November 7, 2022

Mr. Blair Rollins
EHS Specialist
Caerus Operating LLC
143 Diamond Avenue
Parachute, CO 81635

REPORT OF WORK COMPLETED

Project Name: P27-595 1C-34 Flowline Release (Wellhead Excavation)
COGCC Spill/Release Point ID: 482066
COGCC Remediation Project #: 25158
Legal Description: SESE Sec. 27, T5S-R95W, Garfield County
Location (Lat/Long): 39.579295, -108.033164

On behalf of Caerus Operating LLC (Caerus), Campos EPC (CEPC) has prepared this Report of Work Completed (ROWC) to document recent assessment activities at the P27-595 well pad (Site). This ROWC provides background and purpose of the assessment, methodology, summarized results, and recommendations for additional action. Attachments to this ROWC include field notes, Site exhibit with sample locations, soil analytical data table and laboratory report.

BACKGROUND

The Site is approximately 9 miles north of Parachute, CO. Land use is primarily high mountain desert rangeland and oil and gas operations. Lithology consists mostly of Rock outcrop - Torriorthents complex on severe slopes. The Site is situated in a narrow canyon with surrounding topography sloping toward the Site from the east and the west. The nearest watercourse is the East Fork Parachute Creek, situated approximately 150 feet (ft) west of the Site. Depth to groundwater is estimated to be 70 ft in the vicinity of the Site.

Initial spill response measures are documented in Colorado Oil and Gas Conservation Commission (COGCC) Form 19 #403023550 and Form 19 403035231. Initial assessment and remedial activities are documented in COGCC Form 27 #403149259. CEPC also detailed initial assessment and remedial activities in a ROWC dated July 15, 2022.

The following report focuses on supplemental assessment and remedial activities at the wellhead connection to the failed flowline. A separate ROWC was prepared for the production unit connection to the failed flowline.

METHODOLOGY

On October 7, 2022, CEPC and subcontractor personnel conducted excavation and soil sampling via hydro-vac truck at the wellhead excavation. Impacted soils were removed and samples were collected from the south and west sidewalls at approximately eight ft below ground surface (bgs). Due to a concrete cellar around the wellhead, an additional sample was collected via potholing at eight ft bgs approximately 15 ft west of the wellhead cellar. Visual inspection and field screening via Photo Ionization Detector (PID) were completed at each sample location. All samples were collected in laboratory provided jars, immediately packed on ice, and shipped via courier to Pace Analytical for laboratory analysis of the approved reduced Table 915-1 analytical suite. A Trimble RTX data collector

was used to survey GPS locations for all samples and Autel Evo II drone was used to collect updated imagery. Hydro-vac contents were disposed of at a nearby Caerus facility.

As part of this investigation, soil boring data and sample analysis from a background assessment was used for comparison to pH values and Arsenic concentrations at the Site. A Caerus subcontractor completed the soil boring in native, undisturbed soil immediately south of the Site.

RESULTS

Field screening results indicated PID readings of 0.0 parts per million (ppm) and no apparent staining or odors for all sample locations. Laboratory results indicated compliance with the reduced Table 915-1 analytical suite as compared to Residential Soil Screening Level (RSSL) cleanup concentrations (applicable standards), with exception to Sodium Adsorption Ration (SAR), pH, and Arsenic. One SAR exceedance of 15.6 was detected at the west wall of the excavation. One pH exceedance of 8.68 was detected at the south wall of the excavation. No exceedances were detected in the pothole sample west of the wellhead, with exception for Arsenic. Arsenic concentrations exceeded applicable standards in all samples and ranged from 18.0 milligrams per kilogram (mg/kg) to 30.2 mg/kg.

Laboratory results for background soil boring samples indicated naturally occurring elevated concentrations of Arsenic ranging up to 30.6 mg/kg. Additional background data indicates pH values ranging up to 8.82. Comprehensive analytical data tables and laboratory reports are included as attachments.

CONCLUSION

Based on laboratory results, CEPC concludes that all impacted soils from the release have been removed from the wellhead area and exceedances are within known background concentrations, with exception to SAR impacts found at the west sidewall below the concrete cellar. SAR impacts have been delineated horizontally as shown in the pothole sample results for sample ID 20221007-P27(PH01)@8'. CEPC recommends a request to the COGCC to leave remaining inorganic impacts in place while the wellhead is in production and believes a no further action request is warranted for the wellhead excavation.

ATTACHMENTS

- Site Exhibits with sample locations
- Soil Analytical Table
- Laboratory Reports
- Field Notes and Photos
- Background soil boring data

Thank you for the opportunity to support you on this project. Please reach out anytime with questions regarding this report and associated field work.

Steve Sivigliano
Environmental Project Manager

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SOIL ANALYTICAL RESULTS TABLE
CAERUS OIL AND GAS - P27-595 Flowline Release

CAMPOS

Sample Name	ORGANIC COMPOUNDS in mg/kg								SOIL SUITABILITY				METALS in mg/kg									
	GRO	DRO	ORO	TPH	Benzene	Toluene	Ethylbenzene	Total Xylenes	Electrical Conductivity (mmhos/cm)	Sodium Adsorption Ratio	pH (su)	Boron-hot water soluble (mg/L)	Arsenic	Barium	Cadmium	Chromium (VI)	Copper	Lead	Nickel	Selenium	Silver	Zinc
WELLHEAD EXCAVATION																						
20220426-P27-595(POR01)@6'	291	2460	323	**3,074**	0.617	2.70	0.213	8.61	1.19	**9.88**	**8.42**	0.664	**14.2**	1,390	<0.5	<1.0	28.4	14.5	15.1	<2.0	<1.0	50
20220518-P27(POR01)@9'	1.08	20.7	52	73.78	<0.001	<0.005	<0.0025	<0.0065	1.57	4.96	**8.49**	1.07	**23.2**	343	<0.5	<1.0	27	15.7	18.2	<2.0	<1.0	51.5
20220518-P27(E.WALL)@8'	0.196	11.1	44.8	56.10	<0.001	<0.005	<0.0025	<0.0065	0.374	3.38	8.25	0.818	**24.7**	270	<0.5	<1.0	19.8	9.18	13.6	<2.0	<1.0	38.1
20220518-P27(N.WALL)@8'	0.204	33.7	38.1	72.00	<0.001	<0.005	<0.0025	<0.0065	1.67	5.2	7.92	0.906	**14.7**	233	<0.5	<1.0	22.3	13.7	16.9	<2.0	<1.0	48.6
20220518-P27(S.WALL)@8'	0.248	15.2	43.9	59.35	<0.001	<0.005	<0.0025	<0.0065	0.591	**6.07**	8.23	1.57	**20.3**	266	<0.5	<1.0	25.9	16.5	19.2	<2.0	<1.0	51.5
20220518-P27(W.WALL)@8'	0.69	26.5	37.2	64.39	<0.001	<0.005	<0.0025	0.0267	**4.33**	**28.6**	8.01	1.08	**14.1**	477	<0.5	<1.0	25.8	13.1	17	<2.0	<1.0	51.6
20221007-P27(PH01)@8'	0.208	16	32.3	49	na	na	na	na	0.298	3.11	8.56	na	**30.2**	na	na	na	na	na	na	na	na	na
20221007-P27(SWALL02)@8'	0.211	73.6	163	237	na	na	na	na	0.414	2.94	**8.68**	na	**21.2**	na	na	na	na	na	na	na	na	na
20221007-P27(WWALL02)@8'	1.39	40.2	92	134	na	na	na	na	2.380	**15.6**	8.26	na	**18.0**	na	na	na	na	na	na	na	na	na
BACKGROUND																						
20220426-P27-595(BG-N)@2'	na	na	na	na	na	na	na	na	0.452	0.145	7.54	1.03	**16.0**	300	na	na	na	na	na	na	na	na
20220426-P27-595(BG-S)@3'	na	na	na	na	na	na	na	na	0.217	0.11	7.97	0.557	**14.5**	232	na	na	na	na	na	na	na	na
20220622-OIL SHALE BG5 30-31'	-	-	-	-	-	-	-	-	-	-	-	-	**30.6**	-	-	-	-	-	-	-	-	-
20220622-OIL SHALE BG5 11-13'	-	-	-	-	-	-	-	-	-	-	**8.71**	-	**-**	-	-	-	-	-	-	-	-	-
COGCC TABLE 915-1 RESIDENTIAL SOIL SCREENING LEVEL CONCENTRATIONS	500 mg/kg				1.2 mg/kg	490 mg/kg	5.8 mg/kg	58 mg/kg	<4.0 mmhos/cm	<6 unitless	6 - 8.3 su	2 mg/L	0.68 mg/kg	15,000 mg/kg	71 mg/kg	0.3 mg/kg	3,100 mg/kg	400 mg/kg	1,500 mg/kg	390 mg/kg	390 mg/kg	23,000 mg/kg
PROTECTION OF GROUNDWATER SOIL SCREENING LEVEL CONCENTRATIONS	500 mg/kg				0.0026 mg/kg	0.69 mg/kg	0.78 mg/kg	9.9 mg/kg	<4.0 mmhos/cm	<6 unitless	6 - 8.3 su	2 mg/L	0.29 mg/kg	82 mg/kg	0.38 mg/kg	0.00067 mg/kg	46 mg/kg	14 mg/kg	26 mg/kg	0.26 mg/kg	0.8 mg/kg	370 mg/kg

Notes:

Bold with yellow highlight - exceeds applicable COGCC Table 915-1 soil screening level concentration

< - less than laboratory reporting detection limit (RDL)

COGCC - Colorado Oil and Gas Conservation Commission

TPH - Total Petroleum Hydrocarbons (volatile and extractable)

GRO - Gasoline Range Organics

DRO - Diesel Range Organics

ORO - Oil Range Organics

mg/kg - milligrams per kilogram

mg/L - milligrams per Liter

mmhos/cm - millimhos per centimeter

su - standard unit

na - not analyzed

SOIL ANALYTICAL RESULTS TABLE (continued)
CAERUS OIL AND GAS - P27-595 Flowline Release

CAMPOS

Sample Name	ORGANIC COMPOUNDS in mg/kg (continued)																
	1, 2, 4-trimethylbenzene	1, 3, 5-trimethylbenzene	Acenaphthene	Anthracene	Benz(a) anthracene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Benzo(a) pyrene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1, 2, 3-cd) pyrene	1-methylnaphthalene	2-mehtylnaphthalene	Naphthalene	Pyrene
WELLHEAD EXCAVATION																	
20220426-P27-595(POR01)@6'	3.20	5.61	0.185	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.0084	0.61	<0.006	2.19	6.30	1.90	0.011
20220518-P27 (POR01)@9'	<0.005	0.00983	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.02	<0.02	<0.02	<0.006
20220518-P27 (E.WALL)@8'	<0.005	<0.005	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.02	<0.02	<0.02	<0.006
20220518-P27 (N.WALL)@8'	<0.005	0.0062	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.02	<0.02	<0.02	<0.006
20220518-P27(S.WALL)@8'	<0.005	0.00635	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.02	<0.02	<0.02	<0.006
20220518-P27(W.WALL)@8'	0.00507	0.0728	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.02	0.0307	<0.02	<0.006
20221007-P27(PH01)@8'	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
20221007-P27(SWALL02)@8'	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
20221007-P27(WWALL02)@8'	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
COGCC TABLE 915-1 RESIDENTIAL SOIL SCREENING LEVEL CONCENTRATIONS	30 mg/kg	27 mg/kg	360 mg/kg	1800 mg/kg	1.1 mg/kg	1.1 mg/kg	11 mg/kg	0.11 mg/kg	110 mg/kg	0.11 mg/kg	240 mg/kg	240 mg/kg	1.1 mg/kg	18 mg/kg	24 mg/kg	2 mg/kg	180 mg/kg
PROTECTION OF GROUNDWATER SOIL SCREENING LEVEL CONCENTRATIONS	0.0081 mg/kg	0.0087 mg/kg	0.55 mg/kg	5.8 mg/kg	0.011 mg/kg	0.3 mg/kg	2.9 mg/kg	0.24 mg/kg	9 mg/kg	0.096 mg/kg	8.9 mg/kg	0.54 mg/kg	0.98 mg/kg	0.006 mg/kg	0.019 mg/kg	0.0038 mg/kg	1.3 mg/kg

Notes:

Bold with yellow highlight - exceeds applicable COGCC Table 915-1 soil screening level concentration

< - less than laboratory reporting detection limit (RDL)

COGCC - Colorado Oil and Gas Convservation Commission

mg/kg - milligrams per kilogram

mmhos/cm - millimhos per centimeter

su - standard unit

na - not analyzed

CAERUS OPERATING LLC

P27

N. PARACHUTE / EF P27 595

COGCC LOCATION ID: 335806

GARFIELD COUNTY, CO

SESE SEC. 27 T5S-R95W

DRAFTER: AB | DATE: 8/23/2022

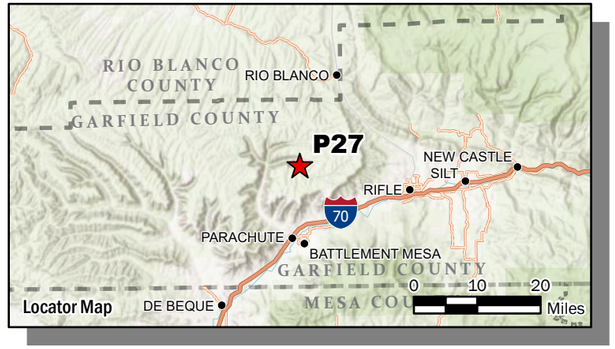
Legend

- Soil Sample Location
- Water Sample

Identifier	Latitude NAD83	Longitude NAD83	Elevation
20220426-P27-595(BG-N)@2'	39.580349	-108.034120	6529.79 ft
20220426-P27-595(BG-S)@3'	39.577906	-108.032654	6563.86 ft
20220426-P27-595(POR01)@6'	39.579305	-108.033136	6595.50 ft
20220426-P27-595(SW01)	39.580699	-108.035166	6489.89 ft
20220518-P27(E.WALL)@8'	39.579311	-108.033114	6596.29 ft
20220518-P27(N.WALL)@8'	39.579315	-108.033132	6598.95 ft
20220518-P27(POR01)@9'	39.579306	-108.033125	6595.40 ft
20220518-P27(S.WALL)@8'	39.579299	-108.033122	6595.73 ft

Identifier	Latitude NAD83	Longitude NAD83	Elevation
20220518-P27(W.WALL)@8'	39.579300	-108.033145	6600.56 ft
20220524-P27-595(SEP-NWWALL)@8'	39.578762	-108.032561	6647.93 ft
20220725-P27(BASE)@14'	39.578740	-108.032547	6648.28 ft
20220725-P27(EWALL)@10'	39.578754	-108.032523	6649.30 ft
20220725-P27(NWALL)@10'	39.578760	-108.032558	6645.03 ft
20220725-P27(SWALL)@10'	39.578738	-108.032531	6648.12 ft
20220725-P27(WWALL)@10'	39.578737	-108.032557	6647.99 ft

COORDINATE SYSTEM
GCS NORTH AMERICAN 1983



CAERUS OPERATING LLC

P27

N. PARACHUTE / EF P27 595

COGCC LOCATION ID: 335806

GARFIELD COUNTY, CO

SESE SEC. 27 T5S-R95W

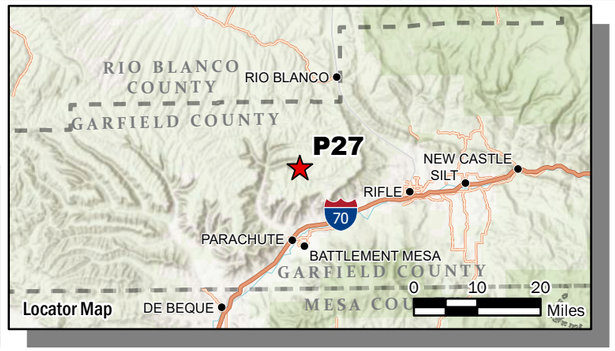
DRAFTER: AB | DATE: 10/28/2022

Legend

Soil Sample Location

COORDINATE SYSTEM
GCS NORTH AMERICAN 1983

Identifier	Latitude_NAD83	Longitude_NAD83	Elevation
20220518-P27(E.WALL)@8'	39.579311	-108.033114	6596.288086
20220518-P27(POR01)@9'	39.579306	-108.033125	6595.398926
20220518-P27(N.WALL)@8'	39.579315	-108.033132	6598.945801
20221007-P27(PH01)@8'	39.579233	-108.033233	6652.203125
20221007-P27(WWALL02)@8'	39.579297	-108.033145	6652.721191
20221007-P27(SWALL02)@8'	39.579291	-108.033119	6647.777832



Location P27 Date 10/7/22

Project / Client P27 / Caerus

Sunny, clear, 45°F

0800 - on site to re-sample near Wellheads and separator/pothole W side of Wellheads / Collect PW sample from partially buried tank.

- review JSA
- review Scope of Work

Sample ID	Time	PID	odor / stain?
20221007-P27 (PH01) @ 8'	0930	0.00	N/N
" (SWall02) @ 8'	1000	0.00	N/N
" (WWall02) @ 8'	1015	0.00	N/N
" (Sep-EWall02) @ 10'	1130	0.00	N/N
~~" (PW01)~~ PW not sampled →			

1230 - all samples collected. offsite

No Further Entries 10/7/22


Concrete pad at wellhead and excavation


Pothole location west of wellhead

LEGEND

- Background Sample

0 1,000 2,000 ft

1 inch = 1,510 ft

N W E S

Project No:	022-050
Map By:	NDB
Date:	7/22/2022

East Fork Background Sample Location
North Parachute Ranch
Caerus Oil and Gas LLC
Garfield County, Colorado

ENTRADA CONSULTING GROUP
330 Grand Avenue, Unit C
Grand Junction, CO 81501
970-579-1015

Figure
1

ENTRADA
CONSULTING GROUP

Caerus Oil and Gas LLC
143 Diamond Ave
Parachute, CO 81635

Site Name: North Parachute Ranch

Soil Boring ID: Oil Shale BG5

Date Started	: 2022-06-22
Detector	: MiniRae PID
Hole Diameter	: 6"
Drilling Method	: Solid Stem Auger
Sampling Method	: Split Spoon
Drilling Company	: CO Drilling and Sampling
Latitude	: 39.577731°
Longitude	: -108.032025°
Project Number	: 022-050
Logged By	: R. Johnson & C. Mace

Depth (ft)	USCS	GRAPHIC	DESCRIPTION	Moisture (%)	Fines (%)	Structure	PID (ppm)	Staining	Recovery (in)	Sample	Blow Count
0			0-5' Rocky.								
5	GC		5-7' Brown, moist clay w/ angular decomposing shale fragments	moist	80	M	0.5	N	14	5-7	8, 10, 22
10	GC		10-11' Brown, moist clay into tan dry silt w/ trace gravel	dry	95	M	1.2	N	12	10-11	4, 4, 19
	SH		11-13' Shale, platy, grey to tan, moderately decomposed, dry	dry	90	M	9.0	N	13	11-13	19, 24, 33, 30
15				-	-	-	-	-	6	none	50
	GM		16-17' Sandy silt, tan, gravelly w/ angular shale fragments	sl moist	90	M	20.7	N	10	16-17	12, 21, 30 (3")
20	SH		20-21' Silty clay into platy gravelly clay into shale. Noted bitumen in shale.	sl moist	90	P	2.8	N	18	20-21	16, 50
25	GC		25-27' Brown to tan, sandy clay, 50-70% gravel composed of shale fragments. Noted bitumen odor.	sl moist	90	P	3.2	N	20	25-27	8, 7, 50
30	GC		30-31' Tan silty sandy shale gravel w/ bitumen odor	moist	90	M	7.3	N	9	30-31	15, 50
	GC		31-33' Moist grey to tan shale fragments ranging from coarse sand-size to gravel and cobble size w/ bitumen odor	moist	90	M	0.6	N	15	none	8, 7, 8
35	GC		35-37' Brown silty sandy clay w/trace gravel-sized angular shale fragments.	v moist	90	M	0.5	N	20	35-37	21, 5, 10, 10
40	GC		40-42' Brown clay into coarse shaley clay w/ orange and red decomposing shale. Noted white, fibrous fungus(?) in lower 3" of sample.	wet	90	M	1.4	N	15	40-42	5, 7, 6
45	GC		45-47' Brown shaley gravel (7") decomposing w/ orange fragments into sandy clay (9"). Wet.	wet	80	M	-	N	16	45-47	6, 10, 4, 6
50			TD at 47ft MD								

ANALYTICAL REPORT

October 31, 2022

Caerus Oil and Gas

Sample Delivery Group:	L1544580
Samples Received:	10/08/2022
Project Number:	P27
Description:	P27
Site:	P27
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

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SAMPLE SUMMARY

20221007-P27(PH01)@8' L1544580-01 Solid

Collected by: Chad Dodge | Collected date/time: 10/07/22 09:30 | Received date/time: 10/08/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1944121	1	10/20/22 18:01	10/20/22 18:01	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1942114	1	10/15/22 08:00	10/15/22 10:00	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1940546	1	10/11/22 10:00	10/11/22 13:30	NTG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1949655	5	10/27/22 20:24	10/28/22 18:38	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1940502	1	10/10/22 13:03	10/11/22 09:46	BAM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1941998	1	10/16/22 21:16	10/17/22 17:38	TJD	Mt. Juliet, TN

20221007-P27(SWALL02)@8' L1544580-02 Solid

Collected by: Chad Dodge | Collected date/time: 10/07/22 10:00 | Received date/time: 10/08/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1944121	1	10/20/22 18:04	10/20/22 18:04	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1942114	1	10/15/22 08:00	10/15/22 10:00	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1940546	1	10/11/22 10:00	10/11/22 13:30	NTG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1949655	5	10/27/22 20:24	10/28/22 18:41	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1940502	1	10/10/22 13:03	10/11/22 10:07	BAM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1941998	1	10/16/22 21:16	10/17/22 09:44	JDG	Mt. Juliet, TN

20221007-P27(WWALL02)@8' L1544580-03 Solid

Collected by: Chad Dodge | Collected date/time: 10/07/22 10:15 | Received date/time: 10/08/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1944121	1	10/20/22 18:07	10/20/22 18:07	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1942114	1	10/15/22 08:00	10/15/22 10:00	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1940546	1	10/11/22 10:00	10/11/22 13:30	NTG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1949655	5	10/27/22 20:24	10/28/22 18:44	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1940990	1	10/10/22 13:03	10/11/22 19:34	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1941998	1	10/16/22 21:16	10/17/22 09:19	JDG	Mt. Juliet, TN

20221007-P27(SEP-EWALL02)@10' L1544580-04 Solid

Collected by: Chad Dodge | Collected date/time: 10/07/22 11:30 | Received date/time: 10/08/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1944121	1	10/20/22 18:10	10/20/22 18:10	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1942114	1	10/15/22 08:00	10/15/22 10:00	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1940546	1	10/11/22 10:00	10/11/22 13:30	NTG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1949655	5	10/27/22 20:24	10/28/22 18:54	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1940990	1	10/10/22 13:03	10/11/22 19:58	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1941998	1	10/16/22 21:16	10/17/22 10:36	JDG	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	3.11		1	10/20/2022 18:01	WG1944121

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.56	T8	1	10/15/2022 10:00	WG1942114

Sample Narrative:
L1544580-01 WG1942114: 8.56 at 19.8C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	298		10.0	1	10/11/2022 13:30	WG1940546

Sample Narrative:
L1544580-01 WG1940546: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	30.2		1.00	5	10/28/2022 18:38	WG1949655

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	0.208		0.100	1	10/11/2022 09:46	WG1940502
(S) a,a,a-Trifluorotoluene(FID)	*89.7*		*77.0-120*		*10/11/2022 09:46*	WG1940502

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
C10-C28 Diesel Range	16.0		4.00	1	10/17/2022 17:38	WG1941998
C28-C36 Motor Oil Range	32.3		4.00	1	10/17/2022 17:38	WG1941998
(S) o-Terphenyl	*71.3*		*18.0-148*		*10/17/2022 17:38*	WG1941998

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.94		1	10/20/2022 18:04	WG1944121

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.68	T8	1	10/15/2022 10:00	WG1942114

Sample Narrative:
L1544580-02 WG1942114: 8.68 at 19.7C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	414		10.0	1	10/11/2022 13:30	WG1940546

Sample Narrative:
L1544580-02 WG1940546: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	21.2		1.00	5	10/28/2022 18:41	WG1949655

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	0.211		0.100	1	10/11/2022 10:07	WG1940502
(S) a,a,a-Trifluorotoluene(FID)	*92.3*		*77.0-120*		*10/11/2022 10:07*	WG1940502

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
C10-C28 Diesel Range	73.6	J6	4.00	1	10/17/2022 09:44	WG1941998
C28-C36 Motor Oil Range	163		4.00	1	10/17/2022 09:44	WG1941998
(S) o-Terphenyl	*80.8*		*18.0-148*		*10/17/2022 09:44*	WG1941998

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	15.6		1	10/20/2022 18:07	WG1944121

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.26	T8	1	10/15/2022 10:00	WG1942114

Sample Narrative:

L1544580-03 WG1942114: 8.26 at 19.9C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	2380		10.0	1	10/11/2022 13:30	WG1940546

Sample Narrative:

L1544580-03 WG1940546: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	18.0		1.00	5	10/28/2022 18:44	WG1949655

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	1.39		0.100	1	10/11/2022 19:34	WG1940990
(S) a,a,a-Trifluorotoluene(FID)	*86.1*		*77.0-120*		*10/11/2022 19:34*	WG1940990

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
C10-C28 Diesel Range	40.2		4.00	1	10/17/2022 09:19	WG1941998
C28-C36 Motor Oil Range	92.0		4.00	1	10/17/2022 09:19	WG1941998
(S) o-Terphenyl	*81.4*		*18.0-148*		*10/17/2022 09:19*	WG1941998

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.509		1	10/20/2022 18:10	WG1944121

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.40	T8	1	10/15/2022 10:00	WG1942114

Sample Narrative:
L1544580-04 WG1942114: 8.4 at 19.6C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	172		10.0	1	10/11/2022 13:30	WG1940546

Sample Narrative:
L1544580-04 WG1940546: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	23.5		1.00	5	10/28/2022 18:54	WG1949655

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	0.150		0.100	1	10/11/2022 19:58	WG1940990
(S) a,a,a-Trifluorotoluene(FID)	*85.7*		*77.0-120*		*10/11/2022 19:58*	WG1940990

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
C10-C28 Diesel Range	66.4		4.00	1	10/17/2022 10:36	WG1941998
C28-C36 Motor Oil Range	131		4.00	1	10/17/2022 10:36	WG1941998
(S) o-Terphenyl	*81.0*		*18.0-148*		*10/17/2022 10:36*	WG1941998

L1544555-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1544555-01 10/15/22 10:00 • (DUP) R3848774-2 10/15/22 10:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.14	8.14	1	0.000		1

Sample Narrative:

OS: 8.14 at 20C

DUP: 8.14 at 19.8C

L1544572-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1544572-02 10/15/22 10:00 • (DUP) R3848774-3 10/15/22 10:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	10.3	10.3	1	0.000		1

Sample Narrative:

OS: 10.33 at 19.9C

DUP: 10.33 at 20C

Laboratory Control Sample (LCS)

(LCS) R3848774-1 10/15/22 10:00

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 19.8C

Method Blank (MB)

(MB) R3847098-1 10/11/22 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

L1544559-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1544559-01 10/11/22 13:30 • (DUP) R3847098-3 10/11/22 13:30

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	117	116	1	0.430		20

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

L1544586-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1544586-03 10/11/22 13:30 • (DUP) R3847098-4 10/11/22 13:30

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	200	199	1	0.251		20

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

Laboratory Control Sample (LCS)

(LCS) R3847098-2 10/11/22 13:30

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1100	98.0	85.0-115	

Sample Narrative:
LCS: at 25C

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

Method Blank (MB)

(MB) R3854465-1 10/28/22 17:35

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) R3854465-7 10/28/22 17:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	96.7	96.7	80.0-120	

L1543534-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1543534-01 10/28/22 17:42 • (MS) R3854465-5 10/28/22 17:52 • (MSD) R3854465-6 10/28/22 17:55

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	6.41	77.7	97.0	71.3	90.6	5	75.0-125	J6	J3	22.1	20

Method Blank (MB)

(MB) R3850065-2 10/11/22 02:47

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)	*99.1*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3850065-1 10/11/22 01:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.57	83.1	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*110*	*77.0-120*	

L1544570-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1544570-01 10/11/22 09:26 • (MS) R3850065-3 10/11/22 10:27 • (MSD) R3850065-4 10/11/22 10:48

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 %
TPH (GC/FID) Low Fraction	5.50	3.27	4.64	4.50	24.9	22.4	1	10.0-151			3.06	28
(S) a,a,a-Trifluorotoluene(FID)					*100*	*102*		*77.0-120*				

Method Blank (MB)

(MB) R3847528-3 10/11/22 16:30

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)	*89.1*			*77.0-120*

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

(LCS) R3847528-1 10/11/22 11:26 • (LCSD) R3847528-2 10/11/22 15:00

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	4.82	5.08	87.6	92.4	72.0-127			5.25	20
(S) a,a,a-Trifluorotoluene(FID)				*99.3*	*100*	*77.0-120*				

Method Blank (MB)

(MB) R3849444-1 10/17/22 05:45

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	0.416	J	0.274	4.00
(S) o-Terphenyl	*85.3*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3849444-2 10/17/22 05:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	40.4	80.8	50.0-150	
(S) o-Terphenyl			*108*	*18.0-148*	

L1544580-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1544580-02 10/17/22 09:44 • (MS) R3849444-3 10/17/22 09:57 • (MSD) R3849444-4 10/17/22 10:10

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 %
C10-C28 Diesel Range	49.0	73.6	77.5	91.3	7.96	36.1	1	50.0-150	J6	J6	16.4	20
(S) o-Terphenyl					*85.0*	*97.6*		*18.0-148*				

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.
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®

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

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

ALL SHADED AREAS are for LAB USE ONLY

Company: Campos EPC	Billing Information: Caerus Oil and Gas, LLC Account: CAERUSPCO
Address: 1401 Blake St. Denver, CO 80202	
Report To: Brett Middleton	Email To: bmiddleton@caerusoilandgas.com
Copy To: jjanicek@caerusoilandgas.com	Site Collection Info/Address:
Customer Project Name/Number: P27	State: CO / County/City: / Time Zone Collected: [ ]PT [✓]MT [ ]CT [ ]ET
Phone: 970-616-0600 Email: same as above	Site/Facility ID #: P27 / Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Chad Dodge	Purchase Order #: / Quote #: / DW PWS ID #: / DW Location Code:
Collected By (signature):	Turnaround Date Required: standard / Immediately Packed on Ice: [✓] Yes [ ] No
Sample Disposal: [✓] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [✓] 5 Day (Expedite Charges Apply) / 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

Analyses: COGCC Table 915-1; EC, SAR, pH, Boron (hot water sol.), Arsenic; TDS, SAR, EC, pH, Arsenic

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:
US7495 80

* 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	COGCC Table 915-1	EC, SAR, pH, Boron (hot water sol.), Arsenic	TDS, SAR, EC, pH, Arsenic
20221007-P27(PHC)@8'	SL	Grab	10/7/22	0930	-	-	-	2			X
20221007-P27(SOUTH)@8'	"	"	"	1000	-	-	-	2			X
20221007-P27(WEST)@8'	"	"	"	1015	-	-	-	2			X
20221007-P27(PHC-EAST)@8'	"	"	"	1130	-	-	-	2			X
					-	-	-				
					-	-	-				
					-	-	-				
					-	-	-				

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 #: 5852 7564 8783

Samples received via: FEDEX UPS Client Courier Pace Courier

E175

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: IR#7
Cooler 1 Temp Upon Receipt: 2.2 oC
Cooler 1 Therm Corr. Factor: .0 oC
Cooler 1 Corrected Temp: 2.2 oC
Comments:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: of:

	Date/Time		Date/Time
Relinquished by/Company: (Signature)	10/7/22 1230	Received by/Company: (Signature)	
Relinquished by/Company: (Signature)	10/7/22 1500	Received by/Company: (Signature)	
Relinquished by/Company: (Signature)		Received by/Company: (Signature)	10-8-22 0900

Acctnum:
Template:
Prelogin:
PM:
PB:

ANALYTICAL REPORT

July 14, 2022

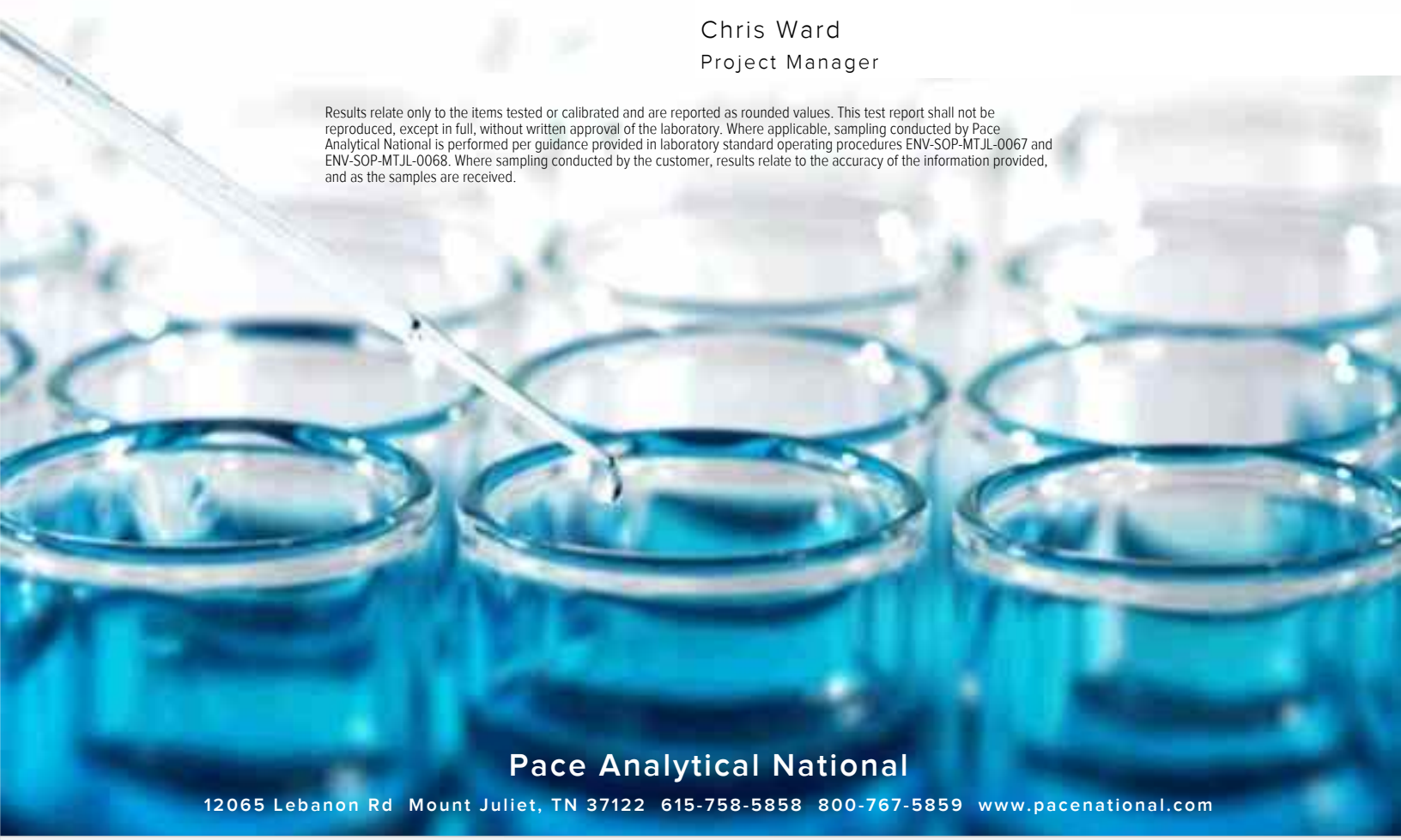
Caerus Oil and Gas

Sample Delivery Group:	L1508583
Samples Received:	06/24/2022
Project Number:	
Description:	Oil Shale Background

Report To: Blair Rollins
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

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20220622-OIL SHALE BG5 5-7' L1508583-01 Solid

Collected by: RS/CW | Collected date/time: 06/22/22 08:50 | Received date/time: 06/24/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1892129	1	07/13/22 23:47	07/13/22 23:47	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1888421	1	07/04/22 15:00	07/07/22 12:40	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1886089	1	06/29/22 13:00	06/29/22 15:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1889064	1	07/02/22 07:37	07/02/22 11:34	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1887737	1	06/30/22 17:09	07/10/22 00:06	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1892133	1	07/13/22 00:05	07/14/22 14:04	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1887735	5	06/30/22 17:02	07/02/22 15:25	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1886436	1	06/25/22 16:04	06/29/22 04:25	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1887114	1	06/25/22 16:04	06/29/22 12:23	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1888618	5	07/04/22 06:51	07/05/22 01:41	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1889542	1	07/04/22 01:41	07/04/22 15:07	AMG	Mt. Juliet, TN

20220622-OIL SHALE BG5 10-11' L1508583-02 Solid

Collected by: RS/CW | Collected date/time: 06/22/22 09:10 | Received date/time: 06/24/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1892129	1	07/13/22 23:50	07/13/22 23:50	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1888421	1	07/04/22 15:00	07/07/22 12:53	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1886089	1	06/29/22 13:00	06/29/22 15:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1889064	1	07/02/22 07:37	07/02/22 11:34	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1887737	1	06/30/22 17:09	07/10/22 00:09	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1892133	1	07/13/22 00:05	07/14/22 14:07	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1887735	5	06/30/22 17:02	07/02/22 15:29	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1886436	1	06/25/22 16:04	06/29/22 04:46	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1887852	1	06/25/22 16:04	06/30/22 05:26	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1888618	5	07/04/22 06:51	07/05/22 01:54	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1889542	1	07/04/22 01:41	07/04/22 14:32	AMG	Mt. Juliet, TN

20220622-OIL SHALE BG5 11-13' L1508583-03 Solid

Collected by: RS/CW | Collected date/time: 06/22/22 09:25 | Received date/time: 06/24/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1888421	1	07/04/22 15:00	07/07/22 12:58	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1888896	1	07/05/22 08:00	07/05/22 10:00	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1889064	1	07/02/22 07:37	07/02/22 11:34	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1887737	1	06/30/22 17:09	07/10/22 00:12	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1887735	5	06/30/22 17:02	07/02/22 15:33	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1886436	1	06/25/22 16:04	06/29/22 05:08	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1887852	1	06/25/22 16:04	06/30/22 05:45	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1888618	5	07/04/22 06:51	07/05/22 02:07	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1889542	1	07/04/22 01:41	07/04/22 15:25	AMG	Mt. Juliet, TN

20220622-OIL SHALE BG5 16-17' L1508583-04 Solid

Collected by: RS/CW | Collected date/time: 06/22/22 09:50 | Received date/time: 06/24/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1892129	1	07/13/22 23:55	07/13/22 23:55	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1888421	1	07/04/22 15:00	07/07/22 13:03	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1888896	1	07/05/22 08:00	07/05/22 10:00	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1889064	1	07/02/22 07:37	07/02/22 11:34	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1887737	1	06/30/22 17:09	07/10/22 00:14	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1892133	1	07/13/22 00:05	07/14/22 14:09	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1887735	5	06/30/22 17:02	07/02/22 15:36	JPD	Mt. Juliet, TN

20220622-OIL SHALE BG5 16-17' L1508583-04 Solid

Collected by: RS/CW | Collected date/time: 06/22/22 09:50 | Received date/time: 06/24/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1886436	1	06/25/22 16:04	06/29/22 05:29	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1887852	1	06/25/22 16:04	06/30/22 06:04	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1888618	5	07/04/22 06:51	07/05/22 03:26	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1889542	1	07/04/22 01:41	07/04/22 16:37	AMG	Mt. Juliet, TN

20220622-OIL SHALE BG5 20-21' L1508583-05 Solid

Collected by: RS/CW | Collected date/time: 06/22/22 10:10 | Received date/time: 06/24/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1892129	1	07/13/22 23:58	07/13/22 23:58	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1888421	1	07/04/22 15:00	07/07/22 13:09	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1888896	1	07/05/22 08:00	07/05/22 10:00	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1889064	1	07/02/22 07:37	07/02/22 11:34	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1887737	1	06/30/22 17:09	07/09/22 23:23	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1892133	1	07/13/22 00:05	07/14/22 14:12	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1887735	5	06/30/22 17:02	07/02/22 14:17	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1886437	1	06/25/22 16:04	06/28/22 21:00	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1887852	1	06/25/22 16:04	06/30/22 06:23	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1888618	5	07/04/22 06:51	07/05/22 03:39	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1889542	1	07/04/22 01:41	07/04/22 15:43	AMG	Mt. Juliet, TN

20220622-OIL SHALE BG5 25-27' L1508583-06 Solid

Collected by: RS/CW | Collected date/time: 06/22/22 10:50 | Received date/time: 06/24/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1892129	1	07/14/22 00:01	07/14/22 00:01	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1888421	1	07/04/22 15:00	07/07/22 15:18	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1888818	1	07/04/22 09:00	07/04/22 09:15	EPW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1889064	1	07/02/22 07:37	07/02/22 11:34	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1887737	1	06/30/22 17:09	07/10/22 00:23	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1892133	1	07/13/22 00:05	07/14/22 14:15	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1887735	5	06/30/22 17:02	07/02/22 15:40	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1886437	1	06/25/22 16:04	06/28/22 21:23	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1887852	1	06/25/22 16:04	06/30/22 06:42	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1888618	5	07/04/22 06:51	07/05/22 03:52	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1889542	1	07/04/22 01:41	07/04/22 16:19	AMG	Mt. Juliet, TN

20220622-OIL SHALE BG5 30-31' L1508583-07 Solid

Collected by: RS/CW | Collected date/time: 06/22/22 11:45 | Received date/time: 06/24/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1892129	1	07/14/22 00:04	07/14/22 00:04	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1888421	1	07/04/22 15:00	07/07/22 13:19	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1888121	1	06/30/22 15:00	06/30/22 17:11	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1889064	1	07/02/22 07:37	07/02/22 11:34	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1887737	1	06/30/22 17:09	07/10/22 00:26	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1892133	1	07/13/22 00:05	07/14/22 14:17	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1887735	5	06/30/22 17:02	07/02/22 15:44	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1886437	1	06/25/22 16:04	06/28/22 21:47	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1887852	1	06/25/22 16:04	06/30/22 07:01	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1888618	10	07/04/22 06:51	07/05/22 04:18	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1889542	1	07/04/22 01:41	07/04/22 16:01	AMG	Mt. Juliet, TN

20220622-OIL SHALE BG5 35-37' L1508583-08 Solid

Collected by: RS/CW | Collected date/time: 06/22/22 12:25 | Received date/time: 06/24/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1892129	1	07/14/22 00:07	07/14/22 00:07	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1888421	1	07/04/22 15:00	07/07/22 13:35	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1887630	1	06/30/22 10:00	06/30/22 11:52	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1889064	1	07/02/22 07:37	07/02/22 11:34	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1887737	1	06/30/22 17:09	07/10/22 00:28	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1892133	1	07/13/22 00:05	07/14/22 14:20	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1887735	5	06/30/22 17:02	07/02/22 15:48	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1886437	1	06/25/22 16:04	06/28/22 22:10	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1887852	1	06/25/22 16:04	06/30/22 07:20	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1888618	1	07/04/22 06:51	07/04/22 23:43	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1889542	1	07/04/22 01:41	07/04/22 12:45	AMG	Mt. Juliet, TN

20220622-OIL SHALE BG5 40-42' L1508583-09 Solid

Collected by: RS/CW | Collected date/time: 06/22/22 13:00 | Received date/time: 06/24/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1892129	1	07/14/22 00:10	07/14/22 00:10	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1888421	1	07/04/22 15:00	07/07/22 13:40	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1887630	1	06/30/22 10:00	06/30/22 11:52	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1889064	1	07/02/22 07:37	07/02/22 11:34	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1887737	1	06/30/22 17:09	07/10/22 00:31	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1892133	1	07/13/22 00:05	07/14/22 14:28	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1887735	5	06/30/22 17:02	07/02/22 15:52	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1886437	1	06/25/22 16:04	06/28/22 22:34	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1887852	1	06/25/22 16:04	06/30/22 07:39	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1888618	10	07/04/22 06:51	07/05/22 02:33	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1889542	1	07/04/22 01:41	07/04/22 13:56	AMG	Mt. Juliet, TN

20220622-OIL SHALE BG5 45-47' L1508583-10 Solid

Collected by: RS/CW | Collected date/time: 06/22/22 13:45 | Received date/time: 06/24/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1892129	1	07/14/22 00:18	07/14/22 00:18	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1888421	1	07/04/22 15:00	07/07/22 13:45	ERP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1888789	1	07/02/22 10:00	07/02/22 12:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1889064	1	07/02/22 07:37	07/02/22 11:34	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1887737	1	06/30/22 17:09	07/10/22 00:34	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1892133	1	07/13/22 00:05	07/14/22 14:31	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1887735	5	06/30/22 17:02	07/02/22 16:30	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1886437	1	06/25/22 16:04	06/28/22 22:57	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1887852	1	06/25/22 16:04	06/30/22 07:59	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1888618	1	07/04/22 06:51	07/04/22 23:56	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1889542	1.04	07/04/22 01:41	07/04/22 14:14	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

Project Narrative

L1508583-03: 20220622-OIL SHALE BG5 11-13' unable to have HW Boron and SAR run on it due to sample matrix.

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.369		1	07/13/2022 23:47	WG1892129

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	ND		1.00	1	07/07/2022 12:40	WG1888421

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.24	T8	1	06/29/2022 15:00	WG1886089

Sample Narrative:

L1508583-01 WG1886089: 8.24 at 23.1C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	231		10.0	1	07/02/2022 11:34	WG1889064

Sample Narrative:

L1508583-01 WG1889064: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	342		0.500	1	07/10/2022 00:06	WG1887737
Cadmium	0.508		0.500	1	07/10/2022 00:06	WG1887737
Copper	28.8		2.00	1	07/10/2022 00:06	WG1887737
Lead	15.3		0.500	1	07/10/2022 00:06	WG1887737
Nickel	19.8		2.00	1	07/10/2022 00:06	WG1887737
Selenium	ND		2.00	1	07/10/2022 00:06	WG1887737
Silver	ND		1.00	1	07/10/2022 00:06	WG1887737
Zinc	57.6		5.00	1	07/10/2022 00:06	WG1887737

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	0.467		0.200	1	07/14/2022 14:04	WG1892133

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	24.2		1.00	5	07/02/2022 15:25	WG1887735

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	0.126	J3	0.100	1	06/29/2022 04:25	WG1886436
(S) a,a,a-Trifluorotoluene(FID)	*108*		*77.0-120*		*06/29/2022 04:25*	WG1886436

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	06/29/2022 12:23	WG1887114
Toluene	ND		0.00500	1	06/29/2022 12:23	WG1887114
Ethylbenzene	ND		0.00250	1	06/29/2022 12:23	WG1887114
Xylenes, Total	ND		0.00650	1	06/29/2022 12:23	WG1887114
1,2,4-Trimethylbenzene	ND		0.00500	1	06/29/2022 12:23	WG1887114
1,3,5-Trimethylbenzene	ND		0.00500	1	06/29/2022 12:23	WG1887114
(S) Toluene-d8	*107*		*75.0-131*		*06/29/2022 12:23*	WG1887114
(S) 4-Bromofluorobenzene	*92.8*		*67.0-138*		*06/29/2022 12:23*	WG1887114
(S) 1,2-Dichloroethane-d4	*92.9*		*70.0-130*		*06/29/2022 12:23*	WG1887114

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	92.8		20.0	5	07/05/2022 01:41	WG1888618
C28-C36 Motor Oil Range	223		20.0	5	07/05/2022 01:41	WG1888618
(S) o-Terphenyl	*95.4*		*18.0-148*		*07/05/2022 01:41*	WG1888618

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	07/04/2022 15:07	WG1889542
Anthracene	ND		0.00600	1	07/04/2022 15:07	WG1889542
Benzo(a)anthracene	ND		0.00600	1	07/04/2022 15:07	WG1889542
Benzo(b)fluoranthene	ND		0.00600	1	07/04/2022 15:07	WG1889542
Benzo(k)fluoranthene	ND		0.00600	1	07/04/2022 15:07	WG1889542
Benzo(a)pyrene	ND		0.00600	1	07/04/2022 15:07	WG1889542
Chrysene	ND		0.00600	1	07/04/2022 15:07	WG1889542
Dibenz(a,h)anthracene	ND		0.00600	1	07/04/2022 15:07	WG1889542
Fluoranthene	ND		0.00600	1	07/04/2022 15:07	WG1889542
Fluorene	ND		0.00600	1	07/04/2022 15:07	WG1889542
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	07/04/2022 15:07	WG1889542
1-Methylnaphthalene	ND		0.0200	1	07/04/2022 15:07	WG1889542
2-Methylnaphthalene	ND		0.0200	1	07/04/2022 15:07	WG1889542
Naphthalene	ND		0.0200	1	07/04/2022 15:07	WG1889542
Pyrene	ND		0.00600	1	07/04/2022 15:07	WG1889542
(S) p-Terphenyl-d14	*85.9*		*23.0-120*		*07/04/2022 15:07*	WG1889542
(S) Nitrobenzene-d5	*74.9*		*14.0-149*		*07/04/2022 15:07*	WG1889542
(S) 2-Fluorobiphenyl	*67.3*		*34.0-125*		*07/04/2022 15:07*	WG1889542

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.624		1	07/13/2022 23:50	WG1892129

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	ND		1.00	1	07/07/2022 12:53	WG1888421

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.38	T8	1	06/29/2022 15:00	WG1886089

Sample Narrative:

L1508583-02 WG1886089: 8.38 at 23.1C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	366		10.0	1	07/02/2022 11:34	WG1889064

Sample Narrative:

L1508583-02 WG1889064: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	307		0.500	1	07/10/2022 00:09	WG1887737
Cadmium	0.576		0.500	1	07/10/2022 00:09	WG1887737
Copper	27.2		2.00	1	07/10/2022 00:09	WG1887737
Lead	15.0		0.500	1	07/10/2022 00:09	WG1887737
Nickel	19.3		2.00	1	07/10/2022 00:09	WG1887737
Selenium	ND		2.00	1	07/10/2022 00:09	WG1887737
Silver	ND		1.00	1	07/10/2022 00:09	WG1887737
Zinc	61.6		5.00	1	07/10/2022 00:09	WG1887737

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	1.17		0.200	1	07/14/2022 14:07	WG1892133

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	22.1		1.00	5	07/02/2022 15:29	WG1887735

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	0.320	J3	0.100	1	06/29/2022 04:46	WG1886436
(S) a,a,a-Trifluorotoluene(FID)	*106*		*77.0-120*		*06/29/2022 04:46*	WG1886436

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	06/30/2022 05:26	WG1887852
Toluene	0.0263		0.00500	1	06/30/2022 05:26	WG1887852
Ethylbenzene	ND		0.00250	1	06/30/2022 05:26	WG1887852
Xylenes, Total	0.0517		0.00650	1	06/30/2022 05:26	WG1887852
1,2,4-Trimethylbenzene	ND		0.00500	1	06/30/2022 05:26	WG1887852
1,3,5-Trimethylbenzene	ND		0.00500	1	06/30/2022 05:26	WG1887852
(S) Toluene-d8	*102*		*75.0-131*		*06/30/2022 05:26*	WG1887852
(S) 4-Bromofluorobenzene	*100*		*67.0-138*		*06/30/2022 05:26*	WG1887852
(S) 1,2-Dichloroethane-d4	*96.1*		*70.0-130*		*06/30/2022 05:26*	WG1887852

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	176		20.0	5	07/05/2022 01:54	WG1888618
C28-C36 Motor Oil Range	321		20.0	5	07/05/2022 01:54	WG1888618
(S) o-Terphenyl	*155*	J1	*18.0-148*		*07/05/2022 01:54*	WG1888618

Sample Narrative:

L1508583-02 WG1888618: 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	ND		0.00600	1	07/04/2022 14:32	WG1889542
Anthracene	ND		0.00600	1	07/04/2022 14:32	WG1889542
Benzo(a)anthracene	ND		0.00600	1	07/04/2022 14:32	WG1889542
Benzo(b)fluoranthene	ND		0.00600	1	07/04/2022 14:32	WG1889542
Benzo(k)fluoranthene	ND		0.00600	1	07/04/2022 14:32	WG1889542
Benzo(a)pyrene	ND		0.00600	1	07/04/2022 14:32	WG1889542
Chrysene	ND		0.00600	1	07/04/2022 14:32	WG1889542
Dibenz(a,h)anthracene	ND		0.00600	1	07/04/2022 14:32	WG1889542
Fluoranthene	ND		0.00600	1	07/04/2022 14:32	WG1889542
Fluorene	ND		0.00600	1	07/04/2022 14:32	WG1889542
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	07/04/2022 14:32	WG1889542
1-Methylnaphthalene	ND		0.0200	1	07/04/2022 14:32	WG1889542
2-Methylnaphthalene	ND		0.0200	1	07/04/2022 14:32	WG1889542
Naphthalene	ND		0.0200	1	07/04/2022 14:32	WG1889542
Pyrene	ND		0.00600	1	07/04/2022 14:32	WG1889542
(S) p-Terphenyl-d14	*77.7*		*23.0-120*		*07/04/2022 14:32*	WG1889542
(S) Nitrobenzene-d5	*66.9*		*14.0-149*		*07/04/2022 14:32*	WG1889542
(S) 2-Fluorobiphenyl	*61.9*		*34.0-125*		*07/04/2022 14:32*	WG1889542

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	07/07/2022 12:58	WG1888421

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.71	T8	1	07/05/2022 10:00	WG1888896

Sample Narrative:
L1508583-03 WG1888896: 8.71 at 23.7C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	317		10.0	1	07/02/2022 11:34	WG1889064

Sample Narrative:
L1508583-03 WG1889064: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	470		0.500	1	07/10/2022 00:12	WG1887737
Cadmium	0.563		0.500	1	07/10/2022 00:12	WG1887737
Copper	27.2		2.00	1	07/10/2022 00:12	WG1887737
Lead	15.3		0.500	1	07/10/2022 00:12	WG1887737
Nickel	17.6		2.00	1	07/10/2022 00:12	WG1887737
Selenium	ND		2.00	1	07/10/2022 00:12	WG1887737
Silver	ND		1.00	1	07/10/2022 00:12	WG1887737
Zinc	49.2		5.00	1	07/10/2022 00:12	WG1887737

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	28.0		1.00	5	07/02/2022 15:33	WG1887735

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	2.15	J3	0.100	1	06/29/2022 05:08	WG1886436
(S) a,a,a-Trifluorotoluene(FID)	*101*		*77.0-120*		*06/29/2022 05:08*	WG1886436

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00710		0.00100	1	06/30/2022 05:45	WG1887852
Toluene	0.346		0.00500	1	06/30/2022 05:45	WG1887852
Ethylbenzene	0.0177		0.00250	1	06/30/2022 05:45	WG1887852
Xylenes, Total	0.846		0.00650	1	06/30/2022 05:45	WG1887852
1,2,4-Trimethylbenzene	0.0159		0.00500	1	06/30/2022 05:45	WG1887852
1,3,5-Trimethylbenzene	0.0110		0.00500	1	06/30/2022 05:45	WG1887852
(S) Toluene-d8	*99.4*		*75.0-131*		*06/30/2022 05:45*	WG1887852
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*06/30/2022 05:45*	WG1887852
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*06/30/2022 05:45*	WG1887852

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	539		20.0	5	07/05/2022 02:07	WG1888618
C28-C36 Motor Oil Range	755		20.0	5	07/05/2022 02:07	WG1888618
(S) o-Terphenyl	*124*		*18.0-148*		*07/05/2022 02:07*	WG1888618

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	07/04/2022 15:25	WG1889542
Anthracene	ND		0.00600	1	07/04/2022 15:25	WG1889542
Benzo(a)anthracene	ND		0.00600	1	07/04/2022 15:25	WG1889542
Benzo(b)fluoranthene	ND		0.00600	1	07/04/2022 15:25	WG1889542
Benzo(k)fluoranthene	ND		0.00600	1	07/04/2022 15:25	WG1889542
Benzo(a)pyrene	ND		0.00600	1	07/04/2022 15:25	WG1889542
Chrysene	ND		0.00600	1	07/04/2022 15:25	WG1889542
Dibenz(a,h)anthracene	ND		0.00600	1	07/04/2022 15:25	WG1889542
Fluoranthene	ND		0.00600	1	07/04/2022 15:25	WG1889542
Fluorene	ND		0.00600	1	07/04/2022 15:25	WG1889542
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	07/04/2022 15:25	WG1889542
1-Methylnaphthalene	0.0343		0.0200	1	07/04/2022 15:25	WG1889542
2-Methylnaphthalene	0.250		0.0200	1	07/04/2022 15:25	WG1889542
Naphthalene	0.0381		0.0200	1	07/04/2022 15:25	WG1889542
Pyrene	0.0118		0.00600	1	07/04/2022 15:25	WG1889542
(S) p-Terphenyl-d14	*79.8*		*23.0-120*		*07/04/2022 15:25*	WG1889542
(S) Nitrobenzene-d5	*77.8*		*14.0-149*		*07/04/2022 15:25*	WG1889542
(S) 2-Fluorobiphenyl	*64.1*		*34.0-125*		*07/04/2022 15:25*	WG1889542

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.844		1	07/13/2022 23:55	WG1892129

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	ND		1.00	1	07/07/2022 13:03	WG1888421

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.82	T8	1	07/05/2022 10:00	WG1888896

Sample Narrative:

L1508583-04 WG1888896: 8.82 at 23.5C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	267		10.0	1	07/02/2022 11:34	WG1889064

Sample Narrative:

L1508583-04 WG1889064: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	359		0.500	1	07/10/2022 00:14	WG1887737
Cadmium	0.577		0.500	1	07/10/2022 00:14	WG1887737
Copper	25.6		2.00	1	07/10/2022 00:14	WG1887737
Lead	15.6		0.500	1	07/10/2022 00:14	WG1887737
Nickel	16.3		2.00	1	07/10/2022 00:14	WG1887737
Selenium	ND		2.00	1	07/10/2022 00:14	WG1887737
Silver	ND		1.00	1	07/10/2022 00:14	WG1887737
Zinc	46.6		5.00	1	07/10/2022 00:14	WG1887737

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	0.361		0.200	1	07/14/2022 14:09	WG1892133

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	21.0		1.00	5	07/02/2022 15:36	WG1887735

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	1.85	J3	0.100	1	06/29/2022 05:29	WG1886436
(S) a,a,a-Trifluorotoluene(FID)	*102*		*77.0-120*		*06/29/2022 05:29*	WG1886436

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.0174		0.00100	1	06/30/2022 06:04	WG1887852
Toluene	0.538		0.00500	1	06/30/2022 06:04	WG1887852
Ethylbenzene	0.0359		0.00250	1	06/30/2022 06:04	WG1887852
Xylenes, Total	1.14		0.00650	1	06/30/2022 06:04	WG1887852
1,2,4-Trimethylbenzene	0.0240		0.00500	1	06/30/2022 06:04	WG1887852
1,3,5-Trimethylbenzene	0.0174		0.00500	1	06/30/2022 06:04	WG1887852
(S) Toluene-d8	*100*		*75.0-131*		*06/30/2022 06:04*	WG1887852
(S) 4-Bromofluorobenzene	*96.6*		*67.0-138*		*06/30/2022 06:04*	WG1887852
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*06/30/2022 06:04*	WG1887852

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	324		20.0	5	07/05/2022 03:26	WG1888618
C28-C36 Motor Oil Range	574		20.0	5	07/05/2022 03:26	WG1888618
(S) o-Terphenyl	*133*		*18.0-148*		*07/05/2022 03:26*	WG1888618

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	07/04/2022 16:37	WG1889542
Anthracene	ND		0.00600	1	07/04/2022 16:37	WG1889542
Benzo(a)anthracene	ND		0.00600	1	07/04/2022 16:37	WG1889542
Benzo(b)fluoranthene	ND		0.00600	1	07/04/2022 16:37	WG1889542
Benzo(k)fluoranthene	ND		0.00600	1	07/04/2022 16:37	WG1889542
Benzo(a)pyrene	ND		0.00600	1	07/04/2022 16:37	WG1889542
Chrysene	ND		0.00600	1	07/04/2022 16:37	WG1889542
Dibenz(a,h)anthracene	ND		0.00600	1	07/04/2022 16:37	WG1889542
Fluoranthene	ND		0.00600	1	07/04/2022 16:37	WG1889542
Fluorene	ND		0.00600	1	07/04/2022 16:37	WG1889542
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	07/04/2022 16:37	WG1889542
1-Methylnaphthalene	0.0233		0.0200	1	07/04/2022 16:37	WG1889542
2-Methylnaphthalene	0.155		0.0200	1	07/04/2022 16:37	WG1889542
Naphthalene	0.0321		0.0200	1	07/04/2022 16:37	WG1889542
Pyrene	0.0112		0.00600	1	07/04/2022 16:37	WG1889542
(S) p-Terphenyl-d14	*99.0*		*23.0-120*		*07/04/2022 16:37*	WG1889542
(S) Nitrobenzene-d5	*88.4*		*14.0-149*		*07/04/2022 16:37*	WG1889542
(S) 2-Fluorobiphenyl	*69.5*		*34.0-125*		*07/04/2022 16:37*	WG1889542

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.748		1	07/13/2022 23:58	WG1892129

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	07/07/2022 13:09	WG1888421

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.49	T8	1	07/05/2022 10:00	WG1888896

Sample Narrative:
L1508583-05 WG1888896: 8.49 at 23.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	264		10.0	1	07/02/2022 11:34	WG1889064

Sample Narrative:
L1508583-05 WG1889064: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	324		0.500	1	07/09/2022 23:23	WG1887737
Cadmium	0.530		0.500	1	07/09/2022 23:23	WG1887737
Copper	23.7		2.00	1	07/09/2022 23:23	WG1887737
Lead	16.0		0.500	1	07/09/2022 23:23	WG1887737
Nickel	18.4		2.00	1	07/09/2022 23:23	WG1887737
Selenium	ND		2.00	1	07/09/2022 23:23	WG1887737
Silver	ND		1.00	1	07/09/2022 23:23	WG1887737
Zinc	49.6	O1	5.00	1	07/09/2022 23:23	WG1887737

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.496		0.200	1	07/14/2022 14:12	WG1892133

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	21.2	O1	1.00	5	07/02/2022 14:17	WG1887735

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.143	J3	0.100	1	06/28/2022 21:00	WG1886437
(S) a,a,a-Trifluorotoluene(FID)	*99.1*		*77.0-120*		*06/28/2022 21:00*	WG1886437

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	06/30/2022 06:23	WG1887852
Toluene	0.00782		0.00500	1	06/30/2022 06:23	WG1887852
Ethylbenzene	ND		0.00250	1	06/30/2022 06:23	WG1887852
Xylenes, Total	0.0135		0.00650	1	06/30/2022 06:23	WG1887852
1,2,4-Trimethylbenzene	ND		0.00500	1	06/30/2022 06:23	WG1887852
1,3,5-Trimethylbenzene	ND		0.00500	1	06/30/2022 06:23	WG1887852
(S) Toluene-d8	*99.5*		*75.0-131*		*06/30/2022 06:23*	WG1887852
(S) 4-Bromofluorobenzene	*99.9*		*67.0-138*		*06/30/2022 06:23*	WG1887852
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*06/30/2022 06:23*	WG1887852

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	125		20.0	5	07/05/2022 03:39	WG1888618
C28-C36 Motor Oil Range	306		20.0	5	07/05/2022 03:39	WG1888618
(S) o-Terphenyl	*100*		*18.0-148*		*07/05/2022 03:39*	WG1888618

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	07/04/2022 15:43	WG1889542
Anthracene	ND		0.00600	1	07/04/2022 15:43	WG1889542
Benzo(a)anthracene	ND		0.00600	1	07/04/2022 15:43	WG1889542
Benzo(b)fluoranthene	ND		0.00600	1	07/04/2022 15:43	WG1889542
Benzo(k)fluoranthene	ND		0.00600	1	07/04/2022 15:43	WG1889542
Benzo(a)pyrene	ND		0.00600	1	07/04/2022 15:43	WG1889542
Chrysene	ND		0.00600	1	07/04/2022 15:43	WG1889542
Dibenz(a,h)anthracene	ND		0.00600	1	07/04/2022 15:43	WG1889542
Fluoranthene	ND		0.00600	1	07/04/2022 15:43	WG1889542
Fluorene	ND		0.00600	1	07/04/2022 15:43	WG1889542
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	07/04/2022 15:43	WG1889542
1-Methylnaphthalene	ND		0.0200	1	07/04/2022 15:43	WG1889542
2-Methylnaphthalene	ND		0.0200	1	07/04/2022 15:43	WG1889542
Naphthalene	ND		0.0200	1	07/04/2022 15:43	WG1889542
Pyrene	ND		0.00600	1	07/04/2022 15:43	WG1889542
(S) p-Terphenyl-d14	*80.7*		*23.0-120*		*07/04/2022 15:43*	WG1889542
(S) Nitrobenzene-d5	*59.2*		*14.0-149*		*07/04/2022 15:43*	WG1889542
(S) 2-Fluorobiphenyl	*58.8*		*34.0-125*		*07/04/2022 15:43*	WG1889542

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	1.09		1	07/14/2022 00:01	WG1892129

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	ND		1.00	1	07/07/2022 15:18	WG1888421

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.23	T8	1	07/04/2022 09:15	WG1888818

Sample Narrative:

L1508583-06 WG1888818: 8.23 at 23.6C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	265		10.0	1	07/02/2022 11:34	WG1889064

Sample Narrative:

L1508583-06 WG1889064: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	314		0.500	1	07/10/2022 00:23	WG1887737
Cadmium	0.553		0.500	1	07/10/2022 00:23	WG1887737
Copper	27.3		2.00	1	07/10/2022 00:23	WG1887737
Lead	17.6		0.500	1	07/10/2022 00:23	WG1887737
Nickel	21.9		2.00	1	07/10/2022 00:23	WG1887737
Selenium	ND		2.00	1	07/10/2022 00:23	WG1887737
Silver	ND		1.00	1	07/10/2022 00:23	WG1887737
Zinc	57.6		5.00	1	07/10/2022 00:23	WG1887737

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	0.420		0.200	1	07/14/2022 14:15	WG1892133

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	28.3		1.00	5	07/02/2022 15:40	WG1887735

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	0.869		0.100	1	06/28/2022 21:23	WG1886437
(S) a,a,a-Trifluorotoluene(FID)	*92.9*		*77.0-120*		*06/28/2022 21:23*	WG1886437

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00415		0.00100	1	06/30/2022 06:42	WG1887852
Toluene	0.151		0.00500	1	06/30/2022 06:42	WG1887852
Ethylbenzene	0.00825		0.00250	1	06/30/2022 06:42	WG1887852
Xylenes, Total	0.306		0.00650	1	06/30/2022 06:42	WG1887852
1,2,4-Trimethylbenzene	0.00780		0.00500	1	06/30/2022 06:42	WG1887852
1,3,5-Trimethylbenzene	ND		0.00500	1	06/30/2022 06:42	WG1887852
(S) Toluene-d8	*96.4*		*75.0-131*		*06/30/2022 06:42*	WG1887852
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*06/30/2022 06:42*	WG1887852
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*06/30/2022 06:42*	WG1887852

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	142		20.0	5	07/05/2022 03:52	WG1888618
C28-C36 Motor Oil Range	343		20.0	5	07/05/2022 03:52	WG1888618
(S) o-Terphenyl	*96.2*		*18.0-148*		*07/05/2022 03:52*	WG1888618

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	07/04/2022 16:19	WG1889542
Anthracene	ND		0.00600	1	07/04/2022 16:19	WG1889542
Benzo(a)anthracene	ND		0.00600	1	07/04/2022 16:19	WG1889542
Benzo(b)fluoranthene	ND		0.00600	1	07/04/2022 16:19	WG1889542
Benzo(k)fluoranthene	ND		0.00600	1	07/04/2022 16:19	WG1889542
Benzo(a)pyrene	ND		0.00600	1	07/04/2022 16:19	WG1889542
Chrysene	ND		0.00600	1	07/04/2022 16:19	WG1889542
Dibenz(a,h)anthracene	ND		0.00600	1	07/04/2022 16:19	WG1889542
Fluoranthene	ND		0.00600	1	07/04/2022 16:19	WG1889542
Fluorene	ND		0.00600	1	07/04/2022 16:19	WG1889542
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	07/04/2022 16:19	WG1889542
1-Methylnaphthalene	ND		0.0200	1	07/04/2022 16:19	WG1889542
2-Methylnaphthalene	ND		0.0200	1	07/04/2022 16:19	WG1889542
Naphthalene	ND		0.0200	1	07/04/2022 16:19	WG1889542
Pyrene	ND		0.00600	1	07/04/2022 16:19	WG1889542
(S) p-Terphenyl-d14	*78.2*		*23.0-120*		*07/04/2022 16:19*	WG1889542
(S) Nitrobenzene-d5	*63.3*		*14.0-149*		*07/04/2022 16:19*	WG1889542
(S) 2-Fluorobiphenyl	*61.8*		*34.0-125*		*07/04/2022 16:19*	WG1889542

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.836		1	07/14/2022 00:04	WG1892129

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	ND		1.00	1	07/07/2022 13:19	WG1888421

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.08	T8	1	06/30/2022 17:11	WG1888121

Sample Narrative:

L1508583-07 WG1888121: 8.08 at 24.1C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	283		10.0	1	07/02/2022 11:34	WG1889064

Sample Narrative:

L1508583-07 WG1889064: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	409		0.500	1	07/10/2022 00:26	WG1887737
Cadmium	0.587		0.500	1	07/10/2022 00:26	WG1887737
Copper	29.9		2.00	1	07/10/2022 00:26	WG1887737
Lead	17.8		0.500	1	07/10/2022 00:26	WG1887737
Nickel	17.0		2.00	1	07/10/2022 00:26	WG1887737
Selenium	ND		2.00	1	07/10/2022 00:26	WG1887737
Silver	ND		1.00	1	07/10/2022 00:26	WG1887737
Zinc	48.4		5.00	1	07/10/2022 00:26	WG1887737

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	0.235		0.200	1	07/14/2022 14:17	WG1892133

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	30.6		1.00	5	07/02/2022 15:44	WG1887735

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	1.26		0.100	1	06/28/2022 21:47	WG1886437
(S) a,a,a-Trifluorotoluene(FID)	*95.0*		*77.0-120*		*06/28/2022 21:47*	WG1886437

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00908		0.00100	1	06/30/2022 07:01	WG1887852
Toluene	0.375		0.00500	1	06/30/2022 07:01	WG1887852
Ethylbenzene	0.0190		0.00250	1	06/30/2022 07:01	WG1887852
Xylenes, Total	0.795		0.00650	1	06/30/2022 07:01	WG1887852
1,2,4-Trimethylbenzene	0.0121		0.00500	1	06/30/2022 07:01	WG1887852
1,3,5-Trimethylbenzene	0.00641		0.00500	1	06/30/2022 07:01	WG1887852
(S) Toluene-d8	*98.4*		*75.0-131*		*06/30/2022 07:01*	WG1887852
(S) 4-Bromofluorobenzene	*98.7*		*67.0-138*		*06/30/2022 07:01*	WG1887852
(S) 1,2-Dichloroethane-d4	*99.9*		*70.0-130*		*06/30/2022 07:01*	WG1887852

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	609		40.0	10	07/05/2022 04:18	WG1888618
C28-C36 Motor Oil Range	989		40.0	10	07/05/2022 04:18	WG1888618
(S) o-Terphenyl	*253*	J1	*18.0-148*		*07/05/2022 04:18*	WG1888618

Sample Narrative:

L1508583-07 WG1888618: 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	ND		0.00600	1	07/04/2022 16:01	WG1889542
Anthracene	ND		0.00600	1	07/04/2022 16:01	WG1889542
Benzo(a)anthracene	ND		0.00600	1	07/04/2022 16:01	WG1889542
Benzo(b)fluoranthene	ND		0.00600	1	07/04/2022 16:01	WG1889542
Benzo(k)fluoranthene	ND		0.00600	1	07/04/2022 16:01	WG1889542
Benzo(a)pyrene	ND		0.00600	1	07/04/2022 16:01	WG1889542
Chrysene	ND		0.00600	1	07/04/2022 16:01	WG1889542
Dibenz(a,h)anthracene	ND		0.00600	1	07/04/2022 16:01	WG1889542
Fluoranthene	ND		0.00600	1	07/04/2022 16:01	WG1889542
Fluorene	ND		0.00600	1	07/04/2022 16:01	WG1889542
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	07/04/2022 16:01	WG1889542
1-Methylnaphthalene	0.0234		0.0200	1	07/04/2022 16:01	WG1889542
2-Methylnaphthalene	0.163		0.0200	1	07/04/2022 16:01	WG1889542
Naphthalene	0.0325		0.0200	1	07/04/2022 16:01	WG1889542
Pyrene	ND		0.00600	1	07/04/2022 16:01	WG1889542
(S) p-Terphenyl-d14	*92.0*		*23.0-120*		*07/04/2022 16:01*	WG1889542
(S) Nitrobenzene-d5	*87.2*		*14.0-149*		*07/04/2022 16:01*	WG1889542
(S) 2-Fluorobiphenyl	*67.8*		*34.0-125*		*07/04/2022 16:01*	WG1889542

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.623		1	07/14/2022 00:07	WG1892129

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	ND		1.00	1	07/07/2022 13:35	WG1888421

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.09	T8	1	06/30/2022 11:52	WG1887630

Sample Narrative:

L1508583-08 WG1887630: 8.09 at 23.2C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	207		10.0	1	07/02/2022 11:34	WG1889064

Sample Narrative:

L1508583-08 WG1889064: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	223		0.500	1	07/10/2022 00:28	WG1887737
Cadmium	ND		0.500	1	07/10/2022 00:28	WG1887737
Copper	18.6		2.00	1	07/10/2022 00:28	WG1887737
Lead	11.8		0.500	1	07/10/2022 00:28	WG1887737
Nickel	16.8		2.00	1	07/10/2022 00:28	WG1887737
Selenium	ND		2.00	1	07/10/2022 00:28	WG1887737
Silver	ND		1.00	1	07/10/2022 00:28	WG1887737
Zinc	44.0		5.00	1	07/10/2022 00:28	WG1887737

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	0.239		0.200	1	07/14/2022 14:20	WG1892133

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	13.9		1.00	5	07/02/2022 15:48	WG1887735

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	0.194		0.100	1	06/28/2022 22:10	WG1886437
(S) a,a,a-Trifluorotoluene(FID)	*102*		*77.0-120*		*06/28/2022 22:10*	WG1886437

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	06/30/2022 07:20	WG1887852
Toluene	ND		0.00500	1	06/30/2022 07:20	WG1887852
Ethylbenzene	ND		0.00250	1	06/30/2022 07:20	WG1887852
Xylenes, Total	0.00854		0.00650	1	06/30/2022 07:20	WG1887852
1,2,4-Trimethylbenzene	ND		0.00500	1	06/30/2022 07:20	WG1887852
1,3,5-Trimethylbenzene	ND		0.00500	1	06/30/2022 07:20	WG1887852
(S) Toluene-d8	*95.9*		*75.0-131*		*06/30/2022 07:20*	WG1887852
(S) 4-Bromofluorobenzene	*103*		*67.0-138*		*06/30/2022 07:20*	WG1887852
(S) 1,2-Dichloroethane-d4	*98.9*		*70.0-130*		*06/30/2022 07:20*	WG1887852

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	26.8		4.00	1	07/04/2022 23:43	WG1888618
C28-C36 Motor Oil Range	97.9		4.00	1	07/04/2022 23:43	WG1888618
(S) o-Terphenyl	*71.6*		*18.0-148*		*07/04/2022 23:43*	WG1888618

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	07/04/2022 12:45	WG1889542
Anthracene	ND		0.00600	1	07/04/2022 12:45	WG1889542
Benzo(a)anthracene	ND		0.00600	1	07/04/2022 12:45	WG1889542
Benzo(b)fluoranthene	ND		0.00600	1	07/04/2022 12:45	WG1889542
Benzo(k)fluoranthene	ND		0.00600	1	07/04/2022 12:45	WG1889542
Benzo(a)pyrene	ND		0.00600	1	07/04/2022 12:45	WG1889542
Chrysene	ND		0.00600	1	07/04/2022 12:45	WG1889542
Dibenz(a,h)anthracene	ND		0.00600	1	07/04/2022 12:45	WG1889542
Fluoranthene	ND		0.00600	1	07/04/2022 12:45	WG1889542
Fluorene	ND		0.00600	1	07/04/2022 12:45	WG1889542
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	07/04/2022 12:45	WG1889542
1-Methylnaphthalene	ND		0.0200	1	07/04/2022 12:45	WG1889542
2-Methylnaphthalene	ND		0.0200	1	07/04/2022 12:45	WG1889542
Naphthalene	ND		0.0200	1	07/04/2022 12:45	WG1889542
Pyrene	ND		0.00600	1	07/04/2022 12:45	WG1889542
(S) p-Terphenyl-d14	*80.3*		*23.0-120*		*07/04/2022 12:45*	WG1889542
(S) Nitrobenzene-d5	*67.1*		*14.0-149*		*07/04/2022 12:45*	WG1889542
(S) 2-Fluorobiphenyl	*64.8*		*34.0-125*		*07/04/2022 12:45*	WG1889542

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.936		1	07/14/2022 00:10	WG1892129

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	ND		1.00	1	07/07/2022 13:40	WG1888421

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	7.24	T8	1	06/30/2022 11:52	WG1887630

Sample Narrative:

L1508583-09 WG1887630: 7.24 at 22.9C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	275		10.0	1	07/02/2022 11:34	WG1889064

Sample Narrative:

L1508583-09 WG1889064: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	242		0.500	1	07/10/2022 00:31	WG1887737
Cadmium	ND		0.500	1	07/10/2022 00:31	WG1887737
Copper	18.2		2.00	1	07/10/2022 00:31	WG1887737
Lead	10.5		0.500	1	07/10/2022 00:31	WG1887737
Nickel	16.1		2.00	1	07/10/2022 00:31	WG1887737
Selenium	ND		2.00	1	07/10/2022 00:31	WG1887737
Silver	ND		1.00	1	07/10/2022 00:31	WG1887737
Zinc	42.8		5.00	1	07/10/2022 00:31	WG1887737

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	07/14/2022 14:28	WG1892133

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	12.4		1.00	5	07/02/2022 15:52	WG1887735

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	0.300		0.100	1	06/28/2022 22:34	WG1886437
(S) a,a,a-Trifluorotoluene(FID)	*102*		*77.0-120*		*06/28/2022 22:34*	WG1886437

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	06/30/2022 07:39	WG1887852
Toluene	0.0383		0.00500	1	06/30/2022 07:39	WG1887852
Ethylbenzene	0.00598		0.00250	1	06/30/2022 07:39	WG1887852
Xylenes, Total	0.142		0.00650	1	06/30/2022 07:39	WG1887852
1,2,4-Trimethylbenzene	ND		0.00500	1	06/30/2022 07:39	WG1887852
1,3,5-Trimethylbenzene	ND		0.00500	1	06/30/2022 07:39	WG1887852
(S) Toluene-d8	*99.4*		*75.0-131*		*06/30/2022 07:39*	WG1887852
(S) 4-Bromofluorobenzene	*96.1*		*67.0-138*		*06/30/2022 07:39*	WG1887852
(S) 1,2-Dichloroethane-d4	*98.9*		*70.0-130*		*06/30/2022 07:39*	WG1887852

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	149	J3 J5 J6	40.0	10	07/05/2022 02:33	WG1888618
C28-C36 Motor Oil Range	229		40.0	10	07/05/2022 02:33	WG1888618
(S) o-Terphenyl	*139*		*18.0-148*		*07/05/2022 02:33*	WG1888618

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	07/04/2022 13:56	WG1889542
Anthracene	ND		0.00600	1	07/04/2022 13:56	WG1889542
Benzo(a)anthracene	ND		0.00600	1	07/04/2022 13:56	WG1889542
Benzo(b)fluoranthene	ND		0.00600	1	07/04/2022 13:56	WG1889542
Benzo(k)fluoranthene	ND		0.00600	1	07/04/2022 13:56	WG1889542
Benzo(a)pyrene	ND		0.00600	1	07/04/2022 13:56	WG1889542
Chrysene	ND		0.00600	1	07/04/2022 13:56	WG1889542
Dibenz(a,h)anthracene	ND		0.00600	1	07/04/2022 13:56	WG1889542
Fluoranthene	ND		0.00600	1	07/04/2022 13:56	WG1889542
Fluorene	ND		0.00600	1	07/04/2022 13:56	WG1889542
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	07/04/2022 13:56	WG1889542
1-Methylnaphthalene	ND		0.0200	1	07/04/2022 13:56	WG1889542
2-Methylnaphthalene	0.0247		0.0200	1	07/04/2022 13:56	WG1889542
Naphthalene	ND		0.0200	1	07/04/2022 13:56	WG1889542
Pyrene	ND		0.00600	1	07/04/2022 13:56	WG1889542
(S) p-Terphenyl-d14	*95.6*		*23.0-120*		*07/04/2022 13:56*	WG1889542
(S) Nitrobenzene-d5	*75.4*		*14.0-149*		*07/04/2022 13:56*	WG1889542
(S) 2-Fluorobiphenyl	*75.2*		*34.0-125*		*07/04/2022 13:56*	WG1889542

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.748		1	07/14/2022 00:18	WG1892129

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Hexavalent Chromium	ND		1.00	1	07/07/2022 13:45	WG1888421

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	pH				
pH	8.38	T8	1	07/02/2022 12:00	WG1888789

Sample Narrative:

L1508583-10 WG1888789: 8.38 at 24C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	umhos/cm		umhos/cm			
Specific Conductance	141		10.0	1	07/02/2022 11:34	WG1889064

Sample Narrative:

L1508583-10 WG1889064: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Barium	233		0.500	1	07/10/2022 00:34	WG1887737
Cadmium	ND		0.500	1	07/10/2022 00:34	WG1887737
Copper	19.5		2.00	1	07/10/2022 00:34	WG1887737
Lead	12.0		0.500	1	07/10/2022 00:34	WG1887737
Nickel	14.7		2.00	1	07/10/2022 00:34	WG1887737
Selenium	ND		2.00	1	07/10/2022 00:34	WG1887737
Silver	ND		1.00	1	07/10/2022 00:34	WG1887737
Zinc	43.9		5.00	1	07/10/2022 00:34	WG1887737

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	07/14/2022 14:31	WG1892133

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Arsenic	17.6		1.00	5	07/02/2022 16:30	WG1887735

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	06/28/2022 22:57	WG1886437
(S) a,a,a-Trifluorotoluene(FID)	*103*		*77.0-120*		*06/28/2022 22:57*	WG1886437

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	06/30/2022 07:59	WG1887852
Toluene	ND		0.00500	1	06/30/2022 07:59	WG1887852
Ethylbenzene	ND		0.00250	1	06/30/2022 07:59	WG1887852
Xylenes, Total	ND		0.00650	1	06/30/2022 07:59	WG1887852
1,2,4-Trimethylbenzene	ND		0.00500	1	06/30/2022 07:59	WG1887852
1,3,5-Trimethylbenzene	ND		0.00500	1	06/30/2022 07:59	WG1887852
(S) Toluene-d8	*93.8*		*75.0-131*		*06/30/2022 07:59*	WG1887852
(S) 4-Bromofluorobenzene	*114*		*67.0-138*		*06/30/2022 07:59*	WG1887852
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*06/30/2022 07:59*	WG1887852

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	23.6		4.00	1	07/04/2022 23:56	WG1888618
C28-C36 Motor Oil Range	109		4.00	1	07/04/2022 23:56	WG1888618
(S) o-Terphenyl	*61.7*		*18.0-148*		*07/04/2022 23:56*	WG1888618

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		0.00624	1.04	07/04/2022 14:14	WG1889542
Anthracene	ND		0.00624	1.04	07/04/2022 14:14	WG1889542
Benzo(a)anthracene	ND		0.00624	1.04	07/04/2022 14:14	WG1889542
Benzo(b)fluoranthene	ND		0.00624	1.04	07/04/2022 14:14	WG1889542
Benzo(k)fluoranthene	ND		0.00624	1.04	07/04/2022 14:14	WG1889542
Benzo(a)pyrene	ND		0.00624	1.04	07/04/2022 14:14	WG1889542
Chrysene	ND		0.00624	1.04	07/04/2022 14:14	WG1889542
Dibenz(a,h)anthracene	ND		0.00624	1.04	07/04/2022 14:14	WG1889542
Fluoranthene	ND		0.00624	1.04	07/04/2022 14:14	WG1889542
Fluorene	ND		0.00624	1.04	07/04/2022 14:14	WG1889542
Indeno(1,2,3-cd)pyrene	ND		0.00624	1.04	07/04/2022 14:14	WG1889542
1-Methylnaphthalene	ND		0.0208	1.04	07/04/2022 14:14	WG1889542
2-Methylnaphthalene	ND		0.0208	1.04	07/04/2022 14:14	WG1889542
Naphthalene	ND		0.0208	1.04	07/04/2022 14:14	WG1889542
Pyrene	ND		0.00624	1.04	07/04/2022 14:14	WG1889542
(S) p-Terphenyl-d14	*91.6*		*23.0-120*		*07/04/2022 14:14*	WG1889542
(S) Nitrobenzene-d5	*79.5*		*14.0-149*		*07/04/2022 14:14*	WG1889542
(S) 2-Fluorobiphenyl	*71.5*		*34.0-125*		*07/04/2022 14:14*	WG1889542

QUALITY CONTROL SUMMARY

L1508583-01,02,03,04,05,06,07,08,09,10

Method Blank (MB)

(MB) R3814129-1 07/07/22 12:29

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

L1508583-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1508583-01 07/07/22 12:40 • (DUP) R3814129-3 07/07/22 12:48

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

L1508583-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1508583-10 07/07/22 13:45 • (DUP) R3814129-4 07/07/22 13:50

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	ND	ND	1	0.479		20

Laboratory Control Sample (LCS)

(LCS) R3814129-2 07/07/22 12:34

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	

L1508596-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1508596-04 07/07/22 14:37 • (MS) R3814129-5 07/07/22 14:42 • (MSD) R3814129-6 07/07/22 14:47

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	19.3	18.4	93.9	89.3	1	75.0-125			4.90	20

L1508596-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1508596-04 07/07/22 14:37 • (MS) R3814129-8 07/07/22 14:58

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	701	ND	688	98.1	50	75.0-125	

L1507206-76 Original Sample (OS) • Duplicate (DUP)

(OS) L1507206-76 06/29/22 15:00 • (DUP) R3809077-2 06/29/22 15:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.69	7.69	1	0.000		1

Sample Narrative:

OS: 7.69 at 23.1C

DUP: 7.69 at 23.2C

L1508583-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1508583-01 06/29/22 15:00 • (DUP) R3809077-3 06/29/22 15:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.24	8.23	1	0.121		1

Sample Narrative:

OS: 8.24 at 23.1C

DUP: 8.23 at 23.2C

Laboratory Control Sample (LCS)

(LCS) R3809077-1 06/29/22 15:00

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 23.2C

L1507206-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1507206-08 06/30/22 11:52 • (DUP) R3809410-2 06/30/22 11:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.88	7.89	1	0.127		1

Sample Narrative:

OS: 7.88 at 22.9C

DUP: 7.89 at 23C

L1507206-85 Original Sample (OS) • Duplicate (DUP)

(OS) L1507206-85 06/30/22 11:52 • (DUP) R3809410-3 06/30/22 11:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.82	7.82	1	0.000		1

Sample Narrative:

OS: 7.82 at 22.9C

DUP: 7.82 at 22.9C

Laboratory Control Sample (LCS)

(LCS) R3809410-1 06/30/22 11:52

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 23.1C

L1507708-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1507708-03 06/30/22 17:11 • (DUP) R3809698-2 06/30/22 17:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.55	7.50	1	0.664		1

Sample Narrative:

OS: 7.55 at 24.7C

DUP: 7.5 at 24.9C

L1508861-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1508861-01 06/30/22 17:11 • (DUP) R3809698-3 06/30/22 17:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.29	6.26	1	0.478		1

Sample Narrative:

OS: 6.29 at 23.7C

DUP: 6.26 at 23.7C

Laboratory Control Sample (LCS)

(LCS) R3809698-1 06/30/22 17:11

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 23.3C

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

L1508523-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1508523-01 07/02/22 12:00 • (DUP) R3810294-2 07/02/22 12:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.75	7.79	1	0.515		1

Sample Narrative:

OS: 7.75 at 24.3C

DUP: 7.79 at 24.1C

L1508523-97 Original Sample (OS) • Duplicate (DUP)

(OS) L1508523-97 07/02/22 12:00 • (DUP) R3810294-3 07/02/22 12:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.36	7.37	1	0.136		1

Sample Narrative:

OS: 7.36 at 24C

DUP: 7.37 at 24.5C

Laboratory Control Sample (LCS)

(LCS) R3810294-1 07/02/22 12:00

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 23C

L1508523-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1508523-16 07/04/22 09:15 • (DUP) R3810608-2 07/04/22 09:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.83	7.86	1	0.382		1

Sample Narrative:

OS: 7.83 at 23.6C

DUP: 7.86 at 23.5C

L1508523-28 Original Sample (OS) • Duplicate (DUP)

(OS) L1508523-28 07/04/22 09:15 • (DUP) R3810608-3 07/04/22 09:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.35	7.37	1	0.272		1

Sample Narrative:

OS: 7.35 at 23.7C

DUP: 7.37 at 23.7C

Laboratory Control Sample (LCS)

(LCS) R3810608-1 07/04/22 09:15

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 24.2C

L1508602-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1508602-05 07/05/22 10:00 • (DUP) R3810703-2 07/05/22 10:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.20	8.20	1	0.000		1

Sample Narrative:

OS: 8.2 at 23.8C

DUP: 8.2 at 23.9C

L1509285-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1509285-11 07/05/22 10:00 • (DUP) R3810703-3 07/05/22 10:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.91	7.91	1	0.000		1

Sample Narrative:

OS: 7.91 at 23.7C

DUP: 7.91 at 23.8C

Laboratory Control Sample (LCS)

(LCS) R3810703-1 07/05/22 10:00

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 23.9C

Method Blank (MB)

(MB) R3810288-1 07/02/22 11:34

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

L1508518-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1508518-02 07/02/22 11:34 • (DUP) R3810288-3 07/02/22 11:34

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	10300	10700	1	4.30		20

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

L1508583-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1508583-10 07/02/22 11:34 • (DUP) R3810288-4 07/02/22 11:34

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	141	149	1	5.67		20

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

Laboratory Control Sample (LCS)

(LCS) R3810288-2 07/02/22 11:34

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	284	106	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3812929-1 07/09/22 23:18

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) R3812929-2 07/09/22 23:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	98.9	98.9	80.0-120	
Cadmium	100	94.6	94.6	80.0-120	
Copper	100	96.7	96.7	80.0-120	
Lead	100	94.6	94.6	80.0-120	
Nickel	100	94.7	94.7	80.0-120	
Selenium	100	95.9	95.9	80.0-120	
Silver	20.0	18.3	91.5	80.0-120	
Zinc	100	92.8	92.8	80.0-120	

L1508583-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1508583-05 07/09/22 23:23 • (MS) R3812929-5 07/09/22 23:31 • (MSD) R3812929-6 07/09/22 23:34

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	324	414	408	90.4	84.3	1	75.0-125			1.49	20
Cadmium	100	0.530	104	98.4	104	97.9	1	75.0-125			5.90	20
Copper	100	23.7	129	125	105	102	1	75.0-125			2.83	20
Lead	100	16.0	111	106	94.6	89.6	1	75.0-125			4.65	20
Nickel	100	18.4	113	107	94.5	88.6	1	75.0-125			5.39	20
Selenium	100	ND	105	98.8	105	98.8	1	75.0-125			6.28	20
Silver	20.0	ND	20.5	19.3	103	96.5	1	75.0-125			6.26	20
Zinc	100	49.6	134	129	84.1	79.5	1	75.0-125			3.55	20

Method Blank (MB)

(MB) R3815001-1 07/14/22 13:56

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

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

(LCS) R3815001-2 07/14/22 13:59 • (LCSD) R3815001-3 07/14/22 14:01

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	1.03	1.01	103	101	80.0-120			1.71	20

QUALITY CONTROL SUMMARY

L1508583-01,02,03,04,05,06,07,08,09,10

Method Blank (MB)

(MB) R3810315-1 07/02/22 14:10

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) R3810315-2 07/02/22 14:14

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

L1508583-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1508583-05 07/02/22 14:17 • (MS) R3810315-5 07/02/22 14:36 • (MSD) R3810315-6 07/02/22 14:40

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	21.2	118	111	96.9	89.7	5	75.0-125			6.33	20

Method Blank (MB)

(MB) R3808964-2 06/28/22 20:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*112*			*77.0-120*

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

(LCS) R3808964-1 06/28/22 18:20 • (LCSD) R3808964-3 06/29/22 02:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	4.54	5.77	82.5	105	72.0-127		J3	23.9	20
(S) a,a,a-Trifluorotoluene(FID)				*97.5*	*100*	*77.0-120*				

Method Blank (MB)

(MB) R3810172-2 06/28/22 18:32

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)	*106*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3810172-1 06/28/22 16:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.12	93.1	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*108*	*77.0-120*	

L1508583-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1508583-05 06/28/22 21:00 • (MS) R3810172-3 06/29/22 05:28 • (MSD) R3810172-4 06/29/22 05:51

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	0.143	2.14	3.26	36.3	56.7	1	10.0-151		J3	41.5	28
(S) a,a,a-Trifluorotoluene(FID)					*101*	*106*		*77.0-120*				

Method Blank (MB)

(MB) R3810036-3 06/29/22 07:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	0.00155	J	0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*108*			*75.0-131*
(S) 4-Bromofluorobenzene	*88.8*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*92.1*			*70.0-130*

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

(LCS) R3810036-1 06/29/22 06:16 • (LCSD) R3810036-2 06/29/22 06:36

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	0.116	0.112	92.8	89.6	70.0-123			3.51	20
Toluene	0.125	0.120	0.118	96.0	94.4	75.0-121			1.68	20
Ethylbenzene	0.125	0.119	0.117	95.2	93.6	74.0-126			1.69	20
Xylenes, Total	0.375	0.358	0.363	95.5	96.8	72.0-127			1.39	20
1,2,4-Trimethylbenzene	0.125	0.128	0.123	102	98.4	70.0-126			3.98	20
1,3,5-Trimethylbenzene	0.125	0.123	0.117	98.4	93.6	73.0-127			5.00	20
(S) Toluene-d8				*103*	*104*	*75.0-131*				
(S) 4-Bromofluorobenzene				*92.6*	*93.1*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*99.0*	*95.4*	*70.0-130*				

Method Blank (MB)

(MB) R3810039-2 06/30/22 05:07

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	*102*			*75.0-131*
(S) 4-Bromofluorobenzene	*99.6*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3810039-1 06/30/22 04:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.116	92.8	70.0-123	
Toluene	0.125	0.103	82.4	75.0-121	
Ethylbenzene	0.125	0.104	83.2	74.0-126	
Xylenes, Total	0.375	0.323	86.1	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.0974	77.9	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.100	80.0	73.0-127	
(S) Toluene-d8			*91.3*	*75.0-131*	
(S) 4-Bromofluorobenzene			*108*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*114*	*70.0-130*	

Method Blank (MB)

(MB) R3810717-1 07/04/22 22:23

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	0.370	J	0.274	4.00
(S) o-Terphenyl	*81.2*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3810717-2 07/04/22 22:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	35.4	70.8	50.0-150	
(S) o-Terphenyl			*61.0*	*18.0-148*	

L1508583-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1508583-09 07/05/22 02:33 • (MS) R3810717-3 07/05/22 02:46 • (MSD) R3810717-4 07/05/22 03:00

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	48.8	149	263	91.1	234	0.000	10	50.0-150	J5	J3 J6	97.1	20
(S) o-Terphenyl					*162*	*75.6*		*18.0-148*	J1			

Method Blank (MB)

(MB) R3810991-2 07/04/22 10:22

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	*92.4*			*23.0-120*
(S) Nitrobenzene-d5	*78.8*			*14.0-149*
(S) 2-Fluorobiphenyl	*73.5*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3810991-1 07/04/22 10:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0627	78.4	50.0-120	
Anthracene	0.0800	0.0630	78.8	50.0-126	
Benzo(a)anthracene	0.0800	0.0669	83.6	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0619	77.4	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0647	80.9	49.0-125	
Benzo(a)pyrene	0.0800	0.0622	77.8	42.0-120	
Chrysene	0.0800	0.0652	81.5	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0663	82.9	47.0-125	
Fluoranthene	0.0800	0.0665	83.1	49.0-129	
Fluorene	0.0800	0.0658	82.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0643	80.4	46.0-125	
1-Methylnaphthalene	0.0800	0.0652	81.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0608	76.0	50.0-120	
Naphthalene	0.0800	0.0637	79.6	50.0-120	
Pyrene	0.0800	0.0685	85.6	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3810991-1 07/04/22 10:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*92.8*	*23.0-120*	
(S) Nitrobenzene-d5			*81.8*	*14.0-149*	
(S) 2-Fluorobiphenyl			*74.7*	*34.0-125*	

L1508567-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1508567-03 07/04/22 10:40 • (MS) R3810991-3 07/04/22 10:58 • (MSD) R3810991-4 07/04/22 11:16

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0772	ND	0.0613	0.0626	79.4	81.9	1	14.0-127			2.10	27
Anthracene	0.0772	ND	0.0590	0.0617	76.4	80.8	1	10.0-145			4.47	30
Benzo(a)anthracene	0.0772	ND	0.0609	0.0641	78.9	83.9	1	10.0-139			5.12	30
Benzo(b)fluoranthene	0.0772	ND	0.0561	0.0613	72.7	80.2	1	10.0-140			8.86	36
Benzo(k)fluoranthene	0.0772	ND	0.0594	0.0622	76.9	81.4	1	10.0-137			4.61	31
Benzo(a)pyrene	0.0772	ND	0.0596	0.0637	77.2	83.4	1	10.0-141			6.65	31
Chrysene	0.0772	ND	0.0625	0.0647	81.0	84.7	1	10.0-145			3.46	30
Dibenz(a,h)anthracene	0.0772	ND	0.0604	0.0642	78.2	84.0	1	10.0-132			6.10	31
Fluoranthene	0.0772	ND	0.0628	0.0657	81.3	86.0	1	10.0-153			4.51	33
Fluorene	0.0772	ND	0.0636	0.0637	82.4	83.4	1	11.0-130			0.157	29
Indeno(1,2,3-cd)pyrene	0.0772	ND	0.0563	0.0613	72.9	80.2	1	10.0-137			8.50	32
1-Methylnaphthalene	0.0772	ND	0.0627	0.0645	81.2	84.4	1	10.0-142			2.83	28
2-Methylnaphthalene	0.0772	ND	0.0584	0.0602	75.6	78.8	1	10.0-137			3.04	28
Naphthalene	0.0772	ND	0.0615	0.0639	79.7	83.6	1	10.0-135			3.83	27
Pyrene	0.0772	ND	0.0650	0.0678	84.2	88.7	1	10.0-148			4.22	35
(S) p-Terphenyl-d14					*96.3*	*98.5*		*23.0-120*				
(S) Nitrobenzene-d5					*83.9*	*80.9*		*14.0-149*				
(S) 2-Fluorobiphenyl					*79.0*	*79.4*		*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
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.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
T8	Sample(s) received past/too close to holding time expiration.

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.

Company Name/Address:	Billing Information:
Caerus Oil and Gas **143 Diamond Ave.** **Parachute, CO 81635**	**Caerus Oil and Gas** **143 Diamond Ave.** **Parachute, CO 81635**
Report to: **Blair Rollins**	Email To: brollins@caerusoilandgas.com
Project Description: OIL SHALE BACKGROUND	City/State Collected: CO
Phone: **(970) 640-6919** Fax:	Client Project #	Lab Project #
Collected by (print): Ron Johnson CHRIS MACE	Site/Facility ID #	P.O. #
Collected by (signature): Immediately Packed on Ice N ___ Y ✓	***Rush?*** (Lab MUST Be Notified) ___ Same Day .....200% ___ Next Day .....100% ___ Two Day .....50% ___ Three Day 25%	Date Results Needed Email? ___No ✓Yes FAX? ✓No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L1508583
L-221
Table
Acctnum:
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Table 915 GRO/DRO/ORO	Table 915 Metals	Table 915 PAH's	Table 915 VOCs	Table 915 pH, SPCON, SAR	HWS Boron	Rem./Contaminant	Sample # (lab only)
20220622-OIL SHALE BG-BGS	GRAB	SS	5-7'	20220622	0850	2	X	X	X	X	X	X		-01
			10-11'		0910	2								-02
			11-13'		0925	2								-03
			16-17'		0950	2								-04
			20-21'		1010	2								-05
			25-27'		1050	2								-06
			30-31' Boojum		1145	2								-07
			35-37' Snallygaster		1225	2								-08
			40-42'		1300	2								-09
			45-47'		1345	2								-10

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____

Remarks:

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	2022.06.23	1010	
Relinquished by : (Signature)	Date: 6/23/22	Time: 1500	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) M. Wilkerson

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 2.7 °C Bottles Received: 20

Date: 6/24/22 Time: 900

Condition: OK (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

FedEx # 7755 8084 9135