75.0-125			0.495	20
Nickel	100	13.6	113	111	99.2	97.7	1	75.0-125			1.37	20
Selenium	100	ND	96.3	97.4	96.3	97.4	1	75.0-125			1.13	20
Silver	20.0	ND	18.8	18.7	93.8	93.6	1	75.0-125			0.182	20
Zinc	100	54.5	154	147	99.5	92.2	1	75.0-125			4.86	20

Method Blank (MB)

(MB) R3833105-1 09/01/22 12:55

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) R3833105-2 09/01/22 12:57 • (LCSD) R3833105-3 09/01/22 13:00

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	1.09	106	109	80.0-120			2.13	20

Method Blank (MB)

(MB) R3832714-1 09/01/22 00:11

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

Laboratory Control Sample (LCS)

(LCS) R3832714-2 09/01/22 00:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	93.4	93.4	80.0-120	

L1530091-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530091-01 09/01/22 00:22 • (MS) R3832714-5 09/01/22 00:32 • (MSD) R3832714-6 09/01/22 00:35

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 %
Arsenic	100	7.44	94.3	95.1	86.9	87.7	5	75.0-125			0.815	20

Method Blank (MB)

(MB) R3832261-3 08/29/22 19:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*113*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3832261-1 08/29/22 16:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.11	92.9	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*101*	*77.0-120*	

Method Blank (MB)

(MB) R3832836-2 08/29/22 11:41

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	*109*			*75.0-131*
(S) 4-Bromofluorobenzene	*80.4*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*95.4*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3832836-1 08/29/22 10:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.115	92.0	70.0-123	
Toluene	0.125	0.118	94.4	75.0-121	
Ethylbenzene	0.125	0.111	88.8	74.0-126	
Xylenes, Total	0.375	0.313	83.5	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.105	84.0	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.123	98.4	73.0-127	
(S) Toluene-d8			*105*	*75.0-131*	
(S) 4-Bromofluorobenzene			*75.6*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*105*	*70.0-130*	

Method Blank (MB)

(MB) R3832094-1 08/30/22 09:58

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	*58.1*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3832094-2 08/30/22 10:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	33.1	66.2	50.0-150	
(S) o-Terphenyl			*60.8*	*18.0-148*	

L1528811-25 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1528811-25 08/30/22 10:53 • (MS) R3832094-3 08/30/22 11:06 • (MSD) R3832094-4 08/30/22 11:25

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	ND	25.8	14.8	51.6	29.6	1	50.0-150		J3 J6	54.2	20
(S) o-Terphenyl					*44.6*	*23.9*		*18.0-148*				

Method Blank (MB)

(MB) R3832061-2 08/29/22 17:20

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	*87.8*			*23.0-120*
(S) Nitrobenzene-d5	*75.8*			*14.0-149*
(S) 2-Fluorobiphenyl	*82.0*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3832061-1 08/29/22 17:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0713	89.1	50.0-120	
Anthracene	0.0800	0.0717	89.6	50.0-126	
Benzo(a)anthracene	0.0800	0.0708	88.5	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0664	83.0	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0658	82.3	49.0-125	
Benzo(a)pyrene	0.0800	0.0583	72.9	42.0-120	
Chrysene	0.0800	0.0700	87.5	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0637	79.6	47.0-125	
Fluoranthene	0.0800	0.0747	93.4	49.0-129	
Fluorene	0.0800	0.0685	85.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0678	84.8	46.0-125	
1-Methylnaphthalene	0.0800	0.0698	87.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0724	90.5	50.0-120	
Naphthalene	0.0800	0.0688	86.0	50.0-120	
Pyrene	0.0800	0.0633	79.1	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3832061-1 08/29/22 17:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*94.0*	*23.0-120*	
(S) Nitrobenzene-d5			*94.1*	*14.0-149*	
(S) 2-Fluorobiphenyl			*94.7*	*34.0-125*	

L1529301-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529301-01 08/29/22 17:39 • (MS) R3832061-3 08/29/22 17:59 • (MSD) R3832061-4 08/29/22 18:19

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0784	ND	0.0564	0.0585	71.9	74.6	1	14.0-127			3.66	27
Anthracene	0.0784	ND	0.0571	0.0572	72.8	73.0	1	10.0-145			0.175	30
Benzo(a)anthracene	0.0784	ND	0.0559	0.0563	71.3	71.8	1	10.0-139			0.713	30
Benzo(b)fluoranthene	0.0784	ND	0.0519	0.0527	66.2	67.2	1	10.0-140			1.53	36
Benzo(k)fluoranthene	0.0784	ND	0.0513	0.0527	65.4	67.2	1	10.0-137			2.69	31
Benzo(a)pyrene	0.0784	ND	0.0572	0.0596	73.0	76.0	1	10.0-141			4.11	31
Chrysene	0.0784	ND	0.0552	0.0573	70.4	73.1	1	10.0-145			3.73	30
Dibenz(a,h)anthracene	0.0784	ND	0.0498	0.0530	63.5	67.6	1	10.0-132			6.23	31
Fluoranthene	0.0784	ND	0.0598	0.0588	76.3	75.0	1	10.0-153			1.69	33
Fluorene	0.0784	ND	0.0553	0.0559	70.5	71.3	1	11.0-130			1.08	29
Indeno(1,2,3-cd)pyrene	0.0784	ND	0.0538	0.0554	68.6	70.7	1	10.0-137			2.93	32
1-Methylnaphthalene	0.0784	ND	0.0557	0.0583	71.0	74.4	1	10.0-142			4.56	28
2-Methylnaphthalene	0.0784	ND	0.0575	0.0591	73.3	75.4	1	10.0-137			2.74	28
Naphthalene	0.0784	ND	0.0533	0.0546	68.0	69.6	1	10.0-135			2.41	27
Pyrene	0.0784	ND	0.0505	0.0522	64.4	66.6	1	10.0-148			3.31	35
(S) p-Terphenyl-d14					*74.2*	*76.9*		*23.0-120*				
(S) Nitrobenzene-d5					*73.8*	*75.3*		*14.0-149*				
(S) 2-Fluorobiphenyl					*77.4*	*80.3*		*34.0-125*				

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

Qualifier	Description
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.

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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

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

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

D176

ALL OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: Garden Gulch 8" (Latham Laydown) Release	State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: / Email:	Site/Facility ID #: Latham Laydown Yard / Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Andrew Smith	Purchase Order # : / Quote #: / DW PWS ID #: / DW Location Code:
Collected By (signature): A Smith	Turnaround Date Required: Standard Turnaround / Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day / Field Filtered (if applicable): [ ] Yes [ ] No / Analysis: ____

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

Container Preservative Type **

Lab Project Manager:

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

Analyses

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Table 915-1 VOCs	TPH (ORO, GRO, DRO)	Table 915-1 Metal's	Table 915-1 PAHs	pH, EC, SAR	Boron (Hot Water Soluble Soil)	Lab Sample # / Comments:
20220823-GG8"-SB03@ 2' - 4'	SL	G	8/23/2022	0915				3	G/P	X	X	X	X	X	X	L1529291 -01
20220823-GG8"-SB03@ 7.5' - 9.5'	SL	G	8/23/2022	0940				~~3~~ 1	G/P	X	X	X	X	X	X	-02
20220823-GG8"-SB03@ 12' - 13.5'	SL	G	8/23/2022	1015				3	G/P	X	X	X	X	X	X	-03
20220823-GG8"-SB03@ 15' - 15.5'	SL	G	8/23/2022	1030				3	G/P	X	X	X	X	X	X	-04

Lab Profile/Line:

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

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #:
Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: NS A7
Cooler 1 Temp Upon Receipt: 1.6 oC
Cooler 1 Therm Corr. Factor: +0 oC
Cooler 1 Corrected Temp: 1.6 oC
Comments:

Relinquished by/Company: (Signature) A Smith	Date/Time: 8/24/22 1230	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time: 8/24/22 1500	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature) D. Ramsey	Date/Time: 8-25-22 0900

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO
Page: ____ of: ____

8/26-NCF-L1529291 CAERUSPCO

R5

Time estimate: oh **Time spent:** oh

Members

HM Hailey Melson (responsible) Chris Ward

Due on *30 August 2022 8:00 AM* for target *Done*

- [ ] Login Clarification needed
- [ ] Chain of custody is incomplete
- [ ] Please specify Metals requested
- [ ] Please specify TCLP requested
- [x] Received additional samples not listed on COC
- [ ] Sample IDs on containers do not match IDs on COC
- [ ] Client did not "X" analysis
- [ ] Chain of Custody is missing
- [ ] If no COC: Received by:_____
- [ ] If no COC: Date/Time:_____
- [ ] If no COC: Temp./Cont.Rec./pH:_____
- [ ] If no COC: Carrier:_____
- [ ] If no COC: Tracking #:_____
- [ ] Client informed by call
- [x] Client informed by Email
- [ ] Client informed by Voicemail
- [x] Date/Time:_____8/26/22@1054_____
- [x] PM initials:_____CMW_____
- [x] Client Contact:_____Andy Smith_____

Comments

Hailey Melson *26 August 2022 8:35 AM*

Received 2 8oz jars for ID: 20220823-GG8"-SB03 @ 0-2 (8/23/22 @ 0855) not listed on COC. Received 2 8oz jars for ID: 20220823-GG8"-SB03 @ 7.5-9.5 (8/23/22 @ 0925) which matches the second ID on the COC but the time in wrong.

Chris Ward *26 August 2022 11:10 AM*

Please dispose of 20220823-GG8"-SB03 @ 0-2 (8/23/22 @ 0855):

Log time per COC

Hailey Melson *26 August 2022 11:15 AM*

Done

ANALYTICAL REPORT

September 14, 2022

Caerus Oil and Gas

Sample Delivery Group:	L1529300
Samples Received:	08/25/2022
Project Number:	
Description:	Garden Gulch 8" (Latham Laydown) Release

Report To:

Brett Middleton
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager

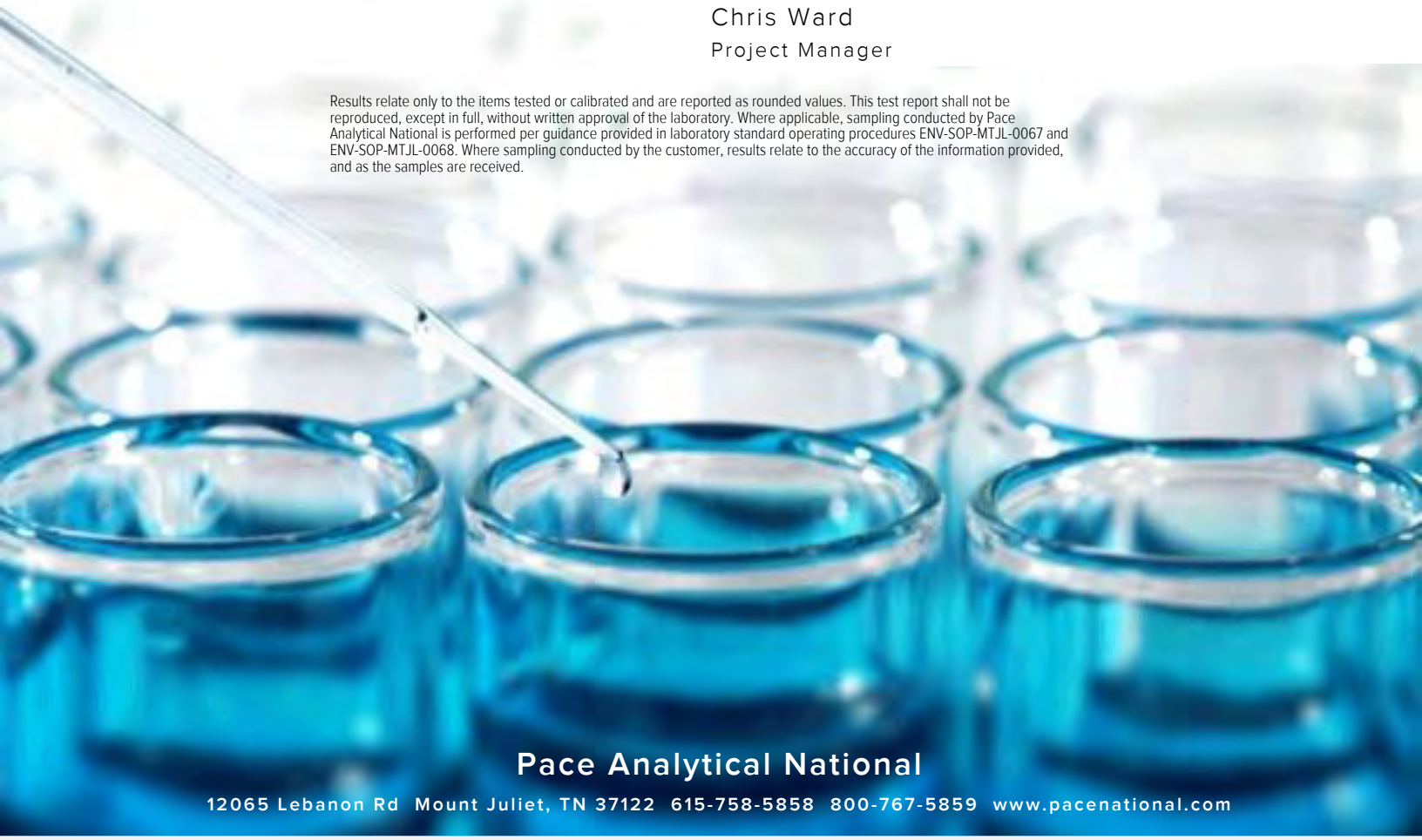


TABLE OF CONTENTS

SAMPLE SUMMARY

20220823-GG8"-SB04 @ 3-5 L1529300-01 Solid

Collected by: Andrew Smith
Collected date/time: 08/23/22 12:50
Received date/time: 08/25/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1918176	1	08/30/22 23:16	08/30/22 23:16	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1920921	1	09/07/22 17:49	09/09/22 08:04	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1920025	1	09/01/22 16:00	09/01/22 18:00	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923754	1	09/10/22 15:00	09/13/22 12:40	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1918579	1	08/31/22 15:35	09/01/22 11:06	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1920370	1	09/05/22 08:25	09/08/22 14:02	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1918583	5	08/31/22 15:36	09/01/22 00:59	SJM	Mt. Juliet, TN

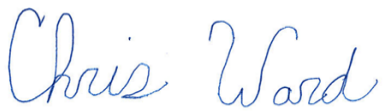
20220823-GG8"-SB04 @ 8-10 L1529300-02 Solid

Collected by: Andrew Smith
Collected date/time: 08/23/22 13:00
Received date/time: 08/25/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1918176	1	08/30/22 23:19	08/30/22 23:19	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1920921	1	09/07/22 17:49	09/09/22 08:09	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1920025	1	09/01/22 16:00	09/01/22 18:00	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923754	1	09/10/22 15:00	09/13/22 12:40	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1918579	1	08/31/22 15:35	09/01/22 11:09	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1920370	1	09/05/22 08:25	09/08/22 14:05	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1918583	5	08/31/22 15:36	09/01/22 01:02	SJM	Mt. Juliet, TN

CASE NARRATIVE

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



Chris Ward
Project Manager

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.00		1	08/30/2022 23:16	WG1918176

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/09/2022 08:04	WG1920921

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.32	T8	1	09/01/2022 18:00	WG1920025

Sample Narrative:

L1529300-01 WG1920025: 8.32 at 19.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	343		10.0	1	09/13/2022 12:40	WG1923754

Sample Narrative:

L1529300-01 WG1923754: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	410		0.0852	0.500	1	09/01/2022 11:06	WG1918579
Cadmium	0.373	J	0.0471	0.500	1	09/01/2022 11:06	WG1918579
Copper	30.6		0.400	2.00	1	09/01/2022 11:06	WG1918579
Lead	14.8		0.208	0.500	1	09/01/2022 11:06	WG1918579
Nickel	19.4		0.132	2.00	1	09/01/2022 11:06	WG1918579
Selenium	1.51	J	0.764	2.00	1	09/01/2022 11:06	WG1918579
Silver	U		0.127	1.00	1	09/01/2022 11:06	WG1918579
Zinc	48.1		0.832	5.00	1	09/01/2022 11:06	WG1918579

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.230		0.0167	0.200	1	09/08/2022 14:02	WG1920370

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	33.3		0.100	1.00	5	09/01/2022 00:59	WG1918583

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.22		1	08/30/2022 23:19	WG1918176

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/09/2022 08:09	WG1920921

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.20	T8	1	09/01/2022 18:00	WG1920025

Sample Narrative:

L1529300-02 WG1920025: 8.2 at 19.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	323		10.0	1	09/13/2022 12:40	WG1923754

Sample Narrative:

L1529300-02 WG1923754: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	468		0.0852	0.500	1	09/01/2022 11:09	WG1918579
Cadmium	0.393	J	0.0471	0.500	1	09/01/2022 11:09	WG1918579
Copper	31.5		0.400	2.00	1	09/01/2022 11:09	WG1918579
Lead	14.9		0.208	0.500	1	09/01/2022 11:09	WG1918579
Nickel	19.3		0.132	2.00	1	09/01/2022 11:09	WG1918579
Selenium	2.05		0.764	2.00	1	09/01/2022 11:09	WG1918579
Silver	U		0.127	1.00	1	09/01/2022 11:09	WG1918579
Zinc	46.7		0.832	5.00	1	09/01/2022 11:09	WG1918579

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.221		0.0167	0.200	1	09/08/2022 14:05	WG1920370

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	31.4		0.100	1.00	5	09/01/2022 01:02	WG1918583

Method Blank (MB)

(MB) R3836808-1 09/09/22 07:31

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

L1529301-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1529301-01 09/09/22 08:14 • (DUP) R3836808-3 09/09/22 08:19

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

L1529928-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1529928-02 09/09/22 10:30 • (DUP) R3836808-8 09/09/22 10:35

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

Laboratory Control Sample (LCS)

(LCS) R3836808-2 09/09/22 07:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.81	98.1	80.0-120	

L1529928-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529928-01 09/09/22 09:27 • (MS) R3836808-4 09/09/22 10:10 • (MSD) R3836808-5 09/09/22 10:15

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 %
Hexavalent Chromium	20.0	U	14.5	15.5	72.6	77.6	1	75.0-125	J6		6.67	20

L1529928-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1529928-01 09/09/22 09:27 • (MS) R3836808-7 09/09/22 10:25

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	638	U	762	119	50	75.0-125	

L1529291-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1529291-02 09/01/22 18:00 • (DUP) R3833117-2 09/01/22 18:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	7.98	7.95	1	0.377		1

Sample Narrative:

OS: 7.98 at 20.7C

DUP: 7.95 at 20.9C

L1529302-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1529302-01 09/01/22 18:00 • (DUP) R3833117-3 09/01/22 18:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.61	8.61	1	0.000		1

Sample Narrative:

OS: 8.61 at 20.2C

DUP: 8.61 at 20.3C

Laboratory Control Sample (LCS)

(LCS) R3833117-1 09/01/22 18:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.90	99.0	99.0-101	

Sample Narrative:

LCS: 9.9 at 20.9C

Method Blank (MB)

(MB) R3836523-1 09/13/22 12:40

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

L1528876-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1528876-07 09/13/22 12:40 • (DUP) R3836523-3 09/13/22 12:40

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	176	173	1	1.55		20

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

L1529291-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1529291-04 09/13/22 12:40 • (DUP) R3836523-4 09/13/22 12:40

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	237	237	1	0.0421		20

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

Laboratory Control Sample (LCS)

(LCS) R3836523-2 09/13/22 12:40

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1120	99.6	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3832955-1 09/01/22 10:29

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

Laboratory Control Sample (LCS)

(LCS) R3832955-2 09/01/22 10:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	100	100	80.0-120	
Cadmium	100	95.5	95.5	80.0-120	
Copper	100	98.6	98.6	80.0-120	
Lead	100	97.8	97.8	80.0-120	
Nickel	100	96.8	96.8	80.0-120	
Selenium	100	97.8	97.8	80.0-120	
Silver	20.0	19.2	95.8	80.0-120	
Zinc	100	94.3	94.3	80.0-120	

L1530091-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530091-01 09/01/22 10:34 • (MS) R3832955-5 09/01/22 10:42 • (MSD) R3832955-6 09/01/22 10:45

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	119	188	220	68.9	101	1	75.0-125	J6		15.7	20
Cadmium	100	0.342	95.1	96.0	94.8	95.6	1	75.0-125			0.922	20
Copper	100	12.6	114	114	101	101	1	75.0-125			0.137	20
Lead	100	16.6	113	113	96.0	96.6	1	75.0-125			0.495	20
Nickel	100	13.6	113	111	99.2	97.7	1	75.0-125			1.37	20
Selenium	100	U	96.3	97.4	96.3	97.4	1	75.0-125			1.13	20
Silver	20.0	U	18.8	18.7	93.8	93.6	1	75.0-125			0.182	20
Zinc	100	54.5	154	147	99.5	92.2	1	75.0-125			4.86	20

Method Blank (MB)

(MB) R3835174-1 09/08/22 13:54

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) R3835174-2 09/08/22 13:57 • (LCSD) R3835174-3 09/08/22 13:59

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	0.984	0.982	98.4	98.2	80.0-120			0.206	20

Method Blank (MB)

(MB) R3832714-1 09/01/22 00:11

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

Laboratory Control Sample (LCS)

(LCS) R3832714-2 09/01/22 00:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	93.4	93.4	80.0-120	

L1530091-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530091-01 09/01/22 00:22 • (MS) R3832714-5 09/01/22 00:32 • (MSD) R3832714-6 09/01/22 00:35

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 %
Arsenic	100	7.44	94.3	95.1	86.9	87.7	5	75.0-125			0.815	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

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

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or Log-in Number Here: D177

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: Garden Gulch 8" (Latham Laydown) Release	State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: / Email:	Site/Facility ID #: Latham Laydown Yard / Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Andrew Smith	Purchase Order #: / Quote #: / DW PWS ID #: / DW Location Code:
Collected By (signature): A Smith	Turnaround Date Required: Standard Turnaround / Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day / Field Filtered (if applicable): [ ] Yes [ ] No / Analysis: ____

Container Preservative Type **

Lab Project Manager:

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

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Table 915-1 VOCs	TPH (ORO, GRO, DRO)	Table 915-1 Metal's	Table 915-1 PAHs	pH, EC, SAR	Boron (Hot Water Soluble Soil)	Lab Sample # / Comments
20220823-GG8"-SB04@ 3' - 5'	SL	G	8/23/2022	1250				1	P			X		X	X	452930001
20220823-GG8"-SB04@ 8' - 10'	SL	G	8/23/2022	1300				1	P			X		X	X	452930002

Analyses

Lab Profile/Line:

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

LAB USE ONLY:
Lab Sample # / Comments:
452930001 -01
452930002 -02

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #:
Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: NS A7
Cooler 1 Temp Upon Receipt: 1.6 oC
Cooler 1 Therm Corr. Factor: 1.6 oC
Cooler 1 Corrected Temp: 1.6 oC
Comments:

Relinquished by/Company: (Signature) A Smith	Date/Time: 8/24/22 1230	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time: 8/24/22 1500	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature) O. Ramsey	Date/Time: 8-25-22 0900

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO
Page: ____ of: ____

ANALYTICAL REPORT

September 14, 2022

Caerus Oil and Gas

Sample Delivery Group:	L1529906
Samples Received:	08/26/2022
Project Number:	
Description:	Garden Gulch 8" (Latham Laydown) Release
Site:	LATHAM LAYDOWN YARD
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager

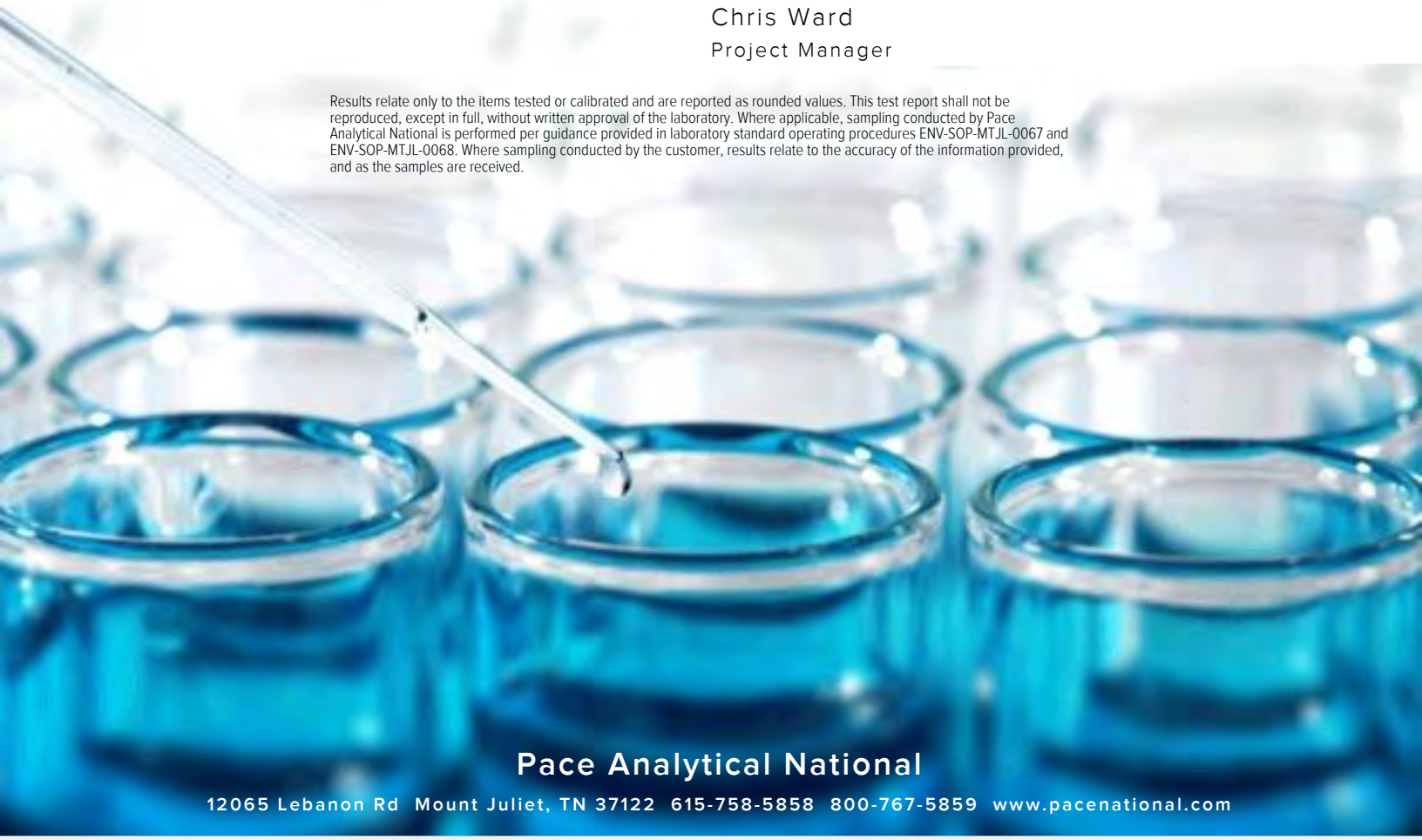


TABLE OF CONTENTS

20220824-GG8"-SB06@ 5'-7' L1529906-01 Solid

Collected by: Andrew Smith
Collected date/time: 08/24/22 11:05
Received date/time: 08/26/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1918394	1	09/01/22 21:47	09/01/22 21:47	ABL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1920921	1	09/07/22 17:49	09/09/22 08:51	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1917653	1	08/28/22 10:00	08/28/22 13:00	SDE	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923614	1	09/09/22 14:54	09/10/22 12:35	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1918579	1	08/31/22 15:35	09/01/22 11:24	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1919209	1	08/31/22 11:50	09/06/22 19:05	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1918583	5	08/31/22 15:36	09/01/22 01:18	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1918407	1	08/27/22 19:33	08/31/22 17:02	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1918350	1	08/27/22 19:33	08/29/22 19:56	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1920027	1	09/02/22 07:25	09/02/22 13:38	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1919540	1	09/01/22 07:18	09/01/22 17:05	AMG	Mt. Juliet, TN

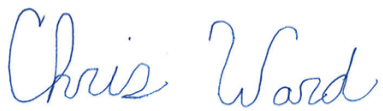
20220824-GG8"-SB06@ 10'-11' L1529906-02 Solid

Collected by: Andrew Smith
Collected date/time: 08/24/22 11:20
Received date/time: 08/26/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1918394	1	09/01/22 21:50	09/01/22 21:50	ABL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1920921	1	09/07/22 17:49	09/09/22 08:56	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1917653	1	08/28/22 10:00	08/28/22 13:00	SDE	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923614	1	09/09/22 14:54	09/10/22 12:35	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1918579	1	08/31/22 15:35	09/01/22 11:41	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1919209	1	08/31/22 11:50	09/06/22 19:08	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1918583	5	08/31/22 15:36	09/01/22 01:22	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1918407	1	08/27/22 19:33	08/31/22 17:25	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1918350	1	08/27/22 19:33	08/29/22 20:15	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1920027	25	09/02/22 07:25	09/02/22 16:55	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1919540	1	09/01/22 07:18	09/01/22 18:25	AMG	Mt. Juliet, TN

CASE NARRATIVE

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



Chris Ward
Project Manager

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.670		1	09/01/2022 21:47	WG1918394

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	ND		1.00	1	09/09/2022 08:51	WG1920921

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.19	T8	1	08/28/2022 13:00	WG1917653

Sample Narrative:

L1529906-01 WG1917653: 8.19 at 23.5C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	273		10.0	1	09/10/2022 12:35	WG1923614

Sample Narrative:

L1529906-01 WG1923614: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	1120		0.500	1	09/01/2022 11:24	WG1918579
Cadmium	ND		0.500	1	09/01/2022 11:24	WG1918579
Copper	28.2		2.00	1	09/01/2022 11:24	WG1918579
Lead	16.4		0.500	1	09/01/2022 11:24	WG1918579
Nickel	25.5		2.00	1	09/01/2022 11:24	WG1918579
Selenium	ND		2.00	1	09/01/2022 11:24	WG1918579
Silver	ND		1.00	1	09/01/2022 11:24	WG1918579
Zinc	69.6		5.00	1	09/01/2022 11:24	WG1918579

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/l		mg/l			
Hot Water Sol. Boron	ND		0.200	1	09/06/2022 19:05	WG1919209

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	21.7		1.00	5	09/01/2022 01:18	WG1918583

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	ND		0.100	1	08/31/2022 17:02	WG1918407
(S) a,a,a-Trifluorotoluene(FID)	*105*		*77.0-120*		*08/31/2022 17:02*	WG1918407

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	08/29/2022 19:56	WG1918350
Toluene	ND		0.00500	1	08/29/2022 19:56	WG1918350
Ethylbenzene	ND		0.00250	1	08/29/2022 19:56	WG1918350
Xylenes, Total	ND		0.00650	1	08/29/2022 19:56	WG1918350
1,2,4-Trimethylbenzene	ND		0.00500	1	08/29/2022 19:56	WG1918350
1,3,5-Trimethylbenzene	ND		0.00500	1	08/29/2022 19:56	WG1918350
(S) Toluene-d8	*103*		*75.0-131*		*08/29/2022 19:56*	WG1918350
(S) 4-Bromofluorobenzene	*97.4*		*67.0-138*		*08/29/2022 19:56*	WG1918350
(S) 1,2-Dichloroethane-d4	*94.8*		*70.0-130*		*08/29/2022 19:56*	WG1918350

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	7.21		4.00	1	09/02/2022 13:38	WG1920027
C28-C36 Motor Oil Range	40.8		4.00	1	09/02/2022 13:38	WG1920027
(S) o-Terphenyl	*38.8*		*18.0-148*		*09/02/2022 13:38*	WG1920027

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	09/01/2022 17:05	WG1919540
Anthracene	ND		0.00600	1	09/01/2022 17:05	WG1919540
Benzo(a)anthracene	ND		0.00600	1	09/01/2022 17:05	WG1919540
Benzo(b)fluoranthene	ND		0.00600	1	09/01/2022 17:05	WG1919540
Benzo(k)fluoranthene	ND		0.00600	1	09/01/2022 17:05	WG1919540
Benzo(a)pyrene	ND		0.00600	1	09/01/2022 17:05	WG1919540
Chrysene	ND		0.00600	1	09/01/2022 17:05	WG1919540
Dibenz(a,h)anthracene	ND		0.00600	1	09/01/2022 17:05	WG1919540
Fluoranthene	ND		0.00600	1	09/01/2022 17:05	WG1919540
Fluorene	ND		0.00600	1	09/01/2022 17:05	WG1919540
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	09/01/2022 17:05	WG1919540
1-Methylnaphthalene	ND		0.0200	1	09/01/2022 17:05	WG1919540
2-Methylnaphthalene	ND		0.0200	1	09/01/2022 17:05	WG1919540
Naphthalene	ND		0.0200	1	09/01/2022 17:05	WG1919540
Pyrene	ND		0.00600	1	09/01/2022 17:05	WG1919540
(S) p-Terphenyl-d14	*94.5*		*23.0-120*		*09/01/2022 17:05*	WG1919540
(S) Nitrobenzene-d5	*93.3*		*14.0-149*		*09/01/2022 17:05*	WG1919540
(S) 2-Fluorobiphenyl	*93.0*		*34.0-125*		*09/01/2022 17:05*	WG1919540

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.783		1	09/01/2022 21:50	WG1918394

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	ND		1.00	1	09/09/2022 08:56	WG1920921

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.22	T8	1	08/28/2022 13:00	WG1917653

Sample Narrative:

L1529906-02 WG1917653: 8.22 at 23.3C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	333		10.0	1	09/10/2022 12:35	WG1923614

Sample Narrative:

L1529906-02 WG1923614: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	1450		0.500	1	09/01/2022 11:41	WG1918579
Cadmium	ND		0.500	1	09/01/2022 11:41	WG1918579
Copper	23.3		2.00	1	09/01/2022 11:41	WG1918579
Lead	26.0		0.500	1	09/01/2022 11:41	WG1918579
Nickel	7.19		2.00	1	09/01/2022 11:41	WG1918579
Selenium	ND		2.00	1	09/01/2022 11:41	WG1918579
Silver	ND		1.00	1	09/01/2022 11:41	WG1918579
Zinc	31.7		5.00	1	09/01/2022 11:41	WG1918579

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/l		mg/l			
Hot Water Sol. Boron	ND		0.200	1	09/06/2022 19:08	WG1919209

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	43.4		1.00	5	09/01/2022 01:22	WG1918583

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	0.448		0.100	1	08/31/2022 17:25	WG1918407
(S) a,a,a-Trifluorotoluene(FID)	*98.6*		*77.0-120*		*08/31/2022 17:25*	WG1918407

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	08/29/2022 20:15	WG1918350
Toluene	ND		0.00500	1	08/29/2022 20:15	WG1918350
Ethylbenzene	ND		0.00250	1	08/29/2022 20:15	WG1918350
Xylenes, Total	ND		0.00650	1	08/29/2022 20:15	WG1918350
1,2,4-Trimethylbenzene	ND		0.00500	1	08/29/2022 20:15	WG1918350
1,3,5-Trimethylbenzene	ND		0.00500	1	08/29/2022 20:15	WG1918350
(S) Toluene-d8	*102*		*75.0-131*		*08/29/2022 20:15*	WG1918350
(S) 4-Bromofluorobenzene	*95.0*		*67.0-138*		*08/29/2022 20:15*	WG1918350
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*08/29/2022 20:15*	WG1918350

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	340		100	25	09/02/2022 16:55	WG1920027
C28-C36 Motor Oil Range	767		100	25	09/02/2022 16:55	WG1920027
(S) o-Terphenyl	*0.000*	J7	*18.0-148*		*09/02/2022 16:55*	WG1920027

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	09/01/2022 18:25	WG1919540
Anthracene	ND		0.00600	1	09/01/2022 18:25	WG1919540
Benzo(a)anthracene	ND		0.00600	1	09/01/2022 18:25	WG1919540
Benzo(b)fluoranthene	ND		0.00600	1	09/01/2022 18:25	WG1919540
Benzo(k)fluoranthene	ND		0.00600	1	09/01/2022 18:25	WG1919540
Benzo(a)pyrene	0.0103		0.00600	1	09/01/2022 18:25	WG1919540
Chrysene	ND		0.00600	1	09/01/2022 18:25	WG1919540
Dibenz(a,h)anthracene	ND		0.00600	1	09/01/2022 18:25	WG1919540
Fluoranthene	ND		0.00600	1	09/01/2022 18:25	WG1919540
Fluorene	ND		0.00600	1	09/01/2022 18:25	WG1919540
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	09/01/2022 18:25	WG1919540
1-Methylnaphthalene	0.0200		0.0200	1	09/01/2022 18:25	WG1919540
2-Methylnaphthalene	ND		0.0200	1	09/01/2022 18:25	WG1919540
Naphthalene	ND		0.0200	1	09/01/2022 18:25	WG1919540
Pyrene	0.00650		0.00600	1	09/01/2022 18:25	WG1919540
(S) p-Terphenyl-d14	*527*	J1	*23.0-120*		*09/01/2022 18:25*	WG1919540
(S) Nitrobenzene-d5	*64.4*		*14.0-149*		*09/01/2022 18:25*	WG1919540
(S) 2-Fluorobiphenyl	*73.9*		*34.0-125*		*09/01/2022 18:25*	WG1919540

Sample Narrative:

L1529906-02 WG1919540: Surrogate failure due to matrix interference

Method Blank (MB)

(MB) R3836808-1 09/09/22 07:31

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

L1529301-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1529301-01 09/09/22 08:14 • (DUP) R3836808-3 09/09/22 08:19

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

L1529928-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1529928-02 09/09/22 10:30 • (DUP) R3836808-8 09/09/22 10:35

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

Laboratory Control Sample (LCS)

(LCS) R3836808-2 09/09/22 07:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.81	98.1	80.0-120	

L1529928-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529928-01 09/09/22 09:27 • (MS) R3836808-4 09/09/22 10:10 • (MSD) R3836808-5 09/09/22 10:15

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 %
Hexavalent Chromium	20.0	ND	14.5	15.5	72.6	77.6	1	75.0-125	J6		6.67	20

L1529928-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1529928-01 09/09/22 09:27 • (MS) R3836808-7 09/09/22 10:25

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	638	ND	762	119	50	75.0-125	

L1529800-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1529800-02 08/28/22 13:00 • (DUP) R3831235-2 08/28/22 13:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.51	7.53	1	0.266		1

Sample Narrative:

OS: 7.51 at 24.1C

DUP: 7.53 at 24.1C

L1529928-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1529928-03 08/28/22 13:00 • (DUP) R3831235-3 08/28/22 13:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.32	8.32	1	0.000		1

Sample Narrative:

OS: 8.32 at 23.1C

DUP: 8.32 at 23.3C

Laboratory Control Sample (LCS)

(LCS) R3831235-1 08/28/22 13:00

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

Sample Narrative:

LCS: 10 at 23.2C

Method Blank (MB)

(MB) R3835770-1 09/10/22 12:35

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

L1529292-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1529292-06 09/10/22 12:35 • (DUP) R3835770-3 09/10/22 12:35

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	470	465	1	1.07		20

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

L1529908-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1529908-04 09/10/22 12:35 • (DUP) R3835770-4 09/10/22 12:35

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	288	287	1	0.661		20

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

Laboratory Control Sample (LCS)

(LCS) R3835770-2 09/10/22 12:35

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1070	95.9	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3832955-1 09/01/22 10:29

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

Laboratory Control Sample (LCS)

(LCS) R3832955-2 09/01/22 10:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	100	100	80.0-120	
Cadmium	100	95.5	95.5	80.0-120	
Copper	100	98.6	98.6	80.0-120	
Lead	100	97.8	97.8	80.0-120	
Nickel	100	96.8	96.8	80.0-120	
Selenium	100	97.8	97.8	80.0-120	
Silver	20.0	19.2	95.8	80.0-120	
Zinc	100	94.3	94.3	80.0-120	

L1530091-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530091-01 09/01/22 10:34 • (MS) R3832955-5 09/01/22 10:42 • (MSD) R3832955-6 09/01/22 10:45

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	119	188	220	68.9	101	1	75.0-125	J6		15.7	20
Cadmium	100	ND	95.1	96.0	94.8	95.6	1	75.0-125			0.922	20
Copper	100	12.6	114	114	101	101	1	75.0-125			0.137	20
Lead	100	16.6	113	113	96.0	96.6	1	75.0-125			0.495	20
Nickel	100	13.6	113	111	99.2	97.7	1	75.0-125			1.37	20
Selenium	100	ND	96.3	97.4	96.3	97.4	1	75.0-125			1.13	20
Silver	20.0	ND	18.8	18.7	93.8	93.6	1	75.0-125			0.182	20
Zinc	100	54.5	154	147	99.5	92.2	1	75.0-125			4.86	20

Method Blank (MB)

(MB) R3834254-1 09/06/22 18:46

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) R3834254-2 09/06/22 18:49 • (LCSD) R3834254-3 09/06/22 18:51

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	1.01	0.996	101	99.6	80.0-120			0.955	20

Method Blank (MB)

(MB) R3832714-1 09/01/22 00:11

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

Laboratory Control Sample (LCS)

(LCS) R3832714-2 09/01/22 00:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	93.4	93.4	80.0-120	

L1530091-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530091-01 09/01/22 00:22 • (MS) R3832714-5 09/01/22 00:32 • (MSD) R3832714-6 09/01/22 00:35

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 %
Arsenic	100	7.44	94.3	95.1	86.9	87.7	5	75.0-125			0.815	20

Method Blank (MB)

(MB) R3832992-2 08/31/22 09:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0249	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*104*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3832992-1 08/31/22 08:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.02	91.3	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*109*	*77.0-120*	

L1529752-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529752-01 08/31/22 11:48 • (MS) R3832992-3 08/31/22 20:29 • (MSD) R3832992-4 08/31/22 20:52

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.45	ND	5.05	4.46	91.0	79.5	1	10.0-151			12.4	28
(S) a,a,a-Trifluorotoluene(FID)					*111*	*109*		*77.0-120*				

Method Blank (MB)

(MB) R3832774-2 08/29/22 19:37

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	*105*			*75.0-131*
(S) 4-Bromofluorobenzene	*98.3*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3832774-1 08/29/22 18:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.151	121	70.0-123	
Toluene	0.125	0.145	116	75.0-121	
Ethylbenzene	0.125	0.136	109	74.0-126	
Xylenes, Total	0.375	0.396	106	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.138	110	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.142	114	73.0-127	
(S) Toluene-d8			*99.6*	*75.0-131*	
(S) 4-Bromofluorobenzene			*98.4*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*108*	*70.0-130*	

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

Method Blank (MB)

(MB) R3833516-1 09/02/22 11:26

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	*56.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3833516-2 09/02/22 11:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	36.2	72.4	50.0-150	
(S) o-Terphenyl			*81.5*	*18.0-148*	

L1529556-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529556-06 09/02/22 14:04 • (MS) R3833516-3 09/02/22 14:17 • (MSD) R3833516-4 09/02/22 14:30

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	49.5	12.0	39.2	33.7	54.9	43.8	1	50.0-150		J6	15.1	20
(S) o-Terphenyl					*55.3*	*40.6*		*18.0-148*				

Method Blank (MB)

(MB) R3833376-2 09/01/22 11:30

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	*93.3*			*23.0-120*
(S) Nitrobenzene-d5	*97.5*			*14.0-149*
(S) 2-Fluorobiphenyl	*92.8*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3833376-1 09/01/22 11:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0618	77.3	50.0-120	
Anthracene	0.0800	0.0644	80.5	50.0-126	
Benzo(a)anthracene	0.0800	0.0644	80.5	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0595	74.4	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0577	72.1	49.0-125	
Benzo(a)pyrene	0.0800	0.0585	73.1	42.0-120	
Chrysene	0.0800	0.0620	77.5	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0564	70.5	47.0-125	
Fluoranthene	0.0800	0.0669	83.6	49.0-129	
Fluorene	0.0800	0.0627	78.4	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0617	77.1	46.0-125	
1-Methylnaphthalene	0.0800	0.0586	73.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0628	78.5	50.0-120	
Naphthalene	0.0800	0.0593	74.1	50.0-120	
Pyrene	0.0800	0.0564	70.5	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3833376-1 09/01/22 11:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*103*	*23.0-120*	
(S) Nitrobenzene-d5			*113*	*14.0-149*	
(S) 2-Fluorobiphenyl			*105*	*34.0-125*	

L1529210-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529210-02 09/01/22 16:06 • (MS) R3833376-3 09/01/22 16:26 • (MSD) R3833376-4 09/01/22 16:46

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0796	ND	0.0571	0.0380	71.7	50.5	1	14.0-127		J3	40.2	27
Anthracene	0.0796	ND	0.0708	0.0434	88.9	57.7	1	10.0-145		J3	48.0	30
Benzo(a)anthracene	0.0796	0.0439	0.145	0.110	127	87.9	1	10.0-139			27.5	30
Benzo(b)fluoranthene	0.0796	0.0688	0.179	0.130	138	81.4	1	10.0-140			31.7	36
Benzo(k)fluoranthene	0.0796	0.0232	0.104	0.0795	102	74.9	1	10.0-137			26.7	31
Benzo(a)pyrene	0.0796	0.0459	0.147	0.110	127	85.2	1	10.0-141			28.8	31
Chrysene	0.0796	0.0505	0.151	0.119	126	91.1	1	10.0-145			23.7	30
Dibenz(a,h)anthracene	0.0796	0.00900	0.0649	0.0541	70.2	60.0	1	10.0-132			18.2	31
Fluoranthene	0.0796	0.0788	0.254	0.172	220	124	1	10.0-153	J5	J3	38.5	33
Fluorene	0.0796	ND	0.0596	0.0383	74.9	50.9	1	11.0-130		J3	43.5	29
Indeno(1,2,3-cd)pyrene	0.0796	0.0389	0.133	0.0972	118	77.5	1	10.0-137			31.1	32
1-Methylnaphthalene	0.0796	ND	0.0562	0.0432	70.6	57.4	1	10.0-142			26.2	28
2-Methylnaphthalene	0.0796	ND	0.0591	0.0481	74.2	64.0	1	10.0-137			20.5	28
Naphthalene	0.0796	ND	0.0555	0.0463	69.7	61.6	1	10.0-135			18.1	27
Pyrene	0.0796	0.0549	0.175	0.122	151	89.2	1	10.0-148	J5	J3	35.7	35
(S) p-Terphenyl-d14					*88.0*	*76.1*		*23.0-120*				
(S) Nitrobenzene-d5					*84.2*	*73.7*		*14.0-149*				
(S) 2-Fluorobiphenyl					*90.2*	*76.8*		*34.0-125*				

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
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.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
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	LAO000356
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.

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

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

D244

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC | Billing Information: Info on file

Address: Info on file

Report To: Jake Janicek, Brett Middleton, Blair Rollins | Email To: info on file

Copy To: Chris McKisson, remediation@confluence-cc.com | Site Collection Info/Address:

Customer Project Name/Number: Garden Gulch 8" (Latham Laydown) Release | State: CO / County/City: Garfield | Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET

Phone:
Email:

Site/Facility ID #: Latham Laydown Yard

Compliance Monitoring? [ ] Yes [X] No

Collected By (print): Andrew Smith

Purchase Order #:
Quote #:

DW PWS ID #:
DW Location Code:

Collected By (signature): A Smith

Turnaround Date Required: Standard Turnaround

Immediately Packed on Ice: [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate
[ ] Return
[ ] Archive:
[ ] Hold:

Rush: (Expedite Charges Apply)
[ ] Same Day [ ] Next Day
[ ] 2 Day [ ] 3 Day
[ ] 4 Day [ ] 5 Day

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

Container Preservative Type **

Lab Project Manager:

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

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Table 915-1 VOCs	TPH (ORO, GRO, DRO)	Table 915-1 Metal's	Table 915-1 PAHs	pH, EC, SAR	Boron (Hot Water Soluble Soil)	Lab Sample # / Comments
20220824-GG8"-SB06@ 5' - 7'	SL	G	8/24/2022	1105				3	G/P	X	X	X	X	X	X	L1529906 -01
20220824-GG8"-SB06@ 10' - 11'	SL	G	8/24/2022	1120				3	G/P	X	X	X	X	X	X	-02

Lab Profile/Line:

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

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: __oC
Comments:
DRA7 .7+0=.7

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
A Smith	8/25/22 1217	[signature]	
[signature]	8/25/22 1330		
		D. Ramsey	8-26-22 0900

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ___ of: ___

ANALYTICAL REPORT

September 19, 2022

Caerus Oil and Gas

Sample Delivery Group:	L1529928
Samples Received:	08/26/2022
Project Number:	
Description:	Garden Gulch 8" (Latham Laydown) Release

Report To:

Brett Middleton
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager

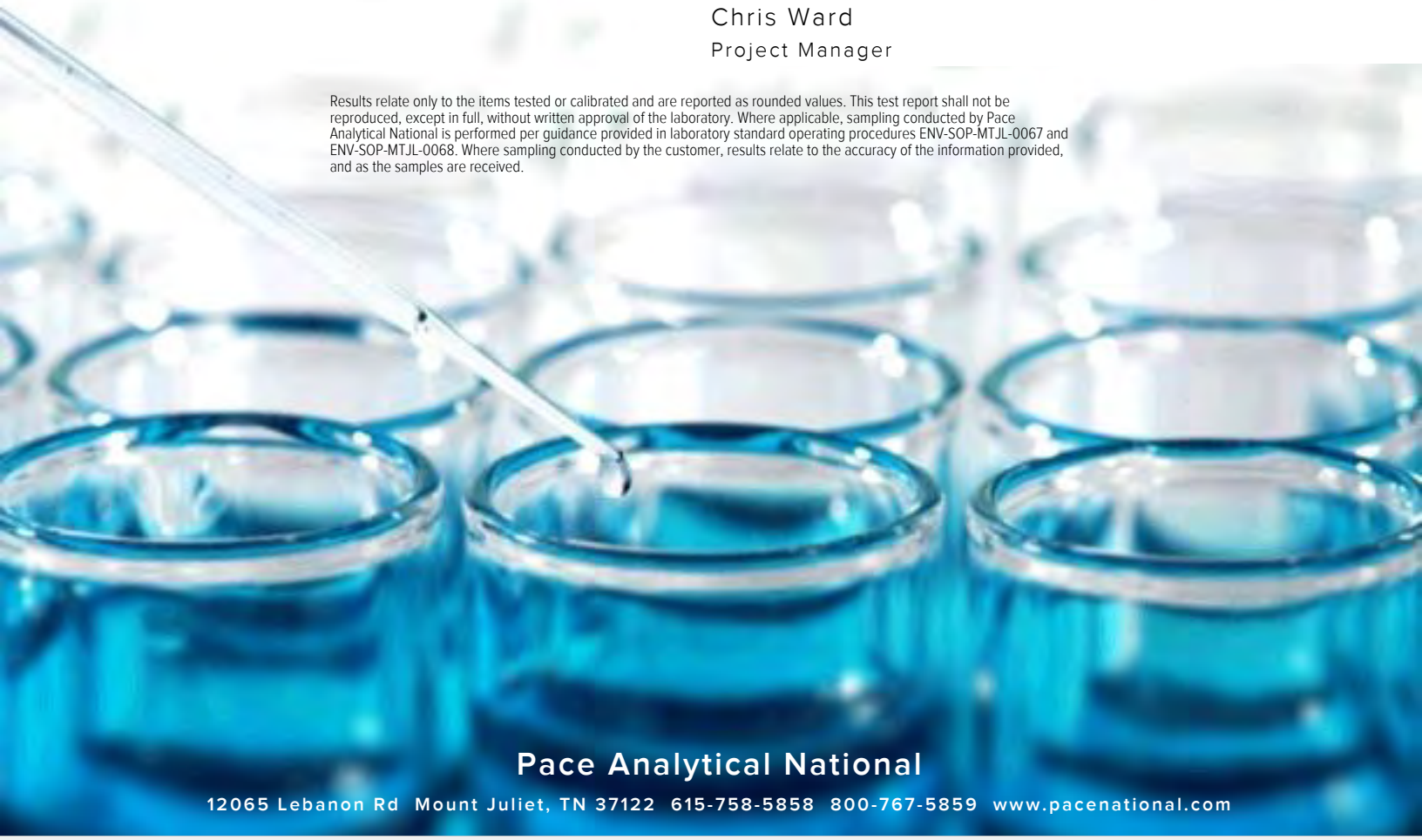


TABLE OF CONTENTS

20220824-GG8"-SB05@ 0'-5' L1529928-01 Solid

Collected by: Andrew Smith | Collected date/time: 08/24/22 08:40 | Received date/time: 08/26/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1919045	1	09/02/22 13:58	09/02/22 13:58	JDG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1920921	1	09/07/22 17:49	09/09/22 09:27	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1917653	1	08/28/22 10:00	08/28/22 13:00	SDE	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923614	1	09/09/22 14:54	09/10/22 12:35	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1918579	1	08/31/22 15:35	09/01/22 11:44	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1919209	1	08/31/22 11:50	09/06/22 19:32	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1918583	5	08/31/22 15:36	09/01/22 01:41	SJM	Mt. Juliet, TN

20220824-GG8"-SB05@ 5'-10' L1529928-02 Solid

Collected by: Andrew Smith | Collected date/time: 08/24/22 09:20 | Received date/time: 08/26/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1919045	1	09/02/22 14:01	09/02/22 14:01	JDG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1920921	1	09/07/22 17:49	09/09/22 10:30	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1917653	1	08/28/22 10:00	08/28/22 13:00	SDE	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923614	1	09/09/22 14:54	09/10/22 12:35	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1918579	1	08/31/22 15:35	09/01/22 11:48	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1919209	1	08/31/22 11:50	09/06/22 19:35	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1918583	5	08/31/22 15:36	09/01/22 01:44	SJM	Mt. Juliet, TN

20220824-GG8"-SB05@ 10'-15' L1529928-03 Solid

Collected by: Andrew Smith | Collected date/time: 08/24/22 09:30 | Received date/time: 08/26/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1919045	1	09/02/22 14:04	09/02/22 14:04	JDG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1920921	1	09/07/22 17:49	09/09/22 10:41	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1917653	1	08/28/22 10:00	08/28/22 13:00	SDE	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923614	1	09/09/22 14:54	09/10/22 12:35	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1918579	1	08/31/22 15:35	09/01/22 11:51	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1919209	1	08/31/22 11:50	09/06/22 19:38	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1918583	5	08/31/22 15:36	09/01/22 01:48	SJM	Mt. Juliet, TN

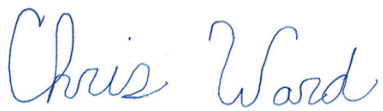
20220824-GG8"-SB05@ 15'-20' L1529928-04 Solid

Collected by: Andrew Smith | Collected date/time: 08/24/22 10:00 | Received date/time: 08/26/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1919045	1	09/02/22 14:06	09/02/22 14:06	JDG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1922800	1	09/09/22 21:14	09/15/22 07:56	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1917653	1	08/28/22 10:00	08/28/22 13:00	SDE	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923614	1	09/09/22 14:54	09/10/22 12:35	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1918579	1	08/31/22 15:35	09/01/22 11:54	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1919209	1	08/31/22 11:50	09/06/22 19:40	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1918583	5	08/31/22 15:36	09/01/22 01:51	SJM	Mt. Juliet, TN

CASE NARRATIVE

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



Chris Ward
Project Manager

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.483		1	09/02/2022 13:58	WG1919045

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	ND	J6	1.00	1	09/09/2022 09:27	WG1920921

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	7.91	T8	1	08/28/2022 13:00	WG1917653

Sample Narrative:

L1529928-01 WG1917653: 7.91 at 23.4C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	1130		10.0	1	09/10/2022 12:35	WG1923614

Sample Narrative:

L1529928-01 WG1923614: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	616		0.500	1	09/01/2022 11:44	WG1918579
Cadmium	ND		0.500	1	09/01/2022 11:44	WG1918579
Copper	38.9		2.00	1	09/01/2022 11:44	WG1918579
Lead	19.1		0.500	1	09/01/2022 11:44	WG1918579
Nickel	23.0		2.00	1	09/01/2022 11:44	WG1918579
Selenium	ND		2.00	1	09/01/2022 11:44	WG1918579
Silver	ND		1.00	1	09/01/2022 11:44	WG1918579
Zinc	52.9		5.00	1	09/01/2022 11:44	WG1918579

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/l		mg/l			
Hot Water Sol. Boron	ND		0.200	1	09/06/2022 19:32	WG1919209

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	54.3		1.00	5	09/01/2022 01:41	WG1918583

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.949		1	09/02/2022 14:01	WG1919045

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	09/09/2022 10:30	WG1920921

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.48	T8	1	08/28/2022 13:00	WG1917653

Sample Narrative:

L1529928-02 WG1917653: 8.48 at 23.1C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	244		10.0	1	09/10/2022 12:35	WG1923614

Sample Narrative:

L1529928-02 WG1923614: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	433		0.500	1	09/01/2022 11:48	WG1918579
Cadmium	0.619		0.500	1	09/01/2022 11:48	WG1918579
Copper	35.6		2.00	1	09/01/2022 11:48	WG1918579
Lead	21.5		0.500	1	09/01/2022 11:48	WG1918579
Nickel	25.1		2.00	1	09/01/2022 11:48	WG1918579
Selenium	2.44		2.00	1	09/01/2022 11:48	WG1918579
Silver	ND		1.00	1	09/01/2022 11:48	WG1918579
Zinc	59.6		5.00	1	09/01/2022 11:48	WG1918579

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	09/06/2022 19:35	WG1919209

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	34.2		1.00	5	09/01/2022 01:44	WG1918583

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.679		1	09/02/2022 14:04	WG1919045

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	09/09/2022 10:41	WG1920921

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.32	T8	1	08/28/2022 13:00	WG1917653

Sample Narrative:

L1529928-03 WG1917653: 8.32 at 23.1C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	326		10.0	1	09/10/2022 12:35	WG1923614

Sample Narrative:

L1529928-03 WG1923614: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	540		0.500	1	09/01/2022 11:51	WG1918579
Cadmium	0.707		0.500	1	09/01/2022 11:51	WG1918579
Copper	38.0		2.00	1	09/01/2022 11:51	WG1918579
Lead	22.1		0.500	1	09/01/2022 11:51	WG1918579
Nickel	27.2		2.00	1	09/01/2022 11:51	WG1918579
Selenium	ND		2.00	1	09/01/2022 11:51	WG1918579
Silver	ND		1.00	1	09/01/2022 11:51	WG1918579
Zinc	66.3		5.00	1	09/01/2022 11:51	WG1918579

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	09/06/2022 19:38	WG1919209

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	35.5		1.00	5	09/01/2022 01:48	WG1918583

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.704		1	09/02/2022 14:06	WG1919045

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	4.45		1.00	1	09/15/2022 07:56	WG1922800

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.26	T8	1	08/28/2022 13:00	WG1917653

Sample Narrative:

L1529928-04 WG1917653: 8.26 at 23.3C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	113		10.0	1	09/10/2022 12:35	WG1923614

Sample Narrative:

L1529928-04 WG1923614: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	239		0.500	1	09/01/2022 11:54	WG1918579
Cadmium	ND		0.500	1	09/01/2022 11:54	WG1918579
Copper	30.5		2.00	1	09/01/2022 11:54	WG1918579
Lead	18.1		0.500	1	09/01/2022 11:54	WG1918579
Nickel	32.4		2.00	1	09/01/2022 11:54	WG1918579
Selenium	ND		2.00	1	09/01/2022 11:54	WG1918579
Silver	ND		1.00	1	09/01/2022 11:54	WG1918579
Zinc	78.5		5.00	1	09/01/2022 11:54	WG1918579

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/l		mg/l			
Hot Water Sol. Boron	ND		0.200	1	09/06/2022 19:40	WG1919209

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	15.5		1.00	5	09/01/2022 01:51	WG1918583

Method Blank (MB)

(MB) R3836808-1 09/09/22 07:31

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

L1529301-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1529301-01 09/09/22 08:14 • (DUP) R3836808-3 09/09/22 08:19

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

L1529928-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1529928-02 09/09/22 10:30 • (DUP) R3836808-8 09/09/22 10:35

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

Laboratory Control Sample (LCS)

(LCS) R3836808-2 09/09/22 07:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.81	98.1	80.0-120	

L1529928-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529928-01 09/09/22 09:27 • (MS) R3836808-4 09/09/22 10:10 • (MSD) R3836808-5 09/09/22 10:15

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 %
Hexavalent Chromium	20.0	ND	14.5	15.5	72.6	77.6	1	75.0-125	J6		6.67	20

L1529928-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1529928-01 09/09/22 09:27 • (MS) R3836808-7 09/09/22 10:25

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	638	ND	762	119	50	75.0-125	

Method Blank (MB)

(MB) R3838224-1 09/15/22 07:43

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

L1530212-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1530212-06 09/15/22 08:27 • (DUP) R3838224-3 09/15/22 08:32

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	ND	ND	1	9.76		20

L1531518-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1531518-03 09/15/22 10:11 • (DUP) R3838224-8 09/15/22 10:16

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

Laboratory Control Sample (LCS)

(LCS) R3838224-2 09/15/22 07:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.67	96.7	80.0-120	

L1531494-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1531494-01 09/15/22 09:19 • (MS) R3838224-4 09/15/22 09:24 • (MSD) R3838224-5 09/15/22 09:29

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 %
Hexavalent Chromium	20.0	ND	18.7	20.6	92.1	102	1	75.0-125			9.94	20

L1531494-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1531494-01 09/15/22 09:19 • (MS) R3838224-7 09/15/22 09:50

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	638	ND	736	115	50	75.0-125	

L1529800-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1529800-02 08/28/22 13:00 • (DUP) R3831235-2 08/28/22 13:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.51	7.53	1	0.266		1

Sample Narrative:

OS: 7.51 at 24.1C

DUP: 7.53 at 24.1C

L1529928-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1529928-03 08/28/22 13:00 • (DUP) R3831235-3 08/28/22 13:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.32	8.32	1	0.000		1

Sample Narrative:

OS: 8.32 at 23.1C

DUP: 8.32 at 23.3C

Laboratory Control Sample (LCS)

(LCS) R3831235-1 08/28/22 13:00

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

Sample Narrative:

LCS: 10 at 23.2C

Method Blank (MB)

(MB) R3835770-1 09/10/22 12:35

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

L1529292-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1529292-06 09/10/22 12:35 • (DUP) R3835770-3 09/10/22 12:35

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	470	465	1	1.07		20

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

L1529908-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1529908-04 09/10/22 12:35 • (DUP) R3835770-4 09/10/22 12:35

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	288	287	1	0.661		20

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

Laboratory Control Sample (LCS)

(LCS) R3835770-2 09/10/22 12:35

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1070	95.9	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3832955-1 09/01/22 10:29

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

Laboratory Control Sample (LCS)

(LCS) R3832955-2 09/01/22 10:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	100	100	80.0-120	
Cadmium	100	95.5	95.5	80.0-120	
Copper	100	98.6	98.6	80.0-120	
Lead	100	97.8	97.8	80.0-120	
Nickel	100	96.8	96.8	80.0-120	
Selenium	100	97.8	97.8	80.0-120	
Silver	20.0	19.2	95.8	80.0-120	
Zinc	100	94.3	94.3	80.0-120	

L1530091-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530091-01 09/01/22 10:34 • (MS) R3832955-5 09/01/22 10:42 • (MSD) R3832955-6 09/01/22 10:45

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	119	188	220	68.9	101	1	75.0-125	J6		15.7	20
Cadmium	100	ND	95.1	96.0	94.8	95.6	1	75.0-125			0.922	20
Copper	100	12.6	114	114	101	101	1	75.0-125			0.137	20
Lead	100	16.6	113	113	96.0	96.6	1	75.0-125			0.495	20
Nickel	100	13.6	113	111	99.2	97.7	1	75.0-125			1.37	20
Selenium	100	ND	96.3	97.4	96.3	97.4	1	75.0-125			1.13	20
Silver	20.0	ND	18.8	18.7	93.8	93.6	1	75.0-125			0.182	20
Zinc	100	54.5	154	147	99.5	92.2	1	75.0-125			4.86	20

Method Blank (MB)

(MB) R3834254-1 09/06/22 18:46

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) R3834254-2 09/06/22 18:49 • (LCSD) R3834254-3 09/06/22 18:51

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	1.01	0.996	101	99.6	80.0-120			0.955	20

Method Blank (MB)

(MB) R3832714-1 09/01/22 00:11

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

Laboratory Control Sample (LCS)

(LCS) R3832714-2 09/01/22 00:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	93.4	93.4	80.0-120	

L1530091-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530091-01 09/01/22 00:22 • (MS) R3832714-5 09/01/22 00:32 • (MSD) R3832714-6 09/01/22 00:35

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 %
Arsenic	100	7.44	94.3	95.1	86.9	87.7	5	75.0-125			0.815	20

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.
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	LAO000356
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.

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

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

D246

ALL SHADED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC | Billing Information: Info on file

Address: Info on file

Report To: Jake Janicek, Brett Middleton, Blair Rollins | Email To: info on file

Copy To: Chris McKisson, remediation@confluence-cc.com | Site Collection Info/Address:

Customer Project Name/Number: Garden Gulch 8" (Latham Laydown) Release | State: CO / County/City: Garfield | Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET

Phone:
Email:

Site/Facility ID #: Latham Laydown Yard

Compliance Monitoring? [ ] Yes [X] No

Collected By (print): Andrew Smith | Purchase Order #: | Quote #:

DW PWS ID #:
DW Location Code:

Collected By (signature): A Smith

Turnaround Date Required: Standard Turnaround

Immediately Packed on Ice: [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate
[ ] Return
[ ] Archive: ____________
[ ] Hold: ____________

Rush: (Expedite Charges Apply)
[ ] Same Day [ ] Next Day
[ ] 2 Day [ ] 3 Day
[ ] 4 Day [ ] 5 Day

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: ____________

Container Preservative Type **

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

Lab Project Manager:

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Table 915-1 VOCs	TPH (ORO, GRO, DRO)	Table 915-1 Metal's	Table 915-1 PAHs	pH, EC, SAR	Boron (Hot Water Soluble Soil)	Lab Sample # / Comments: L1529928
20220824-GG8"-SB05@ 0' - 5'	SL	G	8/24/2022	0840				3	G/P			X		X	X	-01
20220824-GG8"-SB05@ 5' - 10'	SL	G	8/24/2022	0920				3	G/P			X		X	X	-02
20220824-GG8"-SB05@ 10' - 15'	SL	G	8/24/2022	0930				3	G/P			X		X	X	-03
20220824-GG8"-SB05@ 15' - 20'	SL	G	8/24/2022	1000				3	G/P			X		X	X	-04

Lab Profile/Line:

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

LAB USE ONLY:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: __oC
Comments:

DRA7 .7+0=.7

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
A Smith	8/25/22 1217	[signature]	
[signature]	8/25/22 1330		
		P. Ramsey	8-26-22 0900

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

ANALYTICAL REPORT

September 19, 2022

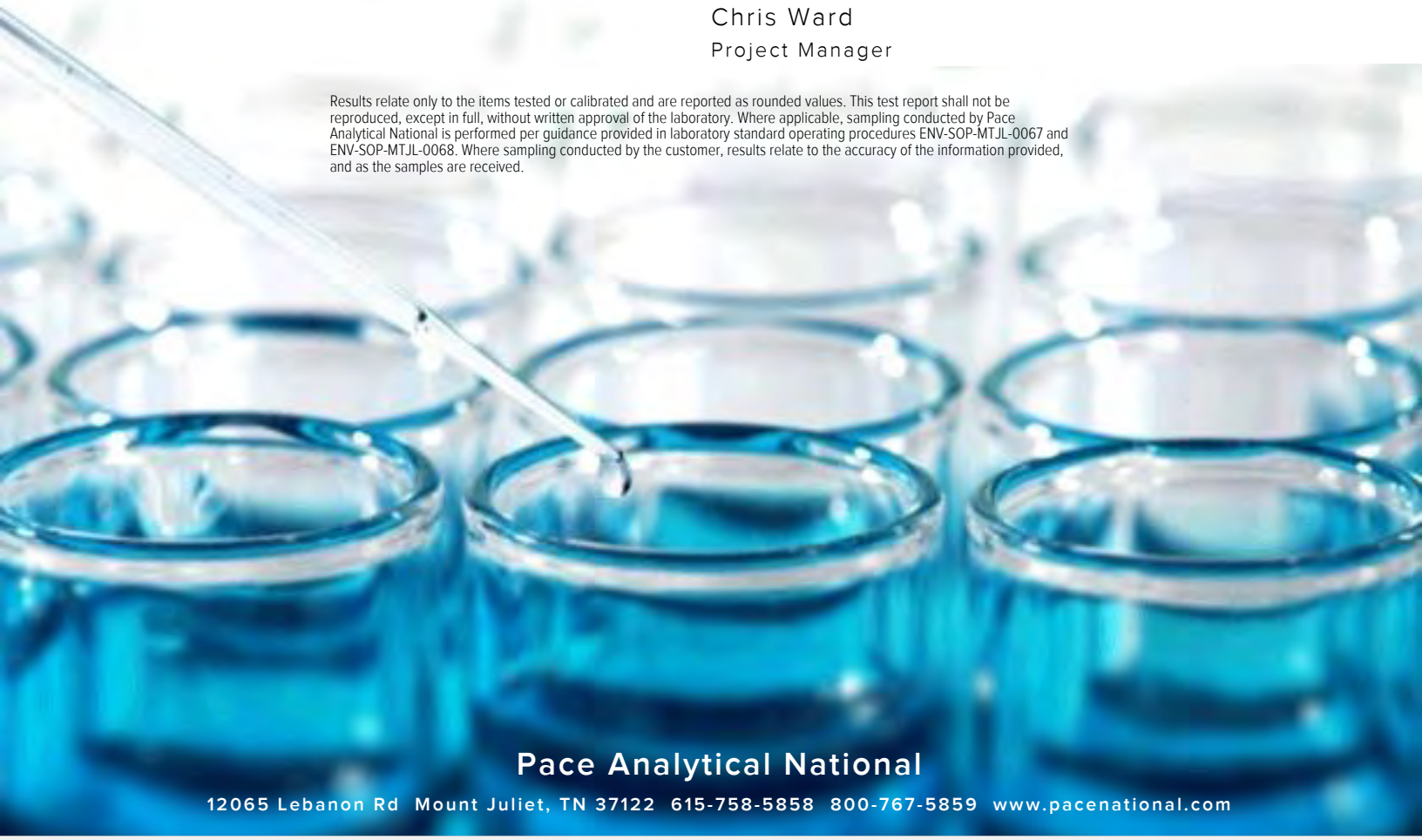
Revised Report

Caerus Oil and Gas

Sample Delivery Group:	L1530214
Samples Received:	08/27/2022
Project Number:	
Description:	Garden Gulch 8" (Latham Laydown) Release
Site:	LATHAM LAYDOWN YARD
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward
Project Manager



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

TABLE OF CONTENTS

20220825-GG8"-SB07@5'-7' L1530214-01 Solid

Collected by: A Smith | Collected date/time: 08/25/22 08:15 | Received date/time: 08/27/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1919047	1	09/14/22 15:59	09/14/22 15:59	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1922800	1	09/09/22 21:14	09/15/22 08:58	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1921580	1	09/06/22 09:00	09/06/22 11:00	SGB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923615	1	09/09/22 14:47	09/10/22 11:30	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1919105	1	09/01/22 18:09	09/04/22 13:10	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1919210	1	08/31/22 11:55	09/06/22 22:23	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1919104	5	09/01/22 17:59	09/02/22 16:59	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1921474	2000	09/01/22 08:35	09/05/22 13:30	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1920632	8	09/01/22 08:35	09/02/22 17:17	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1921775	100	09/01/22 08:35	09/06/22 21:46	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1921339	10	09/06/22 04:40	09/06/22 17:23	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1921346	1	09/05/22 10:26	09/05/22 21:32	AMG	Mt. Juliet, TN

20220825-GG8"-SB07@9' L1530214-02 Solid

Collected by: A Smith | Collected date/time: 08/25/22 08:35 | Received date/time: 08/27/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1919047	1	09/14/22 16:02	09/14/22 16:02	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1921580	1	09/06/22 09:00	09/06/22 11:00	SGB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923615	1	09/09/22 14:47	09/10/22 11:30	NTG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1920789	200	09/01/22 08:35	09/03/22 13:12	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1920632	20	09/01/22 08:35	09/02/22 17:36	DWR	Mt. Juliet, TN

20220825-GG8"-SB08@5'-6.5' L1530214-03 Solid

Collected by: A Smith | Collected date/time: 08/25/22 09:05 | Received date/time: 08/27/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1919047	1	09/14/22 16:05	09/14/22 16:05	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1922800	1	09/09/22 21:14	09/15/22 09:03	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1921580	1	09/06/22 09:00	09/06/22 11:00	SGB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923615	1	09/09/22 14:47	09/10/22 11:30	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1919105	1	09/01/22 18:09	09/04/22 13:18	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1919210	1	08/31/22 11:55	09/06/22 22:26	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1919104	5	09/01/22 17:59	09/02/22 17:03	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1920368	1	09/01/22 08:35	09/02/22 10:09	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1920632	1	09/01/22 08:35	09/02/22 16:58	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1921339	10	09/06/22 04:40	09/06/22 18:01	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1921346	1	09/05/22 10:26	09/05/22 20:05	AMG	Mt. Juliet, TN

20220825-GG8"-SB08@6.5'-8' L1530214-04 Solid

Collected by: A Smith | Collected date/time: 08/25/22 09:15 | Received date/time: 08/27/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1919047	1	09/14/22 16:07	09/14/22 16:07	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1922800	1	09/09/22 21:14	09/15/22 09:09	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1921580	1	09/06/22 09:00	09/06/22 11:00	SGB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1923615	1	09/09/22 14:47	09/10/22 11:30	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1919105	1	09/01/22 18:09	09/04/22 13:21	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1919210	1	08/31/22 11:55	09/06/22 22:29	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1919104	5	09/01/22 17:59	09/02/22 17:06	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1920368	1	09/01/22 08:35	09/02/22 10:31	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1920640	1	09/01/22 08:35	09/03/22 11:21	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1922004	8	09/01/22 08:35	09/06/22 22:09	ACG	Mt. Juliet, TN

SAMPLE SUMMARY

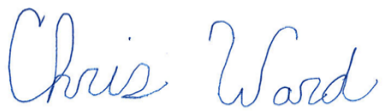
20220825-GG8"-SB08@6.5'-8' L1530214-04 Solid

Collected by: A Smith
Collected date/time: 08/25/22 09:15
Received date/time: 08/27/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1921339	1	09/06/22 04:40	09/07/22 12:06	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1921346	1	09/05/22 10:26	09/05/22 20:22	AMG	Mt. Juliet, TN

CASE NARRATIVE

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



Chris Ward
Project Manager

Report Revision History

Level II Report - Version 1: 09/19/22 11:31

Project Narrative

20220825-GG8"-SB07@9' unable to have all requested analyses run due to volume. Priority list on COC was used to determine what to run with available volume.

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.185		1	09/14/2022 15:59	WG1919047

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	1.47		1.00	1	09/15/2022 08:58	WG1922800

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.83	T8	1	09/06/2022 11:00	WG1921580

Sample Narrative:
L1530214-01 WG1921580: 7.83 at 21.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	184		10.0	1	09/10/2022 11:30	WG1923615

Sample Narrative:
L1530214-01 WG1923615: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	2420		0.500	1	09/04/2022 13:10	WG1919105
Cadmium	0.976		0.500	1	09/04/2022 13:10	WG1919105
Copper	58.9		2.00	1	09/04/2022 13:10	WG1919105
Lead	25.4		0.500	1	09/04/2022 13:10	WG1919105
Nickel	38.7		2.00	1	09/04/2022 13:10	WG1919105
Selenium	ND		2.00	1	09/04/2022 13:10	WG1919105
Silver	ND		1.00	1	09/04/2022 13:10	WG1919105
Zinc	75.8		5.00	1	09/04/2022 13:10	WG1919105

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	09/06/2022 22:23	WG1919210

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	66.6		1.00	5	09/02/2022 16:59	WG1919104

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1790		200	2000	09/05/2022 13:30	WG1921474
(S) a,a,a-Trifluorotoluene(FID)	*85.9*		*77.0-120*		*09/05/2022 13:30*	WG1921474

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	3.14		0.00800	8	09/02/2022 17:17	WG1920632
Toluene	51.4		0.500	100	09/06/2022 21:46	WG1921775
Ethylbenzene	4.53		0.0200	8	09/02/2022 17:17	WG1920632
Xylenes, Total	118		0.650	100	09/06/2022 21:46	WG1921775
1,2,4-Trimethylbenzene	14.3		0.0400	8	09/02/2022 17:17	WG1920632
1,3,5-Trimethylbenzene	15.7		0.0400	8	09/02/2022 17:17	WG1920632
(S) Toluene-d8	*91.6*		*75.0-131*		*09/02/2022 17:17*	WG1920632
(S) Toluene-d8	*103*		*75.0-131*		*09/06/2022 21:46*	WG1921775
(S) 4-Bromofluorobenzene	*111*		*67.0-138*		*09/02/2022 17:17*	WG1920632
(S) 4-Bromofluorobenzene	*104*		*67.0-138*		*09/06/2022 21:46*	WG1921775
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*09/02/2022 17:17*	WG1920632
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*09/06/2022 21:46*	WG1921775

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	636	V	40.0	10	09/06/2022 17:23	WG1921339
C28-C36 Motor Oil Range	483		40.0	10	09/06/2022 17:23	WG1921339
(S) o-Terphenyl	*207*	J1	*18.0-148*		*09/06/2022 17:23*	WG1921339

Sample Narrative:

L1530214-01 WG1921339: Surrogate failure due to matrix interference

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	0.0153		0.00600	1	09/05/2022 21:32	WG1921346
Anthracene	ND		0.00600	1	09/05/2022 21:32	WG1921346
Benzo(a)anthracene	ND		0.00600	1	09/05/2022 21:32	WG1921346
Benzo(b)fluoranthene	ND		0.00600	1	09/05/2022 21:32	WG1921346
Benzo(k)fluoranthene	ND		0.00600	1	09/05/2022 21:32	WG1921346
Benzo(a)pyrene	ND		0.00600	1	09/05/2022 21:32	WG1921346
Chrysene	ND		0.00600	1	09/05/2022 21:32	WG1921346
Dibenz(a,h)anthracene	ND		0.00600	1	09/05/2022 21:32	WG1921346
Fluoranthene	ND		0.00600	1	09/05/2022 21:32	WG1921346
Fluorene	0.0414		0.00600	1	09/05/2022 21:32	WG1921346
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	09/05/2022 21:32	WG1921346
1-Methylnaphthalene	0.537		0.0200	1	09/05/2022 21:32	WG1921346
2-Methylnaphthalene	1.96		0.0200	1	09/05/2022 21:32	WG1921346
Naphthalene	1.04		0.0200	1	09/05/2022 21:32	WG1921346
Pyrene	ND		0.00600	1	09/05/2022 21:32	WG1921346
(S) p-Terphenyl-d14	*86.5*		*23.0-120*		*09/05/2022 21:32*	WG1921346
(S) Nitrobenzene-d5	*921*	J1	*14.0-149*		*09/05/2022 21:32*	WG1921346
(S) 2-Fluorobiphenyl	*76.7*		*34.0-125*		*09/05/2022 21:32*	WG1921346

Sample Narrative:

L1530214-01 WG1921346: Surrogate failure due to matrix interference

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.226		1	09/14/2022 16:02	WG1919047

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	7.95	T8	1	09/06/2022 11:00	WG1921580

Sample Narrative:

L1530214-02 WG1921580: 7.95 at 21.3C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	266		10.0	1	09/10/2022 11:30	WG1923615

Sample Narrative:

L1530214-02 WG1923615: at 25C

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	484		20.0	200	09/03/2022 13:12	WG1920789
(S) a,a,a-Trifluorotoluene(FID)	*90.6*		*77.0-120*		*09/03/2022 13:12*	WG1920789

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Benzene	0.133		0.0200	20	09/02/2022 17:36	WG1920632
Toluene	2.25		0.100	20	09/02/2022 17:36	WG1920632
Ethylbenzene	0.362		0.0500	20	09/02/2022 17:36	WG1920632
Xylenes, Total	9.68		0.130	20	09/02/2022 17:36	WG1920632
1,2,4-Trimethylbenzene	1.83		0.100	20	09/02/2022 17:36	WG1920632
1,3,5-Trimethylbenzene	2.07		0.100	20	09/02/2022 17:36	WG1920632
(S) Toluene-d8	*100*		*75.0-131*		*09/02/2022 17:36*	WG1920632
(S) 4-Bromofluorobenzene	*99.8*		*67.0-138*		*09/02/2022 17:36*	WG1920632
(S) 1,2-Dichloroethane-d4	*105*		*70.0-130*		*09/02/2022 17:36*	WG1920632

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.348		1	09/14/2022 16:05	WG1919047

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	1.69		1.00	1	09/15/2022 09:03	WG1922800

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	7.59	T8	1	09/06/2022 11:00	WG1921580

Sample Narrative:

L1530214-03 WG1921580: 7.59 at 21.1C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	132		10.0	1	09/10/2022 11:30	WG1923615

Sample Narrative:

L1530214-03 WG1923615: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	839		0.500	1	09/04/2022 13:18	WG1919105
Cadmium	0.877		0.500	1	09/04/2022 13:18	WG1919105
Copper	37.1		2.00	1	09/04/2022 13:18	WG1919105
Lead	25.4		0.500	1	09/04/2022 13:18	WG1919105
Nickel	39.2		2.00	1	09/04/2022 13:18	WG1919105
Selenium	ND		2.00	1	09/04/2022 13:18	WG1919105
Silver	ND		1.00	1	09/04/2022 13:18	WG1919105
Zinc	73.9		5.00	1	09/04/2022 13:18	WG1919105

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/l		mg/l			
Hot Water Sol. Boron	ND		0.200	1	09/06/2022 22:26	WG1919210

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	29.6		1.00	5	09/02/2022 17:03	WG1919104

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	9.08		0.100	1	09/02/2022 10:09	WG1920368
(S) a,a,a-Trifluorotoluene(FID)	*80.7*		*77.0-120*		*09/02/2022 10:09*	WG1920368

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.0472		0.00100	1	09/02/2022 16:58	WG1920632
Toluene	0.854		0.00500	1	09/02/2022 16:58	WG1920632
Ethylbenzene	0.0706		0.00250	1	09/02/2022 16:58	WG1920632
Xylenes, Total	1.57		0.00650	1	09/02/2022 16:58	WG1920632
1,2,4-Trimethylbenzene	0.0735		0.00500	1	09/02/2022 16:58	WG1920632
1,3,5-Trimethylbenzene	0.0965		0.00500	1	09/02/2022 16:58	WG1920632
(S) Toluene-d8	*101*		*75.0-131*		*09/02/2022 16:58*	WG1920632
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*09/02/2022 16:58*	WG1920632
(S) 1,2-Dichloroethane-d4	*95.7*		*70.0-130*		*09/02/2022 16:58*	WG1920632

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	190		40.0	10	09/06/2022 18:01	WG1921339
C28-C36 Motor Oil Range	271		40.0	10	09/06/2022 18:01	WG1921339
(S) o-Terphenyl	*80.4*		*18.0-148*		*09/06/2022 18:01*	WG1921339

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	09/05/2022 20:05	WG1921346
Anthracene	ND		0.00600	1	09/05/2022 20:05	WG1921346
Benzo(a)anthracene	ND		0.00600	1	09/05/2022 20:05	WG1921346
Benzo(b)fluoranthene	ND		0.00600	1	09/05/2022 20:05	WG1921346
Benzo(k)fluoranthene	ND		0.00600	1	09/05/2022 20:05	WG1921346
Benzo(a)pyrene	ND		0.00600	1	09/05/2022 20:05	WG1921346
Chrysene	ND		0.00600	1	09/05/2022 20:05	WG1921346
Dibenz(a,h)anthracene	ND		0.00600	1	09/05/2022 20:05	WG1921346
Fluoranthene	ND		0.00600	1	09/05/2022 20:05	WG1921346
Fluorene	0.00675		0.00600	1	09/05/2022 20:05	WG1921346
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	09/05/2022 20:05	WG1921346
1-Methylnaphthalene	0.0987		0.0200	1	09/05/2022 20:05	WG1921346
2-Methylnaphthalene	0.348		0.0200	1	09/05/2022 20:05	WG1921346
Naphthalene	0.139		0.0200	1	09/05/2022 20:05	WG1921346
Pyrene	ND		0.00600	1	09/05/2022 20:05	WG1921346
(S) p-Terphenyl-d14	*66.3*		*23.0-120*		*09/05/2022 20:05*	WG1921346
(S) Nitrobenzene-d5	*310*	J1	*14.0-149*		*09/05/2022 20:05*	WG1921346
(S) 2-Fluorobiphenyl	*71.9*		*34.0-125*		*09/05/2022 20:05*	WG1921346

Sample Narrative:

L1530214-03 WG1921346: Surrogate failure due to matrix interference

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.163		1	09/14/2022 16:07	WG1919047

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	1.83		1.00	1	09/15/2022 09:09	WG1922800

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	7.65	T8	1	09/06/2022 11:00	WG1921580

Sample Narrative:

L1530214-04 WG1921580: 7.65 at 21C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	110		10.0	1	09/10/2022 11:30	WG1923615

Sample Narrative:

L1530214-04 WG1923615: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	556		0.500	1	09/04/2022 13:21	WG1919105
Cadmium	0.702		0.500	1	09/04/2022 13:21	WG1919105
Copper	52.6		2.00	1	09/04/2022 13:21	WG1919105
Lead	23.7		0.500	1	09/04/2022 13:21	WG1919105
Nickel	31.7		2.00	1	09/04/2022 13:21	WG1919105
Selenium	ND		2.00	1	09/04/2022 13:21	WG1919105
Silver	ND		1.00	1	09/04/2022 13:21	WG1919105
Zinc	47.1		5.00	1	09/04/2022 13:21	WG1919105

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/l		mg/l			
Hot Water Sol. Boron	ND		0.200	1	09/06/2022 22:29	WG1919210

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	32.5		1.00	5	09/02/2022 17:06	WG1919104

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	5.01		0.100	1	09/02/2022 10:31	WG1920368
(S) a,a,a-Trifluorotoluene(FID)	*81.5*		*77.0-120*		*09/02/2022 10:31*	WG1920368

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.438		0.00100	1	09/03/2022 11:21	WG1920640
Toluene	12.1		0.0400	8	09/06/2022 22:09	WG1922004
Ethylbenzene	0.158		0.00250	1	09/03/2022 11:21	WG1920640
Xylenes, Total	2.58		0.00650	1	09/03/2022 11:21	WG1920640
1,2,4-Trimethylbenzene	0.0305		0.00500	1	09/03/2022 11:21	WG1920640
1,3,5-Trimethylbenzene	0.0272		0.00500	1	09/03/2022 11:21	WG1920640
(S) Toluene-d8	*106*		*75.0-131*		*09/03/2022 11:21*	WG1920640
(S) Toluene-d8	*109*		*75.0-131*		*09/06/2022 22:09*	WG1922004
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*09/03/2022 11:21*	WG1920640
(S) 4-Bromofluorobenzene	*97.0*		*67.0-138*		*09/06/2022 22:09*	WG1922004
(S) 1,2-Dichloroethane-d4	*97.4*		*70.0-130*		*09/03/2022 11:21*	WG1920640
(S) 1,2-Dichloroethane-d4	*97.5*		*70.0-130*		*09/06/2022 22:09*	WG1922004

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	ND		4.00	1	09/07/2022 12:06	WG1921339
C28-C36 Motor Oil Range	13.5		4.00	1	09/07/2022 12:06	WG1921339
(S) o-Terphenyl	*73.7*		*18.0-148*		*09/07/2022 12:06*	WG1921339

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	09/05/2022 20:22	WG1921346
Anthracene	ND		0.00600	1	09/05/2022 20:22	WG1921346
Benzo(a)anthracene	ND		0.00600	1	09/05/2022 20:22	WG1921346
Benzo(b)fluoranthene	ND		0.00600	1	09/05/2022 20:22	WG1921346
Benzo(k)fluoranthene	ND		0.00600	1	09/05/2022 20:22	WG1921346
Benzo(a)pyrene	ND		0.00600	1	09/05/2022 20:22	WG1921346
Chrysene	ND		0.00600	1	09/05/2022 20:22	WG1921346
Dibenz(a,h)anthracene	ND		0.00600	1	09/05/2022 20:22	WG1921346
Fluoranthene	ND		0.00600	1	09/05/2022 20:22	WG1921346
Fluorene	ND		0.00600	1	09/05/2022 20:22	WG1921346
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	09/05/2022 20:22	WG1921346
1-Methylnaphthalene	ND		0.0200	1	09/05/2022 20:22	WG1921346
2-Methylnaphthalene	ND		0.0200	1	09/05/2022 20:22	WG1921346
Naphthalene	ND		0.0200	1	09/05/2022 20:22	WG1921346
Pyrene	ND		0.00600	1	09/05/2022 20:22	WG1921346
(S) p-Terphenyl-d14	*86.8*		*23.0-120*		*09/05/2022 20:22*	WG1921346
(S) Nitrobenzene-d5	*107*		*14.0-149*		*09/05/2022 20:22*	WG1921346
(S) 2-Fluorobiphenyl	*86.7*		*34.0-125*		*09/05/2022 20:22*	WG1921346

Method Blank (MB)

(MB) R3838224-1 09/15/22 07:43

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

L1530212-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1530212-06 09/15/22 08:27 • (DUP) R3838224-3 09/15/22 08:32

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	ND	ND	1	9.76		20

L1531518-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1531518-03 09/15/22 10:11 • (DUP) R3838224-8 09/15/22 10:16

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

Laboratory Control Sample (LCS)

(LCS) R3838224-2 09/15/22 07:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.67	96.7	80.0-120	

L1531494-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1531494-01 09/15/22 09:19 • (MS) R3838224-4 09/15/22 09:24 • (MSD) R3838224-5 09/15/22 09:29

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 %
Hexavalent Chromium	20.0	ND	18.7	20.6	92.1	102	1	75.0-125			9.94	20

L1531494-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1531494-01 09/15/22 09:19 • (MS) R3838224-7 09/15/22 09:50

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	638	ND	736	115	50	75.0-125	

L1530215-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1530215-01 09/06/22 11:00 • (DUP) R3833980-2 09/06/22 11:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	7.69	7.65	1	0.522		1

Sample Narrative:

OS: 7.69 at 21.3C

DUP: 7.65 at 21.1C

L1530264-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1530264-01 09/06/22 11:00 • (DUP) R3833980-3 09/06/22 11:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.59	7.60	1	0.132		1

Sample Narrative:

OS: 7.59 at 21.3C

DUP: 7.6 at 21.4C

Laboratory Control Sample (LCS)

(LCS) R3833980-1 09/06/22 11:00

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

Sample Narrative:

LCS: 9.91 at 21.3C

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

Method Blank (MB)

(MB) R3835746-1 09/10/22 11:30

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

L1530212-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1530212-08 09/10/22 11:30 • (DUP) R3835746-3 09/10/22 11:30

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	116	119	1	2.48		20

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

L1530734-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1530734-01 09/10/22 11:30 • (DUP) R3835746-4 09/10/22 11:30

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1820	1840	1	0.873		20

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

Laboratory Control Sample (LCS)

(LCS) R3835746-2 09/10/22 11:30

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1080	96.8	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3833700-1 09/04/22 12:45

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

Laboratory Control Sample (LCS)

(LCS) R3833700-2 09/04/22 12:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	97.1	97.1	80.0-120	
Cadmium	100	93.8	93.8	80.0-120	
Copper	100	93.3	93.3	80.0-120	
Lead	100	93.6	93.6	80.0-120	
Nickel	100	93.4	93.4	80.0-120	
Selenium	100	95.8	95.8	80.0-120	
Silver	20.0	17.8	89.1	80.0-120	
Zinc	100	91.6	91.6	80.0-120	

L1530247-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530247-04 09/04/22 12:50 • (MS) R3833700-5 09/04/22 12:58 • (MSD) R3833700-6 09/04/22 13:01

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	181	286	279	104	97.2	1	75.0-125			2.56	20
Cadmium	100	ND	105	89.2	105	88.9	1	75.0-125			16.7	20
Copper	100	15.2	121	106	106	91.0	1	75.0-125			13.5	20
Lead	100	9.64	117	101	108	91.0	1	75.0-125			15.2	20
Nickel	100	17.7	125	108	107	90.6	1	75.0-125			14.2	20
Selenium	100	ND	100	84.1	100	84.1	1	75.0-125			17.7	20
Silver	20.0	ND	20.0	16.9	99.9	84.4	1	75.0-125			16.8	20
Zinc	100	45.9	139	121	93.1	75.3	1	75.0-125			13.7	20

Method Blank (MB)

(MB) R3834273-1 09/06/22 21:49

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) R3834273-2 09/06/22 21:51 • (LCSD) R3834273-3 09/06/22 21:54

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	1.11	1.12	111	112	80.0-120			0.622	20

Method Blank (MB)

(MB) R3833510-1 09/02/22 16:24

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

Laboratory Control Sample (LCS)

(LCS) R3833510-2 09/02/22 16:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	97.3	97.3	80.0-120	

L1530247-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530247-04 09/02/22 16:30 • (MS) R3833510-5 09/02/22 16:40 • (MSD) R3833510-6 09/02/22 16:43

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	5.12	105	92.9	100	87.8	5	75.0-125			12.4	20

Method Blank (MB)

(MB) R3833323-2 09/02/22 05:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*113*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3833323-1 09/02/22 04:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.68	85.1	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*77.0-120*	

Method Blank (MB)

(MB) R3833752-2 09/03/22 07:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.543	2.50
(S) a,a,a-Trifluorotoluene(FID)	*117*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3833752-1 09/03/22 05:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.05	110	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*77.0-120*	

Method Blank (MB)

(MB) R3834071-3 09/05/22 08:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.543	2.50
(S) a,a,a-Trifluorotoluene(FID)	*91.0*			*77.0-120*

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

(LCS) R3834071-1 09/05/22 07:21 • (LCSD) R3834071-2 09/05/22 07:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	6.03	6.04	110	110	72.0-127			0.166	20
(S) a,a,a-Trifluorotoluene(FID)				*109*	*109*	*77.0-120*				

Method Blank (MB)

(MB) R3833427-3 09/02/22 11:00

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	*99.9*			*75.0-131*
(S) 4-Bromofluorobenzene	*99.4*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*98.6*			*70.0-130*

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

(LCS) R3833427-1 09/02/22 09:44 • (LCSD) R3833427-2 09/02/22 10:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.120	0.124	96.0	99.2	70.0-123			3.28	20
Toluene	0.125	0.116	0.119	92.8	95.2	75.0-121			2.55	20
Ethylbenzene	0.125	0.122	0.128	97.6	102	74.0-126			4.80	20
Xylenes, Total	0.375	0.357	0.366	95.2	97.6	72.0-127			2.49	20
1,2,4-Trimethylbenzene	0.125	0.115	0.123	92.0	98.4	70.0-126			6.72	20
1,3,5-Trimethylbenzene	0.125	0.118	0.124	94.4	99.2	73.0-127			4.96	20
(S) Toluene-d8				*102*	*102*	*75.0-131*				
(S) 4-Bromofluorobenzene				*98.0*	*98.9*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*106*	*106*	*70.0-130*				

L1530189-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530189-05 09/02/22 14:07 • (MS) R3833427-4 09/02/22 17:55 • (MSD) R3833427-5 09/02/22 18:14

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.124	ND	0.106	0.0662	85.5	53.4	1	10.0-149		J3	46.2	37
Toluene	0.124	ND	0.107	0.0665	86.3	53.6	1	10.0-156		J3	46.7	38
Ethylbenzene	0.124	ND	0.116	0.0674	93.5	54.4	1	10.0-160		J3	53.0	38
Xylenes, Total	0.372	ND	0.331	0.210	89.0	56.5	1	10.0-160		J3	44.7	38
1,2,4-Trimethylbenzene	0.124	ND	0.111	0.0691	89.5	55.7	1	10.0-160		J3	46.5	36
1,3,5-Trimethylbenzene	0.124	ND	0.111	0.0665	89.5	53.6	1	10.0-160		J3	50.1	38
(S) Toluene-d8					*102*	*101*		*75.0-131*				
(S) 4-Bromofluorobenzene					*101*	*101*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*96.9*	*102*		*70.0-130*				

Method Blank (MB)

(MB) R3834060-2 09/03/22 07:22

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*109*			*75.0-131*
(S) 4-Bromofluorobenzene	*98.4*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*91.0*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3834060-1 09/03/22 06:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.123	98.4	70.0-123	
Ethylbenzene	0.125	0.123	98.4	74.0-126	
Xylenes, Total	0.375	0.391	104	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.145	116	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.140	112	73.0-127	
(S) Toluene-d8			*104*	*75.0-131*	
(S) 4-Bromofluorobenzene			*98.0*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*105*	*70.0-130*	

Method Blank (MB)

(MB) R3834373-3 09/06/22 11:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*102*			*75.0-131*
(S) 4-Bromofluorobenzene	*97.8*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*115*			*70.0-130*

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

(LCS) R3834373-1 09/06/22 10:29 • (LCSD) R3834373-2 09/06/22 10:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Toluene	0.125	0.112	0.110	89.6	88.0	75.0-121			1.80	20
Xylenes, Total	0.375	0.346	0.337	92.3	89.9	72.0-127			2.64	20
(S) Toluene-d8				*98.3*	*96.7*	*75.0-131*				
(S) 4-Bromofluorobenzene				*98.4*	*96.6*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*127*	*118*	*70.0-130*				

Method Blank (MB)

(MB) R3834331-1 09/06/22 12:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Toluene	U		0.00130	0.00500
(S) Toluene-d8	*110*			*75.0-131*
(S) 4-Bromofluorobenzene	*95.4*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*91.3*			*70.0-130*

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

(LCS) R3834331-2 09/06/22 12:52 • (LCSD) R3834331-3 09/06/22 13:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Toluene	0.125	0.124	0.127	99.2	102	75.0-121			2.39	20
(S) Toluene-d8				*105*	*108*	*75.0-131*				
(S) 4-Bromofluorobenzene				*93.8*	*94.8*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*95.1*	*94.3*	*70.0-130*				

Method Blank (MB)

(MB) R3834423-1 09/06/22 16:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	0.853	J	0.274	4.00
(S) o-Terphenyl	*70.9*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3834423-2 09/06/22 16:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	38.2	76.4	50.0-150	
(S) o-Terphenyl			*79.4*	*18.0-148*	

L1530214-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530214-01 09/06/22 17:23 • (MS) R3834423-3 09/06/22 17:36 • (MSD) R3834423-4 09/06/22 17:48

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 %
C10-C28 Diesel Range	48.3	636	1210	1350	1190	1480	10	50.0-150	V	V	10.9	20
(S) o-Terphenyl					*280*	*391*		*18.0-148*	J1	J1		

Sample Narrative:

OS: Surrogate failure due to matrix interference

Method Blank (MB)

(MB) R3833979-2 09/05/22 15:26

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	*91.8*			*23.0-120*
(S) Nitrobenzene-d5	*96.4*			*14.0-149*
(S) 2-Fluorobiphenyl	*87.8*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3833979-1 09/05/22 15:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0736	92.0	50.0-120	
Anthracene	0.0800	0.0739	92.4	50.0-126	
Benzo(a)anthracene	0.0800	0.0741	92.6	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0700	87.5	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0708	88.5	49.0-125	
Benzo(a)pyrene	0.0800	0.0699	87.4	42.0-120	
Chrysene	0.0800	0.0751	93.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0691	86.4	47.0-125	
Fluoranthene	0.0800	0.0771	96.4	49.0-129	
Fluorene	0.0800	0.0757	94.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0725	90.6	46.0-125	
1-Methylnaphthalene	0.0800	0.0738	92.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0746	93.3	50.0-120	
Naphthalene	0.0800	0.0705	88.1	50.0-120	
Pyrene	0.0800	0.0713	89.1	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3833979-1 09/05/22 15:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*102*	*23.0-120*	
(S) Nitrobenzene-d5			*109*	*14.0-149*	
(S) 2-Fluorobiphenyl			*101*	*34.0-125*	

L1530279-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530279-01 09/05/22 17:45 • (MS) R3833979-3 09/05/22 18:03 • (MSD) R3833979-4 09/05/22 18:20

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	0.0796	ND	0.0434	0.0310	54.5	38.9	1	14.0-127		J3	33.3	27
Anthracene	0.0796	ND	0.0480	0.0366	60.3	46.0	1	10.0-145			27.0	30
Benzo(a)anthracene	0.0796	ND	0.0505	0.0417	63.4	52.4	1	10.0-139			19.1	30
Benzo(b)fluoranthene	0.0796	ND	0.0431	0.0367	54.1	46.1	1	10.0-140			16.0	36
Benzo(k)fluoranthene	0.0796	ND	0.0541	0.0455	68.0	57.2	1	10.0-137			17.3	31
Benzo(a)pyrene	0.0796	ND	0.0559	0.0474	70.2	59.5	1	10.0-141			16.5	31
Chrysene	0.0796	ND	0.0610	0.0510	76.6	64.1	1	10.0-145			17.9	30
Dibenz(a,h)anthracene	0.0796	ND	0.0553	0.0481	69.5	60.4	1	10.0-132			13.9	31
Fluoranthene	0.0796	ND	0.0470	0.0337	59.0	42.3	1	10.0-153			33.0	33
Fluorene	0.0796	ND	0.0441	0.0304	55.4	38.2	1	11.0-130		J3	36.8	29
Indeno(1,2,3-cd)pyrene	0.0796	ND	0.0488	0.0415	61.3	52.1	1	10.0-137			16.2	32
1-Methylnaphthalene	0.0796	ND	0.0508	0.0378	63.5	47.2	1	10.0-142		J3	29.3	28
2-Methylnaphthalene	0.0796	ND	0.0494	0.0371	61.6	46.2	1	10.0-137		J3	28.4	28
Naphthalene	0.0796	ND	0.0533	0.0457	67.0	57.4	1	10.0-135			15.4	27
Pyrene	0.0796	ND	0.0433	0.0311	54.4	39.1	1	10.0-148			32.8	35
(S) p-Terphenyl-d14					*60.1*	*65.4*		*23.0-120*				
(S) Nitrobenzene-d5					*74.5*	*94.6*		*14.0-149*				
(S) 2-Fluorobiphenyl					*44.7*	*45.8*		*34.0-125*				

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
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.
J3	The associated batch QC was outside the established quality control range for precision.
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

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

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: J075

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC
Address: Info on file
Report To: Jake Janicek, Brett Middleton, Blair Rollins
Copy To: Chris McKisson, remediation@confluence-cc.com
Customer Project Name/Number: Garden Gulch 8" (Latham Laydown) Release

Billing Information: Info on file
Email To: info on file
Site Collection Info/Address:
State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET

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

Container Preservative Type **

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

Lab Project Manager:

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Table 915-1 VOCs	TPH (ORO, GRO, DRO)	Table 915-1 Metal's	Table 915-1 PAHs	pH, EC, SAR	Boron (Hot Water Soluble Soil)	Lab Sample # / Comments
20220825-GG8"-SB07@ 5' - 7'	SL	G	8/25/2022	0815				3	G/P	X	X	X	X	X	X	L1530214 -01
20220825-GG8"-SB07@ 9'	SL	G	8/25/2022	0835				1	G	X	X			X		-02
20220825-GG8"-SB08@ 5' - 6.5'	SL	G	8/25/2022	0905				3	G/P	X	X	X	X	X	X	-03
20220825-GG8"-SB08@ 6.5' - 8'	SL	G	8/25/2022	0915				3	G/P	X	X	X	X	X	X	-04

Lab Profile/Line:

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

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Please prioritize VOC and pH, EC, SAR analysis for Sample ID: 20220825-GG8"-SB07@9'

Type of Ice Used: Wet Blue Dry None
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #:
Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: 0.9 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
A Smith	8826 1210		
	8-26-22 1500		8/27/22 0930

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO
Page: ____ of: ____

ANALYTICAL REPORT

March 27, 2023

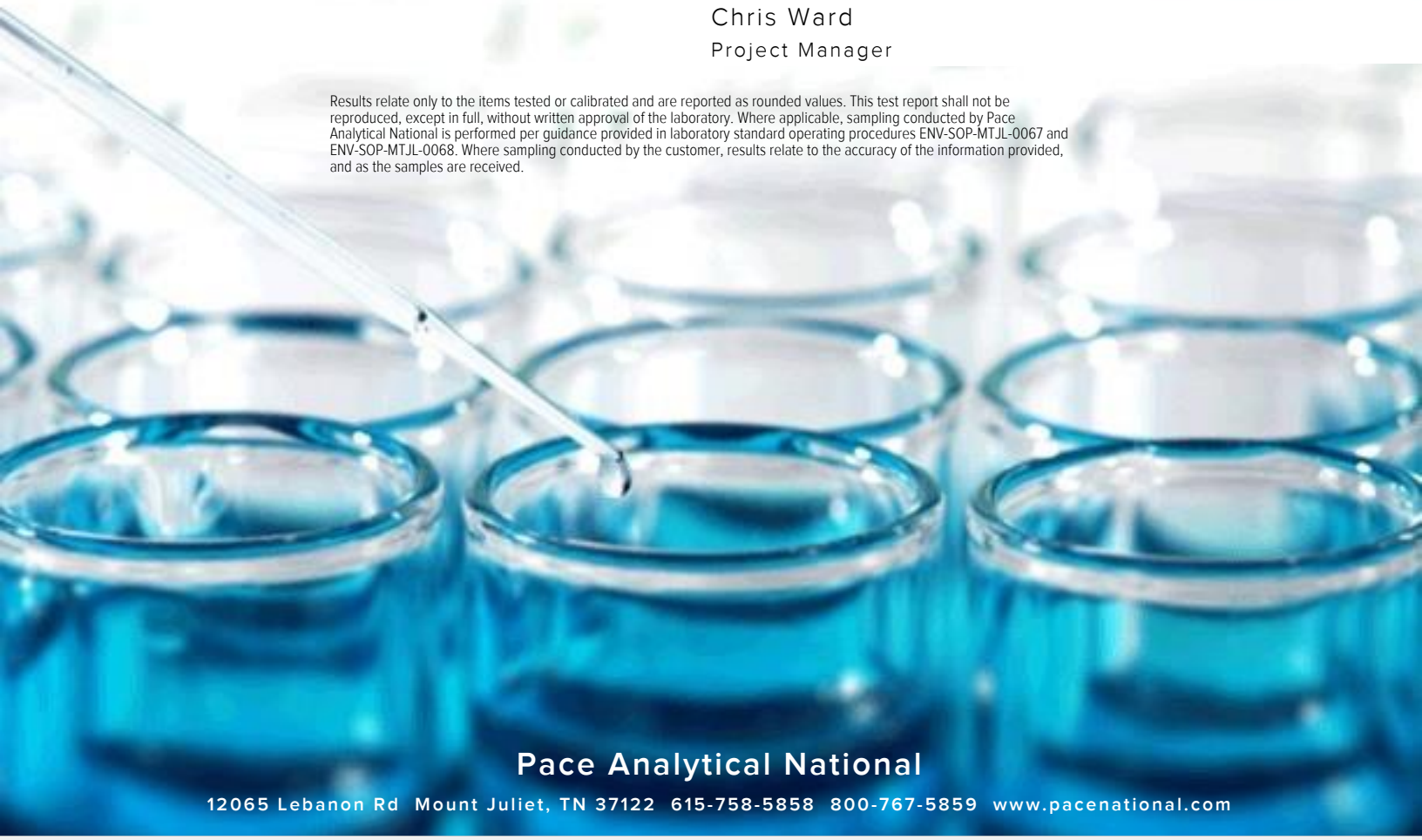
Revised Report

Caerus Oil and Gas

Sample Delivery Group:	L1537530
Samples Received:	09/20/2022
Project Number:	
Description:	Garden Gulch 8" Ground
Site:	LATHAM LAYDOWN YARD
Report To:	Brett M. , Jake J. , Blair R. 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward
Project Manager



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

TABLE OF CONTENTS

20220919-GG8"-MW-01 L1537530-01 GW

Collected by: Alex Slorby | Collected date/time: 09/19/22 12:45 | Received date/time: 09/20/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1932602	1	09/26/22 13:50	09/28/22 14:50	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1929185	1	09/21/22 00:43	09/21/22 00:43	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1931163	1	09/23/22 10:52	09/23/22 10:52	DWR	Mt. Juliet, TN

20220919-GG8"-MW-02 L1537530-02 GW

Collected by: Alex Slorby | Collected date/time: 09/19/22 12:40 | Received date/time: 09/20/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1932444	1	09/26/22 12:01	09/26/22 13:49	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1929185	5	09/21/22 01:11	09/21/22 01:11	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1931163	1	09/23/22 11:13	09/23/22 11:13	DWR	Mt. Juliet, TN

20220919-GG8"-MW-03 L1537530-03 GW

Collected by: Alex Slorby | Collected date/time: 09/19/22 11:20 | Received date/time: 09/20/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1932444	1	09/26/22 12:01	09/26/22 13:49	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1929185	1	09/21/22 01:24	09/21/22 01:24	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1931163	1	09/23/22 11:33	09/23/22 11:33	DWR	Mt. Juliet, TN

20220919-GG8"-MW-04 L1537530-04 GW

Collected by: Alex Slorby | Collected date/time: 09/19/22 12:00 | Received date/time: 09/20/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1932602	1	09/26/22 13:50	09/28/22 14:50	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1929185	1	09/21/22 01:37	09/21/22 01:37	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1931163	1	09/23/22 11:53	09/23/22 11:53	DWR	Mt. Juliet, TN

20220919-GG8"-UPGRADIENT L1537530-05 GW

Collected by: Alex Slorby | Collected date/time: 09/19/22 12:50 | Received date/time: 09/20/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1932602	1	09/26/22 13:50	09/28/22 14:50	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1929185	1	09/21/22 01:51	09/21/22 01:51	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1931163	1	09/23/22 12:14	09/23/22 12:14	DWR	Mt. Juliet, TN

20220919-GG8"-SPRING L1537530-06 GW

Collected by: Alex Slorby | Collected date/time: 09/19/22 13:00 | Received date/time: 09/20/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1932444	1	09/26/22 12:01	09/26/22 13:49	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1929185	1	09/21/22 02:04	09/21/22 02:04	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1931163	1	09/23/22 12:34	09/23/22 12:34	DWR	Mt. Juliet, TN

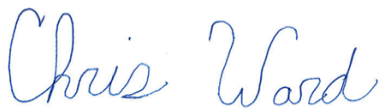
20220919-GG8"-DOWNGRADIENT L1537530-07 GW

Collected by	Collected date/time	Received date/time
Alex Slorby	09/19/22 12:55	09/20/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1932444	1	09/26/22 12:01	09/26/22 13:49	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1929185	1	09/21/22 09:56	09/21/22 09:56	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1931163	1	09/23/22 12:55	09/23/22 12:55	DWR	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: 10/04/22 13:17

Project Narrative

Report reissued to remove TPH (High Fraction)

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	604		13.3	1	09/28/2022 14:50	WG1932602

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	102		0.379	1.00	1	09/21/2022 00:43	WG1929185
Sulfate	67.3		0.594	5.00	1	09/21/2022 00:43	WG1929185

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	09/23/2022 10:52	WG1931163
Toluene	U		0.000278	0.00100	1	09/23/2022 10:52	WG1931163
Ethylbenzene	U		0.000137	0.00100	1	09/23/2022 10:52	WG1931163
Xylenes, Total	U		0.000174	0.00300	1	09/23/2022 10:52	WG1931163
Naphthalene	U		0.00100	0.00500	1	09/23/2022 10:52	WG1931163
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	09/23/2022 10:52	WG1931163
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	09/23/2022 10:52	WG1931163
(S) Toluene-d8	*109*			*80.0-120*		*09/23/2022 10:52*	WG1931163
(S) 4-Bromofluorobenzene	*96.4*			*77.0-126*		*09/23/2022 10:52*	WG1931163
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*		*09/23/2022 10:52*	WG1931163

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	649		13.3	1	09/26/2022 13:49	WG1932444

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	99.2		1.90	5.00	5	09/21/2022 01:11	WG1929185
Sulfate	79.0		2.97	25.0	5	09/21/2022 01:11	WG1929185

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	09/23/2022 11:13	WG1931163
Toluene	U		0.000278	0.00100	1	09/23/2022 11:13	WG1931163
Ethylbenzene	U		0.000137	0.00100	1	09/23/2022 11:13	WG1931163
Xylenes, Total	U		0.000174	0.00300	1	09/23/2022 11:13	WG1931163
Naphthalene	U		0.00100	0.00500	1	09/23/2022 11:13	WG1931163
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	09/23/2022 11:13	WG1931163
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	09/23/2022 11:13	WG1931163
(S) Toluene-d8	*109*			*80.0-120*		*09/23/2022 11:13*	WG1931163
(S) 4-Bromofluorobenzene	*92.8*			*77.0-126*		*09/23/2022 11:13*	WG1931163
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*09/23/2022 11:13*	WG1931163

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	674		10.0	1	09/26/2022 13:49	WG1932444

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	28.9		0.379	1.00	1	09/21/2022 01:24	WG1929185
Sulfate	43.0		0.594	5.00	1	09/21/2022 01:24	WG1929185

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	09/23/2022 11:33	WG1931163
Toluene	U		0.000278	0.00100	1	09/23/2022 11:33	WG1931163
Ethylbenzene	U		0.000137	0.00100	1	09/23/2022 11:33	WG1931163
Xylenes, Total	U		0.000174	0.00300	1	09/23/2022 11:33	WG1931163
Naphthalene	U		0.00100	0.00500	1	09/23/2022 11:33	WG1931163
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	09/23/2022 11:33	WG1931163
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	09/23/2022 11:33	WG1931163
(S) Toluene-d8	*113*			*80.0-120*		*09/23/2022 11:33*	WG1931163
(S) 4-Bromofluorobenzene	*93.5*			*77.0-126*		*09/23/2022 11:33*	WG1931163
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*09/23/2022 11:33*	WG1931163

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	442		10.0	1	09/28/2022 14:50	WG1932602

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	5.20		0.379	1.00	1	09/21/2022 01:37	WG1929185
Sulfate	37.0		0.594	5.00	1	09/21/2022 01:37	WG1929185

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.000137	J	0.0000941	0.00100	1	09/23/2022 11:53	WG1931163
Toluene	0.000460	J	0.000278	0.00100	1	09/23/2022 11:53	WG1931163
Ethylbenzene	0.000308	J	0.000137	0.00100	1	09/23/2022 11:53	WG1931163
Xylenes, Total	U		0.000174	0.00300	1	09/23/2022 11:53	WG1931163
Naphthalene	U		0.00100	0.00500	1	09/23/2022 11:53	WG1931163
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	09/23/2022 11:53	WG1931163
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	09/23/2022 11:53	WG1931163
(S) Toluene-d8	*110*			*80.0-120*		*09/23/2022 11:53*	WG1931163
(S) 4-Bromofluorobenzene	*94.6*			*77.0-126*		*09/23/2022 11:53*	WG1931163
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*		*09/23/2022 11:53*	WG1931163

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	395		10.0	1	09/28/2022 14:50	WG1932602

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	4.86		0.379	1.00	1	09/21/2022 01:51	WG1929185
Sulfate	44.3		0.594	5.00	1	09/21/2022 01:51	WG1929185

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	09/23/2022 12:14	WG1931163
Toluene	U		0.000278	0.00100	1	09/23/2022 12:14	WG1931163
Ethylbenzene	U		0.000137	0.00100	1	09/23/2022 12:14	WG1931163
Xylenes, Total	U		0.000174	0.00300	1	09/23/2022 12:14	WG1931163
Naphthalene	U		0.00100	0.00500	1	09/23/2022 12:14	WG1931163
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	09/23/2022 12:14	WG1931163
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	09/23/2022 12:14	WG1931163
(S) Toluene-d8	*112*			*80.0-120*		*09/23/2022 12:14*	WG1931163
(S) 4-Bromofluorobenzene	*95.7*			*77.0-126*		*09/23/2022 12:14*	WG1931163
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*09/23/2022 12:14*	WG1931163

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	427		10.0	1	09/26/2022 13:49	WG1932444

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	22.6		0.379	1.00	1	09/21/2022 02:04	WG1929185
Sulfate	42.5		0.594	5.00	1	09/21/2022 02:04	WG1929185

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	09/23/2022 12:34	WG1931163
Toluene	U		0.000278	0.00100	1	09/23/2022 12:34	WG1931163
Ethylbenzene	U		0.000137	0.00100	1	09/23/2022 12:34	WG1931163
Xylenes, Total	U		0.000174	0.00300	1	09/23/2022 12:34	WG1931163
Naphthalene	U		0.00100	0.00500	1	09/23/2022 12:34	WG1931163
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	09/23/2022 12:34	WG1931163
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	09/23/2022 12:34	WG1931163
(S) Toluene-d8	*110*			*80.0-120*		*09/23/2022 12:34*	WG1931163
(S) 4-Bromofluorobenzene	*92.5*			*77.0-126*		*09/23/2022 12:34*	WG1931163
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*		*09/23/2022 12:34*	WG1931163

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	374		10.0	1	09/26/2022 13:49	WG1932444

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	10.7		0.379	1.00	1	09/21/2022 09:56	WG1929185
Sulfate	40.9		0.594	5.00	1	09/21/2022 09:56	WG1929185

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	09/23/2022 12:55	WG1931163
Toluene	U		0.000278	0.00100	1	09/23/2022 12:55	WG1931163
Ethylbenzene	U		0.000137	0.00100	1	09/23/2022 12:55	WG1931163
Xylenes, Total	U		0.000174	0.00300	1	09/23/2022 12:55	WG1931163
Naphthalene	U		0.00100	0.00500	1	09/23/2022 12:55	WG1931163
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	09/23/2022 12:55	WG1931163
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	09/23/2022 12:55	WG1931163
(S) Toluene-d8	*112*			*80.0-120*		*09/23/2022 12:55*	WG1931163
(S) 4-Bromofluorobenzene	*94.9*			*77.0-126*		*09/23/2022 12:55*	WG1931163
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*		*09/23/2022 12:55*	WG1931163

Method Blank (MB)

(MB) R3844202-1 09/26/22 13:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1537907-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1537907-02 09/26/22 13:49 • (DUP) R3844202-3 09/26/22 13:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1470	1550	1	5.30	J3	5

L1537907-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1537907-03 09/26/22 13:49 • (DUP) R3844202-4 09/26/22 13:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	656	664	1	1.21		5

Laboratory Control Sample (LCS)

(LCS) R3844202-2 09/26/22 13:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8200	93.2	77.3-123	

Method Blank (MB)

(MB) R3843075-1 09/28/22 14:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1530020-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1530020-02 09/28/22 14:50 • (DUP) R3843075-3 09/28/22 14:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	67200	66600	1	0.897		5

L1530817-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1530817-01 09/28/22 14:50 • (DUP) R3843075-4 09/28/22 14:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	5400	5640	1	4.35		5

Sample Narrative:

OS: In hold analysis did not match conductivity.

Laboratory Control Sample (LCS)

(LCS) R3843075-2 09/28/22 14:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8380	95.2	77.3-123	

Method Blank (MB)

(MB) R3839783-1 09/20/22 18:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Sulfate	U		0.594	5.00

L1537427-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1537427-01 09/20/22 19:23 • (DUP) R3839783-3 09/20/22 19:36

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	6.23	6.06	1	2.72		15
Sulfate	0.676	0.649	1	4.08	J	15

L1537530-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1537530-07 09/21/22 09:56 • (DUP) R3839783-6 09/21/22 10:10

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	10.7	10.9	1	2.02		15
Sulfate	40.9	42.4	1	3.71		15

Laboratory Control Sample (LCS)

(LCS) R3839783-2 09/20/22 19:10

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	38.4	95.9	80.0-120	
Sulfate	40.0	38.3	95.8	80.0-120	

L1537427-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1537427-01 09/20/22 19:23 • (MS) R3839783-4 09/20/22 19:50 • (MSD) R3839783-5 09/20/22 20:03

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 %
Chloride	50.0	6.23	56.1	55.0	99.8	97.5	1	80.0-120			2.07	15
Sulfate	50.0	0.676	50.7	49.6	100	97.9	1	80.0-120			2.20	15

L1537530-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1537530-07 09/21/22 09:56 • (MS) R3839783-7 09/21/22 10:23

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	10.7	59.1	96.8	1	80.0-120	
Sulfate	50.0	40.9	86.9	92.0	1	80.0-120	

Method Blank (MB)

(MB) R3841945-2 09/23/22 09:13

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Xylenes, Total	U		0.000174	0.00300
Naphthalene	U		0.00100	0.00500
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
(S) Toluene-d8	*114*			*80.0-120*
(S) 4-Bromofluorobenzene	*95.6*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3841945-1 09/23/22 08:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.00500	0.00489	97.8	70.0-123	
Toluene	0.00500	0.00477	95.4	79.0-120	
Ethylbenzene	0.00500	0.00470	94.0	79.0-123	
Xylenes, Total	0.0150	0.0139	92.7	79.0-123	
Naphthalene	0.00500	0.00556	111	54.0-135	
1,2,4-Trimethylbenzene	0.00500	0.00386	77.2	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00402	80.4	76.0-122	
(S) Toluene-d8			*110*	*80.0-120*	
(S) 4-Bromofluorobenzene			*94.4*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*110*	*70.0-130*	

L1537453-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1537453-07 09/23/22 15:38 • (MS) R3841945-3 09/23/22 16:40 • (MSD) R3841945-4 09/23/22 17:01

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 %
Benzene	0.500	U	0.622	0.627	124	125	100	17.0-158			0.801	27
Toluene	0.500	U	0.623	0.597	125	119	100	26.0-154			4.26	28
Ethylbenzene	0.500	U	0.611	0.577	122	115	100	30.0-155			5.72	27
Xylenes, Total	1.50	U	1.82	1.75	121	117	100	29.0-154			3.92	28
Naphthalene	0.500	U	0.670	0.675	134	135	100	12.0-156			0.743	35
1,2,4-Trimethylbenzene	0.500	U	0.503	0.507	101	101	100	26.0-154			0.792	27
1,3,5-Trimethylbenzene	0.500	U	0.511	0.503	102	101	100	28.0-153			1.58	27

L1537453-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1537453-07 09/23/22 15:38 • (MS) R3841945-3 09/23/22 16:40 • (MSD) R3841945-4 09/23/22 17:01

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 %
(S) Toluene-d8					*110*	*107*		*80.0-120*				
(S) 4-Bromofluorobenzene					*97.0*	*93.9*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*114*	*114*		*70.0-130*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.

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	LAO000356
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.

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

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: B131

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: Info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: Garden Gulch 8" Ground Water	State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: / Email:	Site/Facility ID #: Latham Laydown Yard / Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Alex Slorby	Purchase Order # : / Quote #: / DW PWS ID #: / DW Location Code:
Collected By (signature):	Turnaround Date Required: Standard Turnaround / Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day / Field Filtered (if applicable): [ ] Yes [ ] No / Analysis:

Container Preservative Type **

Lab Project Manager:

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

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	BTEX	Naphthalene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	TDS	Chloride, Sulfate	TPH- High Fraction				Lab Sample # / Comments
20220919-GG8"-MW-01	GW	G	9/19/2022	1245				5	G/P	X	X	X	X	X	X	X				-01
20220919-GG8"-MW-02	GW	G	9/19/2022	1240				5	G/P	X	X	X	X	X	X	X				-02
20220919-GG8"-MW-03	GW	G	9/19/2022	1120				5	G/P	X	X	X	X	X	X	X				-03
20220919-GG8"-MW-04	GW	G	9/19/2022	1200				5	G/P	X	X	X	X	X	X	X				-04
20220919-GG8"-Upgradient	GW	G	9/19/2022	1250				5	G/P	X	X	X	X	X	X	X				-05
20220919-GG8"-Spring	GW	G	9/19/2022	1300				5	G/P	X	X	X	X	X	X	X				-06
20220919-GG8"-Downgradient	GW	G	9/19/2022	1255				5	G/P	X	X	X	X	X	X	X				-07

Lab Profile/Line:

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

LAB USE ONLY:
Lab Sample # / Comments: L1537530

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet (Blue) Dry None

Packing Material Used:

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

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

Lab Tracking #: 5755 8084 9197

Samples received via: (FEDEX) UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y (N) NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: ___oC
Cooler 1 Therm Corr. Factor: ___oC
Cooler 1 Corrected Temp: ___oC
Comments:

Relinquished by/Company: (Signature)	Date/Time: 9/19/22 1630	Received by/Company: (Signature)	Date/Time: 9/19 1630
Relinquished by/Company: (Signature)	Date/Time: 9/19/22 1730	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature) Hana Minechina	Date/Time: 09/20 09:15

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y (N) NA
HCL MeOH TSP Other

Non Conformance(s): YES / (NO)

Page: ____ of: ____

1 BATTLES - 1 = 35

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

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

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: Info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: Garden Gulch 8" Ground Water	State: CO / Garfield County/City: Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: Email:	Site/Facility ID #: Latham Laydown Yard
Collected By (print): Alex Slorby	Purchase Order # : Quote #:
Collected By (signature):	Turnaround Date Required: Standard Turnaround
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day

Compliance Monitoring? [ ] Yes [X] No

DW PWS ID #:

DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: _____

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

Container Preservative Type **

Lab Project Manager:

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

Analyses

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	BTEX	Naphthalene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	TDS	Chloride, Sulfate
20220919-GG8"-MW-01	GW	G	9/19/2022	1245				5	G/P	X	X	X	X	X	X
20220919-GG8"-MW-02	GW	G	9/19/2022	1240				5	G/P	X	X	X	X	X	X
20220919-GG8"-MW-03	GW	G	9/19/2022	1120				5	G/P	X	X	X	X	X	X
20220919-GG8"-MW-04	GW	G	9/19/2022	1200				5	G/P	X	X	X	X	X	X
20220919-GG8"-Upgradient	GW	G	9/19/2022	1250				5	G/P	X	X	X	X	X	X
20220919-GG8"-Spring	GW	G	9/19/2022	1300				5	G/P	X	X	X	X	X	X
20220919-GG8"-Downgradient	GW	G	9/19/2022	1255				5	G/P	X	X	X	X	X	X

Lab Profile/Line:

Lab Sample Receipt Checklist:

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

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:

Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: ___ oC
Cooler 1 Therm Corr. Factor: ___ oC
Cooler 1 Corrected Temp: ___ oC
Comments:

Relinquished by/Company: (Signature)	Date/Time: 9/19/22 1630	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

ANALYTICAL REPORT

March 27, 2023

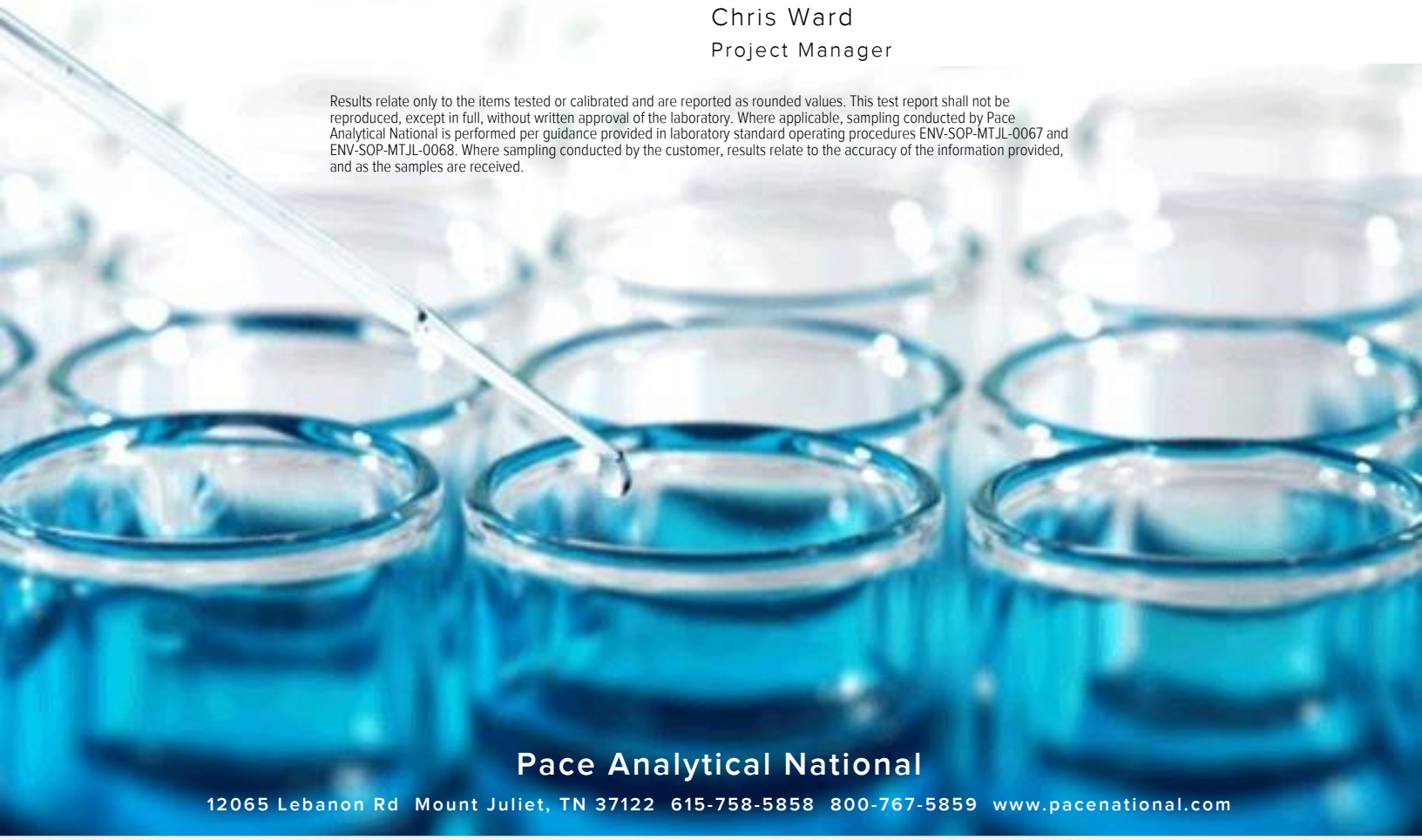
Revised Report

Caerus Oil and Gas

Sample Delivery Group:	L1552653
Samples Received:	11/01/2022
Project Number:	
Description:	Garden Gulch 8" Ground Water
Site:	LATHAM LAYDOWN YARD
Report To:	Brett M. , Jake J. , Blair R. 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward
Project Manager



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

TABLE OF CONTENTS

20221031-GG8"-MW-01 L1552653-01 GW

Collected by: Alex Slorby | Collected date/time: 10/31/22 11:35 | Received date/time: 11/01/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1954844	1	11/05/22 12:52	11/05/22 15:35	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1954587	1	11/04/22 22:51	11/04/22 22:51	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1954413	1	11/04/22 13:37	11/04/22 13:37	ADM	Mt. Juliet, TN

20221031-GG8"-MW-02 L1552653-02 GW

Collected by: Alex Slorby | Collected date/time: 10/31/22 11:45 | Received date/time: 11/01/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1954844	1	11/05/22 12:52	11/05/22 15:35	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1954587	1	11/04/22 23:45	11/04/22 23:45	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1954413	1	11/04/22 13:57	11/04/22 13:57	ADM	Mt. Juliet, TN

20221031-GG8"-MW-03 L1552653-03 GW

Collected by: Alex Slorby | Collected date/time: 10/31/22 12:00 | Received date/time: 11/01/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1954844	1	11/05/22 12:52	11/05/22 15:35	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1954587	1	11/05/22 00:02	11/05/22 00:02	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1954413	1	11/04/22 14:18	11/04/22 14:18	ADM	Mt. Juliet, TN

20221031-GG8"-MW-04 L1552653-04 GW

Collected by: Alex Slorby | Collected date/time: 10/31/22 12:45 | Received date/time: 11/01/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1954844	1	11/05/22 12:52	11/05/22 15:35	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1954587	1	11/05/22 00:20	11/05/22 00:20	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1954413	1	11/04/22 14:38	11/04/22 14:38	ADM	Mt. Juliet, TN

20221031-GG8"-UPGRADIENT L1552653-05 GW

Collected by: Alex Slorby | Collected date/time: 10/31/22 12:30 | Received date/time: 11/01/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1954844	1	11/05/22 12:52	11/05/22 15:35	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1954587	1	11/05/22 00:38	11/05/22 00:38	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1954879	1	11/05/22 13:05	11/05/22 13:05	JAH	Mt. Juliet, TN

20221031-GG8"-SPRING L1552653-06 GW

Collected by: Alex Slorby | Collected date/time: 10/31/22 12:15 | Received date/time: 11/01/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1954844	1	11/05/22 12:52	11/05/22 15:35	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1954587	1	11/05/22 00:56	11/05/22 00:56	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1954879	1	11/05/22 13:27	11/05/22 13:27	JAH	Mt. Juliet, TN

SAMPLE SUMMARY

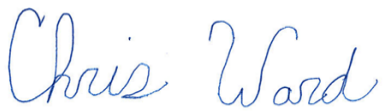
20221031-GG8"-DOWNGRADIENT L1552653-07 GW

Collected by: Alex Slorby
Collected date/time: 10/31/22 12:05
Received date/time: 11/01/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1954844	1	11/05/22 12:52	11/05/22 15:35	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1954587	1	11/05/22 01:50	11/05/22 01:50	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1954879	1	11/05/22 13:49	11/05/22 13:49	JAH	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: 11/09/22 11:14

Project Narrative

Report reissued to remove TPH (High Fraction)

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	556		13.3	1	11/05/2022 15:35	WG1954844

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	70.9		0.379	1.00	1	11/04/2022 22:51	WG1954587
Sulfate	50.7		0.594	5.00	1	11/04/2022 22:51	WG1954587

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	11/04/2022 13:37	WG1954413
Toluene	U		0.000278	0.00100	1	11/04/2022 13:37	WG1954413
Ethylbenzene	U		0.000137	0.00100	1	11/04/2022 13:37	WG1954413
Xylenes, Total	U		0.000174	0.00300	1	11/04/2022 13:37	WG1954413
Naphthalene	U		0.00100	0.00500	1	11/04/2022 13:37	WG1954413
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	11/04/2022 13:37	WG1954413
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	11/04/2022 13:37	WG1954413
(S) Toluene-d8	*108*			*80.0-120*		*11/04/2022 13:37*	WG1954413
(S) 4-Bromofluorobenzene	*106*			*77.0-126*		*11/04/2022 13:37*	WG1954413
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*11/04/2022 13:37*	WG1954413

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	594		20.0	1	11/05/2022 15:35	WG1954844

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	117		0.379	1.00	1	11/04/2022 23:45	WG1954587
Sulfate	69.8		0.594	5.00	1	11/04/2022 23:45	WG1954587

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	11/04/2022 13:57	WG1954413
Toluene	U		0.000278	0.00100	1	11/04/2022 13:57	WG1954413
Ethylbenzene	U		0.000137	0.00100	1	11/04/2022 13:57	WG1954413
Xylenes, Total	U		0.000174	0.00300	1	11/04/2022 13:57	WG1954413
Naphthalene	U		0.00100	0.00500	1	11/04/2022 13:57	WG1954413
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	11/04/2022 13:57	WG1954413
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	11/04/2022 13:57	WG1954413
(S) Toluene-d8	*107*			*80.0-120*		*11/04/2022 13:57*	WG1954413
(S) 4-Bromofluorobenzene	*105*			*77.0-126*		*11/04/2022 13:57*	WG1954413
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*		*11/04/2022 13:57*	WG1954413

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	509		13.3	1	11/05/2022 15:35	WG1954844

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	30.4		0.379	1.00	1	11/05/2022 00:02	WG1954587
Sulfate	41.6		0.594	5.00	1	11/05/2022 00:02	WG1954587

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	11/04/2022 14:18	WG1954413
Toluene	U		0.000278	0.00100	1	11/04/2022 14:18	WG1954413
Ethylbenzene	U		0.000137	0.00100	1	11/04/2022 14:18	WG1954413
Xylenes, Total	U		0.000174	0.00300	1	11/04/2022 14:18	WG1954413
Naphthalene	U		0.00100	0.00500	1	11/04/2022 14:18	WG1954413
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	11/04/2022 14:18	WG1954413
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	11/04/2022 14:18	WG1954413
(S) Toluene-d8	*108*			*80.0-120*		*11/04/2022 14:18*	WG1954413
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*11/04/2022 14:18*	WG1954413
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*11/04/2022 14:18*	WG1954413

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	410		10.0	1	11/05/2022 15:35	WG1954844

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	3.39	B	0.379	1.00	1	11/05/2022 00:20	WG1954587
Sulfate	37.5		0.594	5.00	1	11/05/2022 00:20	WG1954587

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	11/04/2022 14:38	WG1954413
Toluene	0.000298	J	0.000278	0.00100	1	11/04/2022 14:38	WG1954413
Ethylbenzene	0.000209	J	0.000137	0.00100	1	11/04/2022 14:38	WG1954413
Xylenes, Total	U		0.000174	0.00300	1	11/04/2022 14:38	WG1954413
Naphthalene	U		0.00100	0.00500	1	11/04/2022 14:38	WG1954413
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	11/04/2022 14:38	WG1954413
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	11/04/2022 14:38	WG1954413
(S) Toluene-d8	*106*			*80.0-120*		*11/04/2022 14:38*	WG1954413
(S) 4-Bromofluorobenzene	*105*			*77.0-126*		*11/04/2022 14:38*	WG1954413
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*11/04/2022 14:38*	WG1954413

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	281		10.0	1	11/05/2022 15:35	WG1954844

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	4.85	B	0.379	1.00	1	11/05/2022 00:38	WG1954587
Sulfate	29.6		0.594	5.00	1	11/05/2022 00:38	WG1954587

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	11/05/2022 13:05	WG1954879
Toluene	U		0.000278	0.00100	1	11/05/2022 13:05	WG1954879
Ethylbenzene	U		0.000137	0.00100	1	11/05/2022 13:05	WG1954879
Xylenes, Total	U		0.000174	0.00300	1	11/05/2022 13:05	WG1954879
Naphthalene	U		0.00100	0.00500	1	11/05/2022 13:05	WG1954879
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	11/05/2022 13:05	WG1954879
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	11/05/2022 13:05	WG1954879
(S) Toluene-d8	*118*			*80.0-120*		*11/05/2022 13:05*	WG1954879
(S) 4-Bromofluorobenzene	*95.3*			*77.0-126*		*11/05/2022 13:05*	WG1954879
(S) 1,2-Dichloroethane-d4	*99.5*			*70.0-130*		*11/05/2022 13:05*	WG1954879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	393		10.0	1	11/05/2022 15:35	WG1954844

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	13.2		0.379	1.00	1	11/05/2022 00:56	WG1954587
Sulfate	40.2		0.594	5.00	1	11/05/2022 00:56	WG1954587

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	11/05/2022 13:27	WG1954879
Toluene	U		0.000278	0.00100	1	11/05/2022 13:27	WG1954879
Ethylbenzene	U		0.000137	0.00100	1	11/05/2022 13:27	WG1954879
Xylenes, Total	U		0.000174	0.00300	1	11/05/2022 13:27	WG1954879
Naphthalene	U		0.00100	0.00500	1	11/05/2022 13:27	WG1954879
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	11/05/2022 13:27	WG1954879
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	11/05/2022 13:27	WG1954879
(S) Toluene-d8	*116*			*80.0-120*		*11/05/2022 13:27*	WG1954879
(S) 4-Bromofluorobenzene	*90.9*			*77.0-126*		*11/05/2022 13:27*	WG1954879
(S) 1,2-Dichloroethane-d4	*98.8*			*70.0-130*		*11/05/2022 13:27*	WG1954879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	361		10.0	1	11/05/2022 15:35	WG1954844

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	11.5		0.379	1.00	1	11/05/2022 01:50	WG1954587
Sulfate	39.7		0.594	5.00	1	11/05/2022 01:50	WG1954587

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	11/05/2022 13:49	WG1954879
Toluene	U		0.000278	0.00100	1	11/05/2022 13:49	WG1954879
Ethylbenzene	U		0.000137	0.00100	1	11/05/2022 13:49	WG1954879
Xylenes, Total	U		0.000174	0.00300	1	11/05/2022 13:49	WG1954879
Naphthalene	U		0.00100	0.00500	1	11/05/2022 13:49	WG1954879
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	11/05/2022 13:49	WG1954879
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	11/05/2022 13:49	WG1954879
(S) Toluene-d8	*113*			*80.0-120*		*11/05/2022 13:49*	WG1954879
(S) 4-Bromofluorobenzene	*90.5*			*77.0-126*		*11/05/2022 13:49*	WG1954879
(S) 1,2-Dichloroethane-d4	*97.9*			*70.0-130*		*11/05/2022 13:49*	WG1954879

Method Blank (MB)

(MB) R3857951-1 11/05/22 15:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	10.0		10.0	10.0

L1552653-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1552653-04 11/05/22 15:35 • (DUP) R3857951-3 11/05/22 15:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	410	417	1	1.69		5

L1552653-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1552653-06 11/05/22 15:35 • (DUP) R3857951-4 11/05/22 15:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	393	403	1	2.51		5

Laboratory Control Sample (LCS)

(LCS) R3857951-2 11/05/22 15:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8430	95.8	77.3-123	

Method Blank (MB)

(MB) R3857359-1 11/04/22 20:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.510	J	0.379	1.00
Sulfate	U		0.594	5.00

L1552292-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1552292-01 11/04/22 21:04 • (DUP) R3857359-3 11/04/22 21:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	15.5	15.5	1	0.262		15
Sulfate	2.53	2.49	1	1.44	J	15

L1552653-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1552653-06 11/05/22 00:56 • (DUP) R3857359-6 11/05/22 01:14

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	13.2	13.1	1	0.888		15
Sulfate	40.2	40.2	1	0.0224		15

Laboratory Control Sample (LCS)

(LCS) R3857359-2 11/04/22 20:19

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.2	98.1	80.0-120	
Sulfate	40.0	37.6	94.0	80.0-120	

L1552292-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1552292-01 11/04/22 21:04 • (MS) R3857359-4 11/04/22 21:39 • (MSD) R3857359-5 11/04/22 21:57

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 %
Chloride	50.0	15.5	65.3	65.8	99.5	101	1	80.0-120			0.844	15
Sulfate	50.0	2.53	50.6	51.2	96.1	97.3	1	80.0-120			1.11	15

L1552653-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1552653-06 11/05/22 00:56 • (MS) R3857359-7 11/05/22 01:32

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	13.2	63.7	101	1	80.0-120	
Sulfate	50.0	40.2	90.9	101	1	80.0-120	

Method Blank (MB)

(MB) R3857044-3 11/04/22 10:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Xylenes, Total	U		0.000174	0.00300
Naphthalene	U		0.00100	0.00500
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
(S) Toluene-d8	*109*			*80.0-120*
(S) 4-Bromofluorobenzene	*105*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*

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

(LCS) R3857044-1 11/04/22 09:31 • (LCSD) R3857044-2 11/04/22 09:52

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 %
Benzene	0.00500	0.00461	0.00464	92.2	92.8	70.0-123			0.649	20
Toluene	0.00500	0.00470	0.00464	94.0	92.8	79.0-120			1.28	20
Ethylbenzene	0.00500	0.00473	0.00469	94.6	93.8	79.0-123			0.849	20
Xylenes, Total	0.0150	0.0142	0.0142	94.7	94.7	79.0-123			0.000	20
Naphthalene	0.00500	0.00468	0.00487	93.6	97.4	54.0-135			3.98	20
1,2,4-Trimethylbenzene	0.00500	0.00471	0.00471	94.2	94.2	76.0-121			0.000	20
1,3,5-Trimethylbenzene	0.00500	0.00456	0.00467	91.2	93.4	76.0-122			2.38	20
(S) Toluene-d8				*108*	*107*	*80.0-120*				
(S) 4-Bromofluorobenzene				*108*	*105*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*111*	*108*	*70.0-130*				

L1553534-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1553534-01 11/04/22 15:19 • (MS) R3857044-4 11/04/22 20:29 • (MSD) R3857044-5 11/04/22 20:50

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 %
Benzene	0.00500	0.00299	0.00588	0.00753	57.8	90.8	1	17.0-158			24.6	27
Toluene	0.00500	0.000347	0.00309	0.00456	54.9	84.3	1	26.0-154		J3	38.4	28
Ethylbenzene	0.00500	0.0144	0.0173	0.0183	58.0	78.0	1	30.0-155			5.62	27
Xylenes, Total	0.0150	0.0232	0.0310	0.0349	52.0	78.0	1	29.0-154			11.8	28
Naphthalene	0.00500	0.0130	0.0172	0.0175	84.0	90.0	1	12.0-156			1.73	35
1,2,4-Trimethylbenzene	0.00500	0.0293	0.0315	0.0312	44.0	38.0	1	26.0-154			0.957	27
1,3,5-Trimethylbenzene	0.00500	0.0213	0.0240	0.0238	54.0	50.0	1	28.0-153			0.837	27

L1553534-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1553534-01 11/04/22 15:19 • (MS) R3857044-4 11/04/22 20:29 • (MSD) R3857044-5 11/04/22 20:50

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 %
(S) Toluene-d8					*103*	*105*		*80.0-120*				
(S) 4-Bromofluorobenzene					*105*	*103*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*111*	*114*		*70.0-130*				

Method Blank (MB)

(MB) R3858143-4 11/05/22 11:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Xylenes, Total	U		0.000174	0.00300
Naphthalene	U		0.00100	0.00500
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
(S) Toluene-d8	*115*			*80.0-120*
(S) 4-Bromofluorobenzene	*93.3*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*97.5*			*70.0-130*

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

(LCS) R3858143-1 11/05/22 08:29 • (LCSD) R3858143-2 11/05/22 08:51

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 %
Benzene	0.00500	0.00498	0.00496	99.6	99.2	70.0-123			0.402	20
Toluene	0.00500	0.00543	0.00540	109	108	79.0-120			0.554	20
Ethylbenzene	0.00500	0.00528	0.00513	106	103	79.0-123			2.88	20
Xylenes, Total	0.0150	0.0154	0.0145	103	96.7	79.0-123			6.02	20
Naphthalene	0.00500	0.00360	0.00379	72.0	75.8	54.0-135			5.14	20
1,2,4-Trimethylbenzene	0.00500	0.00524	0.00520	105	104	76.0-121			0.766	20
1,3,5-Trimethylbenzene	0.00500	0.00534	0.00510	107	102	76.0-122			4.60	20
(S) Toluene-d8				*109*	*108*	*80.0-120*				
(S) 4-Bromofluorobenzene				*90.6*	*89.6*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*98.7*	*99.2*	*70.0-130*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.

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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

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

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

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Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: Info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: Garden Gulch 8" Ground Water	State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: / Email:	Site/Facility ID #: Latham Laydown Yard / Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Alex Slorby	Purchase Order # : / Quote #: / DW PWS ID #: / DW Location Code:
Collected By (signature): Alex Slorby	Turnaround Date Required: Standard Turnaround / Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day / Field Filtered (if applicable): [ ] Yes [ ] No / Analysis: ____

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

Container Preservative Type **

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

Lab Project Manager:

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	BTEX	Naphthalene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	TDS	Chloride, Sulfate	TPH- High Fraction				Lab Sample # / Comments:
																				L1552693
20221031-GG8"-MW-01	GW	G	10/31/2022	1135				5	G/P	X	X	X	X	X	X	X				-01
20221031-GG8"-MW-02	GW	G	10/31/2022	1145				5	G/P	X	X	X	X	X	X	X				-02
20221031-GG8"-MW-03	GW	G	10/31/2022	1200				5	G/P	X	X	X	X	X	X	X				-03
20221031-GG8"-MW-04	GW	G	10/31/2022	1245				5	G/P	X	X	X	X	X	X	X				-04
20221031-GG8"-Upgradient	GW	G	10/31/2022	1230				5	G/P	X	X	X	X	X	X	X				-05
20221031-GG8"-Spring	GW	G	10/31/2022	1215				5	G/P	X	X	X	X	X	X	X				-06
20221031-GG8"-Downgradient	GW	G	10/31/2022	1205				5	G/P	X	X	X	X	X	X	X				-07

Lab Profile/Line:

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

LAB USE ONLY:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: JHA7
Cooler 1 Temp Upon Receipt: 1.8 oC
Cooler 1 Therm Corr. Factor: ___ oC
Cooler 1 Corrected Temp: ___ oC
Comments:

Relinquished by/Company: (Signature) Alex Slorby	Date/Time: 10/31/22 1700	Received by/Company: (Signature)	Date/Time: 10/31/22 1720
Relinquished by/Company: (Signature)	Date/Time: 10/31/22 1730	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time: 11/01/22 0900

B100

Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

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

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: Info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: Garden Gulch 8" Ground Water	State: CO / Garfield; County/City: ; Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: / Email:	Site/Facility ID #: Latham Laydown Yard; Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Alex Slorby	Purchase Order # : / Quote #: ; DW PWS ID #: / DW Location Code:
Collected By (signature): Alex Slorby	Turnaround Date Required: Standard Turnaround; Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day; Field Filtered (if applicable): [ ] Yes [ ] No; Analysis: ____

Container Preservative Type **

Lab Project Manager:

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

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	BTEX	Naphthalene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	TDS	Chloride, Sulfate
20221031-GG8"-MW-01	GW	G	10/31/2022	1135				5	G/P	X	X	X	X	X	X
20221031-GG8"-MW-02	GW	G	10/31/2022	1145				5	G/P	X	X	X	X	X	X
20221031-GG8"-MW-03	GW	G	10/31/2022	1200				5	G/P	X	X	X	X	X	X
20221031-GG8"-MW-04	GW	G	10/31/2022	1245				5	G/P	X	X	X	X	X	X
20221031-GG8"-Upgradient	GW	G	10/31/2022	1230				5	G/P	X	X	X	X	X	X
20221031-GG8"-Spring	GW	G	10/31/2022	1215				5	G/P	X	X	X	X	X	X
20221031-GG8"-Downgradient	GW	G	10/31/2022	1205				5	G/P	X	X	X	X	X	X

Lab Profile/Line:

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

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: ____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: ____oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Alex Slorby	10/31/22 1700		
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

ANALYTICAL REPORT

March 27, 2023

Revised Report

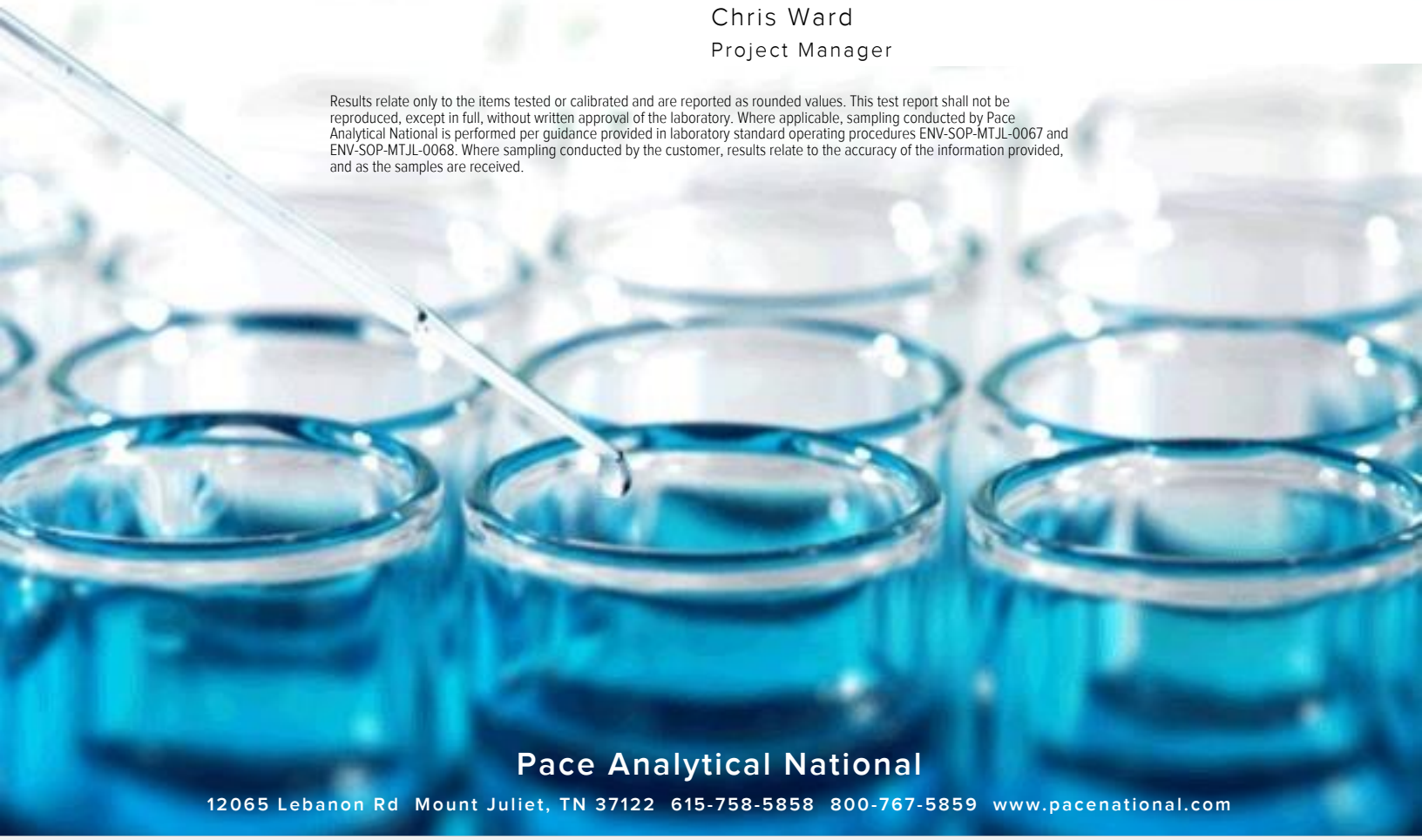
Caerus Oil and Gas

Sample Delivery Group:	L1529299
Samples Received:	08/25/2022
Project Number:	
Description:	Garden Gulch 8" Ground water
Site:	LATHAM LAYDOWN YARD
Report To:	Brett M. , Jake J. , Blair R. 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

TABLE OF CONTENTS

SAMPLE SUMMARY

20220823-GG8"-MW-01 L1529299-01 GW

Collected by: Andrew Smith
Collected date/time: 08/23/22 13:15
Received date/time: 08/25/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1917994	1	08/29/22 11:18	08/29/22 12:38	DTM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1916957	1	08/27/22 06:27	08/27/22 06:27	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1917818	1	08/28/22 19:44	08/28/22 19:44	ACG	Mt. Juliet, TN

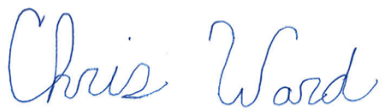
20220823-GG8"-MW-02 L1529299-02 GW

Collected by: Andrew Smith
Collected date/time: 08/23/22 13:20
Received date/time: 08/25/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1917993	1	08/29/22 12:25	08/29/22 15:36	DTM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1916957	1	08/27/22 06:45	08/27/22 06:45	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1917818	1	08/28/22 20:05	08/28/22 20:05	ACG	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: 09/09/22 10:23

Project Narrative

Report reissued to remove TPH (High Fraction)

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	728		13.3	1	08/29/2022 12:38	WG1917994

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	95.3		0.379	1.00	1	08/27/2022 06:27	WG1916957
Sulfate	146		0.594	5.00	1	08/27/2022 06:27	WG1916957

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	08/28/2022 19:44	WG1917818
Toluene	U		0.000278	0.00100	1	08/28/2022 19:44	WG1917818
Ethylbenzene	U		0.000137	0.00100	1	08/28/2022 19:44	WG1917818
Xylenes, Total	0.000201	J	0.000174	0.00300	1	08/28/2022 19:44	WG1917818
Naphthalene	U		0.00100	0.00500	1	08/28/2022 19:44	WG1917818
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	08/28/2022 19:44	WG1917818
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	08/28/2022 19:44	WG1917818
(S) Toluene-d8	*94.8*			*80.0-120*		*08/28/2022 19:44*	WG1917818
(S) 4-Bromofluorobenzene	*100*			*77.0-126*		*08/28/2022 19:44*	WG1917818
(S) 1,2-Dichloroethane-d4	*125*			*70.0-130*		*08/28/2022 19:44*	WG1917818

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	724		13.3	1	08/29/2022 15:36	WG1917993

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	119		0.379	1.00	1	08/27/2022 06:45	WG1916957
Sulfate	160		0.594	5.00	1	08/27/2022 06:45	WG1916957

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.000298	J	0.0000941	0.00100	1	08/28/2022 20:05	WG1917818
Toluene	U		0.000278	0.00100	1	08/28/2022 20:05	WG1917818
Ethylbenzene	U		0.000137	0.00100	1	08/28/2022 20:05	WG1917818
Xylenes, Total	U		0.000174	0.00300	1	08/28/2022 20:05	WG1917818
Naphthalene	U		0.00100	0.00500	1	08/28/2022 20:05	WG1917818
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	08/28/2022 20:05	WG1917818
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	08/28/2022 20:05	WG1917818
(S) Toluene-d8	*94.5*			*80.0-120*		*08/28/2022 20:05*	WG1917818
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*08/28/2022 20:05*	WG1917818
(S) 1,2-Dichloroethane-d4	*124*			*70.0-130*		*08/28/2022 20:05*	WG1917818

Method Blank (MB)

(MB) R3835182-1 08/29/22 15:36

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1528752-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1528752-14 08/29/22 15:36 • (DUP) R3835182-3 08/29/22 15:36

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	10800	11500	1	7.00	J3	5

L1528752-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1528752-15 08/29/22 15:36 • (DUP) R3835182-4 08/29/22 15:36

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	3860	4460	1	14.3	J3	5

Laboratory Control Sample (LCS)

(LCS) R3835182-2 08/29/22 15:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8170	92.8	77.3-123	

Method Blank (MB)

(MB) R3835047-1 08/29/22 12:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1528421-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1528421-01 08/29/22 12:38 • (DUP) R3835047-3 08/29/22 12:38

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	7100	6620	1	7.00	J3	5

L1528421-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1528421-02 08/29/22 12:38 • (DUP) R3835047-4 08/29/22 12:38

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	5340	6140	1	13.9	J3	5

Laboratory Control Sample (LCS)

(LCS) R3835047-2 08/29/22 12:38

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8180	93.0	77.3-123	

Method Blank (MB)

(MB) R3831127-1 08/26/22 10:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Sulfate	U		0.594	5.00

L1528760-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1528760-05 08/26/22 23:17 • (DUP) R3831127-3 08/26/22 23:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	4.24	4.25	1	0.172		15
Sulfate	6.28	6.25	1	0.404		15

L1529233-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1529233-01 08/27/22 03:46 • (DUP) R3831127-6 08/27/22 04:04

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	49.7	49.7	1	0.116		15

Laboratory Control Sample (LCS)

(LCS) R3831127-2 08/26/22 10:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	37.1	92.8	80.0-120	
Sulfate	40.0	37.3	93.2	80.0-120	

L1528760-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1528760-05 08/26/22 23:17 • (MS) R3831127-4 08/26/22 23:53 • (MSD) R3831127-5 08/27/22 00:11

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 %
Chloride	50.0	4.24	55.0	54.7	102	101	1	80.0-120			0.642	15
Sulfate	50.0	6.28	57.2	56.9	102	101	1	80.0-120			0.465	15

L1529233-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1529233-01 08/27/22 03:46 • (MS) R3831127-7 08/27/22 04:22

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	49.7	98.8	98.2	1	80.0-120	

Method Blank (MB)

(MB) R3832871-2 08/28/22 16:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Xylenes, Total	U		0.000174	0.00300
Naphthalene	U		0.00100	0.00500
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
(S) Toluene-d8	*95.8*			*80.0-120*
(S) 4-Bromofluorobenzene	*104*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*126*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3832871-1 08/28/22 16:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.00500	0.00553	111	70.0-123	
Toluene	0.00500	0.00453	90.6	79.0-120	
Ethylbenzene	0.00500	0.00453	90.6	79.0-123	
Xylenes, Total	0.0150	0.0133	88.7	79.0-123	
Naphthalene	0.00500	0.00470	94.0	54.0-135	
1,2,4-Trimethylbenzene	0.00500	0.00481	96.2	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00462	92.4	76.0-122	
(S) Toluene-d8			*94.8*	*80.0-120*	
(S) 4-Bromofluorobenzene			*103*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*122*	*70.0-130*	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.

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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: D178

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: Info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: Garden Gulch 8" Ground Water	State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: / Email:	Site/Facility ID #: Latham Laydown Yard / Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Andrew Smith	Purchase Order # : / Quote #: / DW PWS ID #: / DW Location Code:
Collected By (signature): A Smith	Turnaround Date Required: Standard Turnaround / Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day / Field Filtered (if applicable): [ ] Yes [ ] No Analysis: ____

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

Container Preservative Type **

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

Lab Project Manager:

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	BTEX	Naphthalene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	TDS	Chloride, Sulfate	TPH- High Fraction			
20220823-GG8"-MW-01	GW	G	8/23/2022	1315				5	G/P	X	X	X	X	X	X	X			
20220823-GG8"-MW-02	GW	G	8/23/2022	1320				5	G/P	X	X	X	X	X	X	X			

Analyses

Lab Profile/Line:

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

LAB USE ONLY:
Lab Sample # / Comments:
L1579299
-01
-02

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: NSA7
Cooler 1 Temp Upon Receipt: 1.6 oC
Cooler 1 Therm Corr. Factor: +0 oC
Cooler 1 Corrected Temp: 1.6 oC
Comments:

Relinquished by/Company: (Signature) A Smith	Date/Time: 8/24/22 1230	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time: 8/24/22 1500	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature) D. Ramsey	Date/Time: 8-25-22 0900

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

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

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: Info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: Garden Gulch 8" Ground Water	State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: / Email:	Site/Facility ID #: Latham Laydown Yard / Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Andrew Smith	Purchase Order # : / Quote #: / DW PWS ID #: / DW Location Code:
Collected By (Signature): A Smith	Turnaround Date Required: Standard Turnaround / Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day / Field Filtered (if applicable): [ ] Yes [ ] No / Analysis: _____

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

Container Preservative Type **

Lab Project Manager:

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	BTEX	Naphthalene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	TDS	Chloride, Sulfate
20220823-GG8"-MW-01	GW	G	8/23/2022	1315				5	G/P	X	X	X	X	X	X
20220823-GG8"-MW-02	GW	G	8/23/2022	1320				5	G/P	X	X	X	X	X	X

Analyses

Lab Profile/Line:

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

LAB USE ONLY:
Lab Sample # / Comments:
```

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:

```
Temp Blank Received: Y   N   NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor:___oC
Cooler 1 Corrected Temp: _____oC
Comments:
```

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
A Smith			
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____