April 3, 2023

Blair Rollins
Environmental Specialist
Caerus Oil & Gas LLC (Operator #: 10456)
brollins@caerusoilandgas.com

Report of Work Completed – Tank Release

COGCC Location Name (ID)	KEINATH-68S96W/4NWNE (334152)
Operator Location Name	OB4
COGCC Remediation Project	28274
Legal Description	NWNE Sec. 4 T8S-R96W
Coordinates (Lat/Long)	39.384944 / -108.111685
County	Garfield County, Colorado

Mr. Rollins,

Confluence Compliance Companies, LLC (Confluence) prepared this Report of Work Completed (ROWC) for Caerus Oil & Gas LLC (Caerus) to document recent site investigation activities associated with a release of produced water at the OB4 (Location). The Location is 5.5 miles southwest of Parachute, Colorado in Garfield County as illustrated in the attached Topographic Location Map. Additional information on the Location and associated release is provided in the title block above, attached Site Diagram, and laboratory analytical reports. This ROWC provides background on the Location, methods used to complete the remedial investigation, results of the investigation, and recommendations for how to proceed with this information.

Background

During tank and secondary containment cleaning operations conducted at the Location on October 25, 2022, personnel identified a small amount of stained gravel outside of the south wall of the secondary containment. The spill was reported via Colorado Oil and Gas Conservation Commission (COGCC) Form 19 Document 403208348 to open Spill/Release Point ID 483139. COGCC Form 27 Document 403302474 was later submitted to open Remediation Project 28274.

Methodology

On February 16, 2023, Confluence conducted initial investigation activities. Prior to sampling activities, the tanks and secondary containment liner were removed. Nine locations within the former tank battery footprint were characterized using visual and olfactory observations and field screened with a photoionization detector (PID). Four soil samples were collected from the former containment area: one from the middle of the containment footprint, one from the northern portion of the containment footprint, and two from the southern portion where potential impacts were initially observed during cleaning operations.

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

Results

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

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

Lithology and Hydrogeology

Lithology at the Location is characterized as sandy clay. Groundwater is expected to flow west to Little Alkali Creek and ultimately the Colorado River, located 0.39 miles northwest of the Location. No groundwater was observed during sampling activities. Division of Water Resources well permit 192819, located approximately 0.4 miles northwest of the Location, lists static depth to groundwater at 6 feet bgs. The well sits approximately 110 feet lower in elevation than the Location. Based on this information, it is estimated that depth to groundwater at the Location is greater than 100 feet bgs.

Investigation Results

Field screening results did not indicate soil impacts. No hydrocarbon odor or staining were noted, and PID measurements ranged from 0.1 to 1.9 parts per million (ppm). Analytical results of the soil samples indicate compliance with COGCC Table 915-1 Residential Soil Screening Levels except for pH and arsenic. A pH exceedance of 8.34 was observed, and arsenic exceedances range from 2.18 to 3.15 milligrams per kilogram (mg/kg).

Analysis and Recommendations

Based on the approximate depth to groundwater being greater than 100 feet bgs, Confluence recommends that Caerus request to compare analytical results for site investigation to COGCC Table 915-1 Residential Soil Screening Levels as no reasonable pathway to groundwater appears to exist

Although levels of pH and arsenic elevated above COGCC Table 915-1 Residential Soil Screening Levels remain in the release area, background data collected from the nearby OL34 (COGCC Location ID 334075) located 0.63 miles northeast of the location indicate native levels of these constituents elevated above allowable limits. According to the United States Geologic Survey (USGS) [1] and National Resource Conservation Service (NRCS) [2], both the release investigation area and OL34 are located in the Potts loam soil classification. Due to the proximity and identical soil taxonomy, it is reasonable to conclude that the background samples collected near the OL34 well pad are representative of soil conditions at the Location. Laboratory results of background soil samples collected from OL34 indicate a native pH result of 8.67 and native arsenic result of 5.50 mg/kg. Based on COGCC Table 915-1 Footnote 1, Confluence recommends that Caerus request alternative allowable limits for pH and arsenic of 8.67 and 5.50 mg/kg, respectively.

Assuming the proposed alternative allowable limits and soil screening levels are approved, all constituents of concern are within COGCC Table 915-1 Residential Soil Screening Levels or relevant alternative allowable limit. For this reason, Confluence recommends that Caerus request closure with a no further action (NFA) determination.

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

Regards,

Andrew Smith
Project Manager
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andy.smith@confluence-cc.com

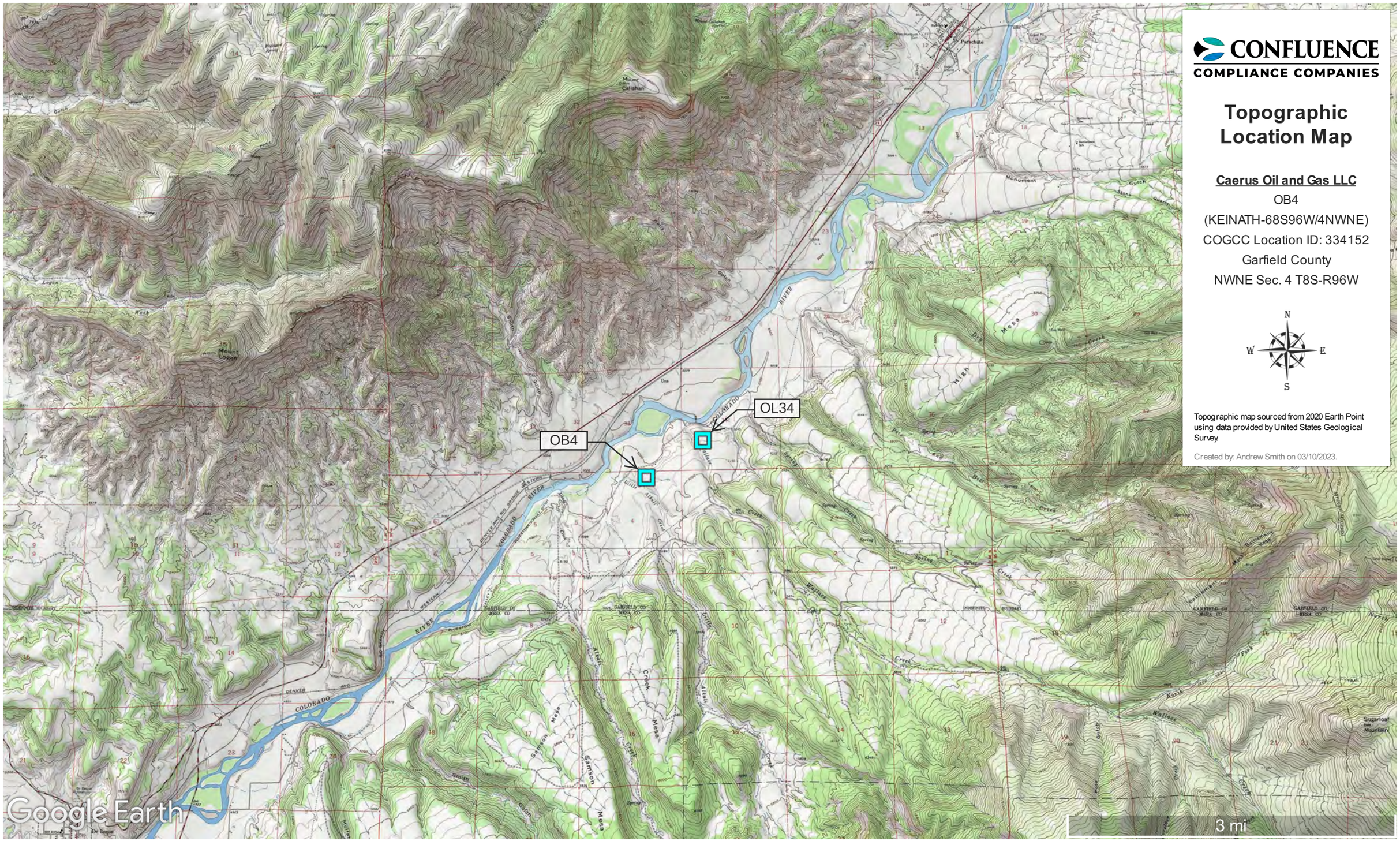
Chris McKisson
Managing Partner
(720) 490-6758
chris.mckisson@confluence-cc.com

Attachments

- Topographic Location Map
- Site Diagram – Release Investigation
- Laboratory Results Summary Table
- Laboratory Analytical Reports

References

1. USGS Staff, United States Geological Survey, United States Department of Interior. National Geologic Map Database. Available online at the following link: https://ngmdb.usgs.gov/Prodesc/proddesc_68589.htm. Accessed [3/21/2023].
2. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: http://websoilsurvey.sc.egov.usda.gov/. Accessed [3/21/2023].



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COMPLIANCE COMPANIES

Topographic Location Map

Caerus Oil and Gas LLC

OB4

(KEINATH-68S96W/4NWNE)

COGCC Location ID: 334152

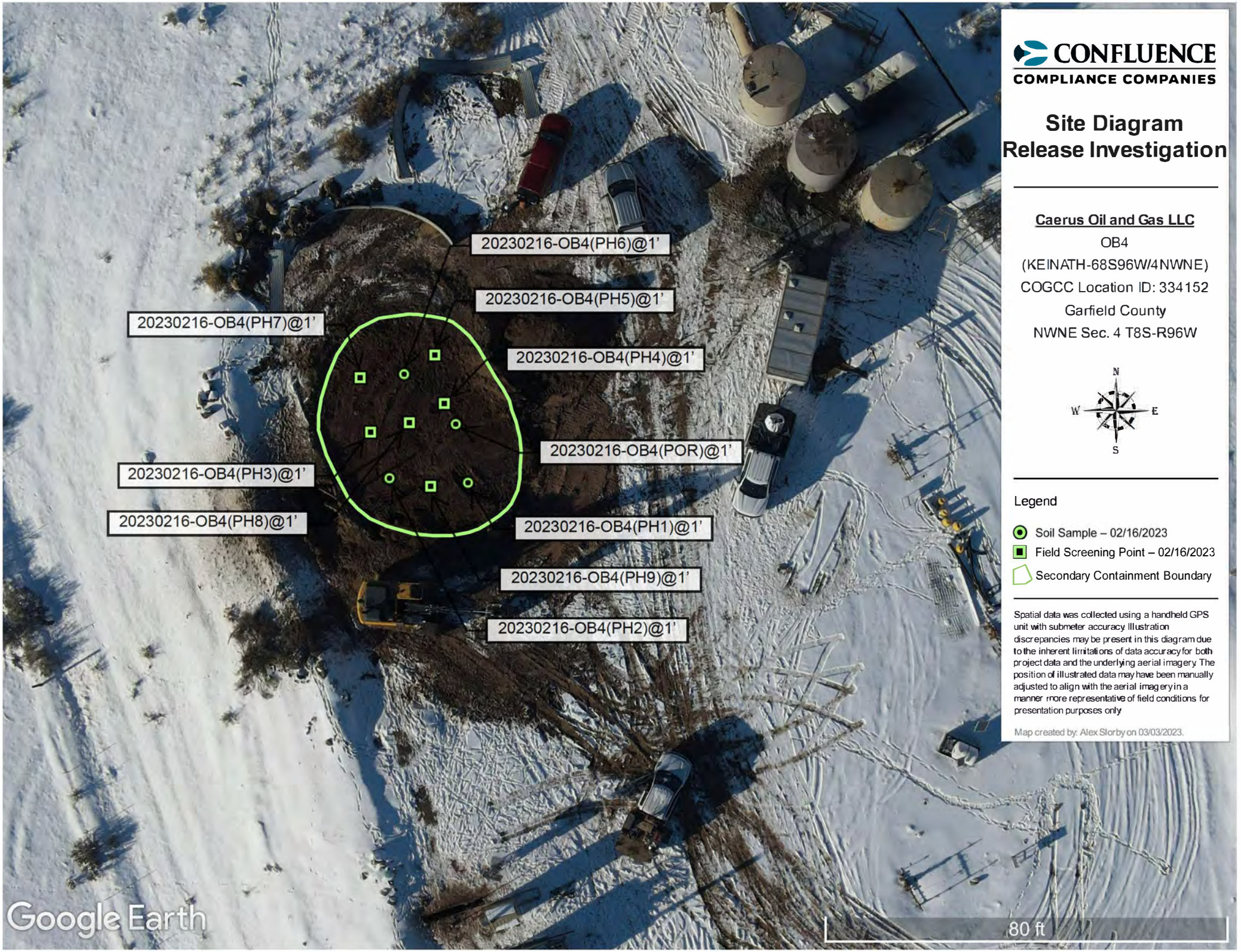
Garfield County

NWNE Sec. 4 T8S-R96W

N
W E
S

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

Created by: Andrew Smith on 03/10/2023.



CONFLUENCE
COMPLIANCE COMPANIES

Site Diagram
Release Investigation

Caerus Oil and Gas LLC
OB4
(KEINATH-68S96W/4NWNE)
COGCC Location ID: 334152
Garfield County
NWNE Sec. 4 T8S-R96W

N
W E
S

Legend

- Soil Sample – 02/16/2023
- Field Screening Point – 02/16/2023
- Secondary Containment Boundary

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

Map created by: Alex Slorby on 03/03/2023.

CONFLUENCE

Laboratory Results Summary Table - Soil
OB4 Tank Battery

3/10/2023

Soil Screening and Remediation Limits					Organic Compounds (mg/kg [ppm])																										
COGCC Table 915-1 Residential -->				NA	500	NA	NA	NA	1.2	490	5.8	58	30	27	360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	18	24	2	180
Sample Date	Solid/Soil Source (Equipment) (Vault/Sump, Separator, Tank Battery, Dump Line, Pit, Cuttings, Background, etc.)	Depth - Z (feet) (NEGATIVE VALUE) below ground surface (bgs)	Sample ID	PID (ppm)	TPH (total volatile and extractable petroleum hydrocarbons) (GRO+DRO+ORO)	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C28) High Fraction	TPH-ORO (C28-C36) High Fraction	Benzene	Toluene	Ethylbenzene	Xylenes - total (sum of o-, m-, p- isomers)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Acenaphthene	Anthracene	Benzo(A)anthracene	Benzo(A)pyrene	Benzo(B)fluoranthene	Benzo(K)fluoranthene	Chrysene	Dibenz(A,H)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3,C,D)pyrene	1- Methylnaphthalene	2- Methylnaphthalene	Naphthalene	Pyrene
2/16/2023	Tank Battery	-1	**20230216-OB4(PH1)@1'**	**0.5**	**0.396**	**0.396**	*<4.00*	*<4.00*	**0.000850**	**0.0155**	**0.00173**	**0.0364**	*<0.00500*	**0.00232**	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.0200*	*<0.0200*	*<0.0200*	*<0.00600*
2/16/2023	Tank Battery	-1	**20230216-OB4(PH2)@1'**	**0.2**	**0.338**	**0.338**	*<4.00*	*<4.00*	**0.00173**	**0.0315**	*<0.00250*	**0.0458**	**0.00228**	**0.00545**	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.0200*	*<0.0200*	*<0.0200*	*<0.00600*
2/16/2023	Tank Battery	-1	**20230216-OB4(PH6)@1'**	**1**	**3.65**	**0.433**	**1.68**	**1.54**	*<0.00100*	*<0.00500*	*<0.00250*	**0.0170**	*<0.00500*	**0.00458**	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.0200*	*<0.0200*	*<0.0200*	*<0.00600*
2/16/2023	Tank Battery	-1	**20230216-OB4(POR)@1'**	**1.9**	**0.360**	**0.360**	*<4.00*	*<4.00*	*<0.00100*	*<0.00500*	**0.00178**	**0.00733**	*<0.00500*	*<0.00500*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.0200*	*<0.0200*	*<0.0200*	*<0.00600*
10/7/2021	Background	-0.5	**20211007-OL3A(BG-S)@.5'**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
10/7/2021	Background	-1	**20211007-OL3A(BG-W)@1'**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
10/7/2021	Background	-1.5	**20211007-OL3A(BG-N)@1.5'**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*

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

Confluence Compliance Companies, LLC
info@confluence-cc.com

CONFLUENCE

Laboratory Results Summary Table - Soil
OB4 Tank Battery

3/10/2023

Soil Screening and Remediation Limits				Soil Suitability for Reclamation				Metals (mg/kg [ppm])									
			COGCC Table 915-1 Residential -->	4	6	6-8.3	2	0.68	15000	71	0.3	3100	400	1500	390	390	23000
Sample Date	Solid/Soil Source (Equipment) (Vault/Sump, Separator, Tank Battery, Dump Line, Pit, Cuttings, Background, etc.)	Depth - Z (feet) (NEGATIVE VALUE) below ground surface (bgs)	Sample ID	EC (Specific Conductance) (millimhos/centimeter) (by saturated paste method)	SAR (Sodium Adsorption Ratio) (calculation) (by saturated paste method)	pH (pH Units) (by saturated paste method)	Boron - Hot Water Soluble (mg/L)	Arsenic	Barium	Cadmium (mg/kg)	Chromium (VI)	Copper	Lead	Nickel	Selenium	Silver	Zinc
2/16/2023	Tank Battery	-1	**20230216-OB4(PH1)@1'**	**1.890**	**5.05**	**8.16**	**0.359**	**3.11**	**177**	**0.222**	*<1.00*	**9.10**	**7.96**	**9.32**	**0.321**	*<0.500*	**27.5**
2/16/2023	Tank Battery	-1	**20230216-OB4(PH2)@1'**	**0.459**	**1.92**	**8.34**	**0.326**	**2.18**	**114**	**0.156**	*<1.00*	**6.70**	**6.01**	**6.17**	**0.193**	*<0.500*	**17.4**
2/16/2023	Tank Battery	-1	**20230216-OB4(PH6)@1'**	**1.360**	**3.24**	**8.18**	**0.416**	**2.99**	**636**	**0.207**	*<1.00*	**9.58**	**8.27**	**9.15**	**0.305**	*<0.500*	**25.2**
2/16/2023	Tank Battery	-1	**20230216-OB4(POR)@1'**	**2.320**	**5.48**	**8.08**	**0.481**	**3.15**	**156**	**0.145**	*<1.00*	**7.58**	**6.00**	**8.01**	**0.327**	*<0.500*	**24.2**
10/7/2021	Background	-0.5	**20211007-OL3A(BG-S)@.5'**	**0.341**	**0.0969**	**8.21**	**0.345**	**5.50**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
10/7/2021	Background	-1	**20211007-OL3A(BG-W)@1'**	**0.301**	**0.460**	**8.46**	**0.692**	**4.42**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
10/7/2021	Background	-1.5	**20211007-OL3A(BG-N)@1.5'**	**0.342**	**2.37**	**8.67**	**0.429**	**3.04**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*

Confluence Compliance Companies, LLC
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Orange Fill = Exceedance
Dark Gray Italics = Below Reporting Detection Limit (RDL)
"NA" = Not Analyzed
mg/kg = milligrams per kilogram / parts per million

ANALYTICAL REPORT

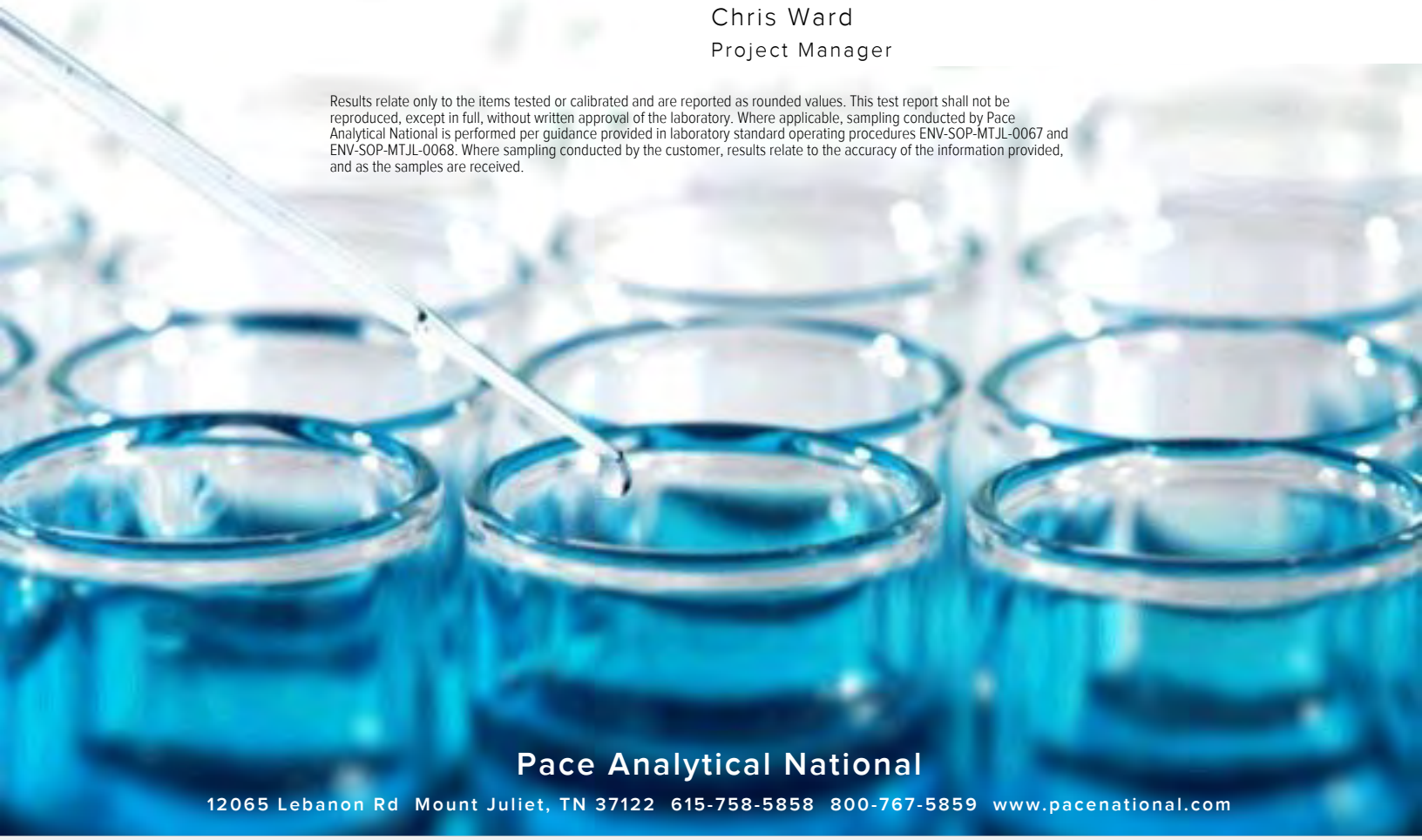
March 01, 2023

Caerus Oil and Gas

Sample Delivery Group:	L1587929
Samples Received:	02/21/2023
Project Number:	OB4 TANK RELEASE
Description:	OB4 Tank Release
Site:	OB4
Report To:	Blair R., Jake J., Brett M. 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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SAMPLE SUMMARY

20230216-OB4(POR)@1' L1587929-01 Solid

Collected by: Alex Slorby
Collected date/time: 02/16/23 14:05
Received date/time: 02/21/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2010596	1	02/23/23 11:07	02/23/23 11:07	ABL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2011268	1	02/22/23 22:33	02/27/23 11:14	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2011036	1	02/22/23 17:00	02/22/23 19:14	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2011113	1	02/22/23 17:35	02/23/23 09:10	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2010529	1	02/22/23 11:26	02/26/23 19:42	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2011479	5	02/23/23 10:23	02/23/23 14:44	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2011684	1	02/22/23 13:46	02/23/23 14:51	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2012636	1	02/22/23 13:46	02/24/23 22:03	BAM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2013276	1	02/28/23 12:56	02/28/23 18:28	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2012110	1	02/24/23 05:48	02/24/23 17:18	AMM	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

Sample Delivery Group (SDG) Narrative

Analysis was performed from an improper container for the following samples.

Lab Sample ID	Project Sample ID	Method
L1587929-01	20230216-OB4(POR)@1'	8015M

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.48		1	02/23/2023 11:07	WG2010596

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	02/27/2023 11:14	WG2011268

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.08	T8	1	02/22/2023 19:14	WG2011036

Sample Narrative:
L1587929-01 WG2011036: 8.08 at 21.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2320		10.0	1	02/23/2023 09:10	WG2011113

Sample Narrative:
L1587929-01 WG2011113: at 25C

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.481		0.0167	0.200	1	02/26/2023 19:42	WG2010529

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.15		0.100	1.00	5	02/23/2023 14:44	WG2011479
Barium	156		0.152	2.50	5	02/23/2023 14:44	WG2011479
Cadmium	0.145	J	0.0855	1.00	5	02/23/2023 14:44	WG2011479
Copper	7.58		0.132	5.00	5	02/23/2023 14:44	WG2011479
Lead	6.00		0.0990	2.00	5	02/23/2023 14:44	WG2011479
Nickel	8.01		0.197	2.50	5	02/23/2023 14:44	WG2011479
Selenium	0.327	J	0.180	2.50	5	02/23/2023 14:44	WG2011479
Silver	U		0.0865	0.500	5	02/23/2023 14:44	WG2011479
Zinc	24.2	J	0.740	25.0	5	02/23/2023 14:44	WG2011479

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.360		0.0217	0.100	1	02/23/2023 14:51	WG2011684
(S) a,a,a-Trifluorotoluene(FID)	*99.9*			*77.0-120*		*02/23/2023 14:51*	WG2011684

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	02/24/2023 22:03	WG2012636
Toluene	U		0.00130	0.00500	1	02/24/2023 22:03	WG2012636
Ethylbenzene	0.00178	J	0.000737	0.00250	1	02/24/2023 22:03	WG2012636
Xylenes, Total	0.00733		0.000880	0.00650	1	02/24/2023 22:03	WG2012636
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	02/24/2023 22:03	WG2012636
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	02/24/2023 22:03	WG2012636
(S) Toluene-d8	*103*			*75.0-131*		*02/24/2023 22:03*	WG2012636
(S) 4-Bromofluorobenzene	*93.1*			*67.0-138*		*02/24/2023 22:03*	WG2012636
(S) 1,2-Dichloroethane-d4	*82.3*			*70.0-130*		*02/24/2023 22:03*	WG2012636

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.61	4.00	1	02/28/2023 18:28	WG2013276
C28-C36 Motor Oil Range	U		0.274	4.00	1	02/28/2023 18:28	WG2013276
(S) o-Terphenyl	*46.7*			*18.0-148*		*02/28/2023 18:28*	WG2013276

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	02/24/2023 17:18	WG2012110
Anthracene	U		0.00230	0.00600	1	02/24/2023 17:18	WG2012110
Benzo(a)anthracene	U		0.00173	0.00600	1	02/24/2023 17:18	WG2012110
Benzo(b)fluoranthene	U		0.00153	0.00600	1	02/24/2023 17:18	WG2012110
Benzo(k)fluoranthene	U		0.00215	0.00600	1	02/24/2023 17:18	WG2012110
Benzo(a)pyrene	U		0.00179	0.00600	1	02/24/2023 17:18	WG2012110
Chrysene	U		0.00232	0.00600	1	02/24/2023 17:18	WG2012110
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	02/24/2023 17:18	WG2012110
Fluoranthene	U		0.00227	0.00600	1	02/24/2023 17:18	WG2012110
Fluorene	U		0.00205	0.00600	1	02/24/2023 17:18	WG2012110
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	02/24/2023 17:18	WG2012110
1-Methylnaphthalene	U		0.00449	0.0200	1	02/24/2023 17:18	WG2012110
2-Methylnaphthalene	U		0.00427	0.0200	1	02/24/2023 17:18	WG2012110
Naphthalene	U		0.00408	0.0200	1	02/24/2023 17:18	WG2012110
Pyrene	U		0.00200	0.00600	1	02/24/2023 17:18	WG2012110
(S) p-Terphenyl-d14	*69.4*			*23.0-120*		*02/24/2023 17:18*	WG2012110
(S) Nitrobenzene-d5	*64.2*			*14.0-149*		*02/24/2023 17:18*	WG2012110
(S) 2-Fluorobiphenyl	*66.9*			*34.0-125*		*02/24/2023 17:18*	WG2012110

Method Blank (MB)

(MB) R3895293-1 02/27/23 08:01

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

L1587810-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1587810-02 02/27/23 10:07 • (DUP) R3895293-8 02/27/23 10:12

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

L1588235-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1588235-01 02/27/23 11:20 • (DUP) R3895293-9 02/27/23 11:25

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	0.575	U	1	200	P1	20

Laboratory Control Sample (LCS)

(LCS) R3895293-2 02/27/23 08:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	11.5	115	80.0-120	

L1587611-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1587611-01 02/27/23 08:57 • (MS) R3895293-4 02/27/23 09:10 • (MSD) R3895293-5 02/27/23 09:15

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	20.3	20.9	101	104	1	75.0-125			2.91	20

L1587611-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1587611-01 02/27/23 08:57 • (MS) R3895293-7 02/27/23 09:20

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	638	U	441	69.1	50	75.0-125	J6

L1587636-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1587636-01 02/22/23 19:14 • (DUP) R3893788-2 02/22/23 19:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	3.61	3.63	1	0.552		1

Sample Narrative:

OS: 3.61 at 22.7C

DUP: 3.63 at 23.2C

L1587921-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1587921-01 02/22/23 19:14 • (DUP) R3893788-3 02/22/23 19:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	7.92	7.94	1	0.252		1

Sample Narrative:

OS: 7.92 at 22.7C

DUP: 7.94 at 22.4C

Laboratory Control Sample (LCS)

(LCS) R3893788-1 02/22/23 19:14

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.94	99.4	99.0-101	

Sample Narrative:

LCS: 9.94 at 22.3C

Method Blank (MB)

(MB) R3893936-1 02/23/23 09:10

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

Sample Narrative:
BLANK: at 25C

L1587945-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1587945-02 02/23/23 09:10 • (DUP) R3893936-3 02/23/23 09:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	3600	3560	1	1.12		20

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

L1588114-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1588114-02 02/23/23 09:10 • (DUP) R3893936-4 02/23/23 09:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	169	170	1	0.710		20

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

Laboratory Control Sample (LCS)

(LCS) R3893936-2 02/23/23 09:10

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1200	107	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3895057-1 02/26/23 19:26

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) R3895057-2 02/26/23 19:28 • (LCSD) R3895057-3 02/26/23 19:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.05	1.04	105	104	80.0-120			1.03	20

QUALITY CONTROL SUMMARY

L1587929-01

Method Blank (MB)

(MB) R3894247-1 02/23/23 14:21

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

Laboratory Control Sample (LCS)

(LCS) R3894247-2 02/23/23 14:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	93.9	93.9	80.0-120	
Barium	100	91.6	91.6	80.0-120	
Cadmium	100	96.0	96.0	80.0-120	
Copper	100	93.4	93.4	80.0-120	
Lead	100	94.3	94.3	80.0-120	
Nickel	100	93.7	93.7	80.0-120	
Selenium	100	104	104	80.0-120	
Silver	20.0	18.7	93.5	80.0-120	
Zinc	100	90.6	90.6	80.0-120	

L1588277-28 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1588277-28 02/23/23 14:28 • (MS) R3894247-5 02/23/23 14:37 • (MSD) R3894247-6 02/23/23 14:41

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	11.0	92.5	81.9	81.5	70.8	5	75.0-125		J6	12.3	20
Barium	100	187	204	210	16.4	22.5	5	75.0-125	J6	J6	2.97	20
Cadmium	100	0.472	89.7	80.2	89.2	79.7	5	75.0-125			11.2	20
Copper	100	17.4	95.9	86.5	78.5	69.0	5	75.0-125		J6	10.3	20
Lead	100	495	455	450	0.000	0.000	5	75.0-125	V	V	1.14	20
Nickel	100	13.2	94.0	85.8	80.8	72.5	5	75.0-125		J6	9.14	20
Selenium	100	0.394	93.5	79.5	93.1	79.1	5	75.0-125			16.3	20
Silver	20.0	U	17.3	15.3	86.3	76.5	5	75.0-125			12.0	20
Zinc	100	381	345	363	0.000	0.000	5	75.0-125	J6	J6	5.04	20

Method Blank (MB)

(MB) R3894394-2 02/23/23 11:50

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

Laboratory Control Sample (LCS)

(LCS) R3894394-1 02/23/23 11:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.04	91.6	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*107*	*77.0-120*	

Method Blank (MB)

(MB) R3895281-3 02/24/23 20:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*103*			*75.0-131*
(S) 4-Bromofluorobenzene	*88.3*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*78.6*			*70.0-130*

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

(LCS) R3895281-1 02/24/23 19:21 • (LCSD) R3895281-2 02/24/23 19:40

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	0.126	0.116	101	92.8	70.0-123			8.26	20
Toluene	0.125	0.127	0.124	102	99.2	75.0-121			2.39	20
Ethylbenzene	0.125	0.119	0.112	95.2	89.6	74.0-126			6.06	20
Xylenes, Total	0.375	0.360	0.362	96.0	96.5	72.0-127			0.554	20
1,2,4-Trimethylbenzene	0.125	0.132	0.132	106	106	70.0-126			0.000	20
1,3,5-Trimethylbenzene	0.125	0.123	0.124	98.4	99.2	73.0-127			0.810	20
(S) Toluene-d8				*94.2*	*98.2*	*75.0-131*				
(S) 4-Bromofluorobenzene				*91.0*	*92.8*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*91.4*	*88.0*	*70.0-130*				

Method Blank (MB)

(MB) R3895931-2 02/28/23 18:15

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*89.0*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3895931-1 02/28/23 18:02

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	39.2	78.4	50.0-150	
(S) o-Terphenyl			*93.4*	*18.0-148*	

Method Blank (MB)

(MB) R3895141-2 02/24/23 11:01

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	*74.1*			*23.0-120*
(S) Nitrobenzene-d5	*72.1*			*14.0-149*
(S) 2-Fluorobiphenyl	*74.8*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3895141-1 02/24/23 10:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0628	78.5	50.0-120	
Anthracene	0.0800	0.0624	78.0	50.0-126	
Benzo(a)anthracene	0.0800	0.0678	84.8	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0633	79.1	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0632	79.0	49.0-125	
Benzo(a)pyrene	0.0800	0.0429	53.6	42.0-120	
Chrysene	0.0800	0.0671	83.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0614	76.8	47.0-125	
Fluoranthene	0.0800	0.0689	86.1	49.0-129	
Fluorene	0.0800	0.0713	89.1	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0650	81.3	46.0-125	
1-Methylnaphthalene	0.0800	0.0618	77.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0665	83.1	50.0-120	
Naphthalene	0.0800	0.0619	77.4	50.0-120	
Pyrene	0.0800	0.0643	80.4	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3895141-1 02/24/23 10:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*76.4*	*23.0-120*	
(S) Nitrobenzene-d5			*79.0*	*14.0-149*	
(S) 2-Fluorobiphenyl			*80.0*	*34.0-125*	

L1586957-27 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1586957-27 02/24/23 12:00 • (MS) R3895141-3 02/24/23 12:20 • (MSD) R3895141-4 02/24/23 12:40

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 %
Acenaphthene	0.0776	U	0.0472	0.0454	60.8	58.5	1	14.0-127			3.89	27
Anthracene	0.0776	U	0.0502	0.0493	64.7	63.5	1	10.0-145			1.81	30
Benzo(a)anthracene	0.0776	U	0.0548	0.0536	70.6	69.1	1	10.0-139			2.21	30
Benzo(b)fluoranthene	0.0776	U	0.0507	0.0512	65.3	66.0	1	10.0-140			0.981	36
Benzo(k)fluoranthene	0.0776	U	0.0512	0.0517	66.0	66.6	1	10.0-137			0.972	31
Benzo(a)pyrene	0.0776	U	0.0563	0.0559	72.6	72.0	1	10.0-141			0.713	31
Chrysene	0.0776	U	0.0573	0.0561	73.8	72.3	1	10.0-145			2.12	30
Dibenz(a,h)anthracene	0.0776	U	0.0514	0.0512	66.2	66.0	1	10.0-132			0.390	31
Fluoranthene	0.0776	U	0.0516	0.0509	66.5	65.6	1	10.0-153			1.37	33
Fluorene	0.0776	U	0.0551	0.0543	71.0	70.0	1	11.0-130			1.46	29
Indeno(1,2,3-cd)pyrene	0.0776	U	0.0558	0.0527	71.9	67.9	1	10.0-137			5.71	32
1-Methylnaphthalene	0.0776	0.00967	0.0576	0.0599	61.8	64.7	1	10.0-142			3.91	28
2-Methylnaphthalene	0.0776	0.0259	0.0804	0.0888	70.2	81.1	1	10.0-137			9.93	28
Naphthalene	0.0776	U	0.0508	0.0474	65.5	61.1	1	10.0-135			6.92	27
Pyrene	0.0776	U	0.0507	0.0502	65.3	64.7	1	10.0-148			0.991	35
(S) p-Terphenyl-d14					*65.9*	*66.9*		*23.0-120*				
(S) Nitrobenzene-d5					*74.4*	*85.4*		*14.0-149*				
(S) 2-Fluorobiphenyl					*66.9*	*68.5*		*34.0-125*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

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

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

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

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

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

L1587829

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: OB4 Tank Release	State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET

Container Preservative Type **

Lab Project Manager:

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

Phone: / Email:	Site/Facility ID #: OB4	Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Alex Slorby	Purchase Order # : / Quote #:	DW PWS ID #: / DW Location Code:
Collected By (signature): Alex Slorby	Turnaround Date Required: Standard Turnaround	Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [ ] No Analysis: _____

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Table 915-1 VOCs	TPH (ORO, GRO, DRO)	Table 915-1 Metal's	Table 915-1 PAHs	pH, EC, SAR	Boron (Hot Water Soluble Soil)	CR6IC				Lab Sample # / Comments:
20230216-OB4(POR)@1'	SL	G	2/16/2023	1405				3	G/P	X	X	X	X	X	X	X				-01

Lab Profile/Line:

Lab Sample Receipt Checklist:

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

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: (Wet) Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: 2.5 oC
Comments:

H168

Relinquished by/Company: (Signature) Alex Slorby	Date/Time: 2/20/23 1100	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time: 2/21/23 1300	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time: 2/21/23 0845

Acctnum:
Template:
Prelogin:
PM:
PB:

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

Non Conformance(s): YES / NO

Page: _____ of: _____

ANALYTICAL REPORT

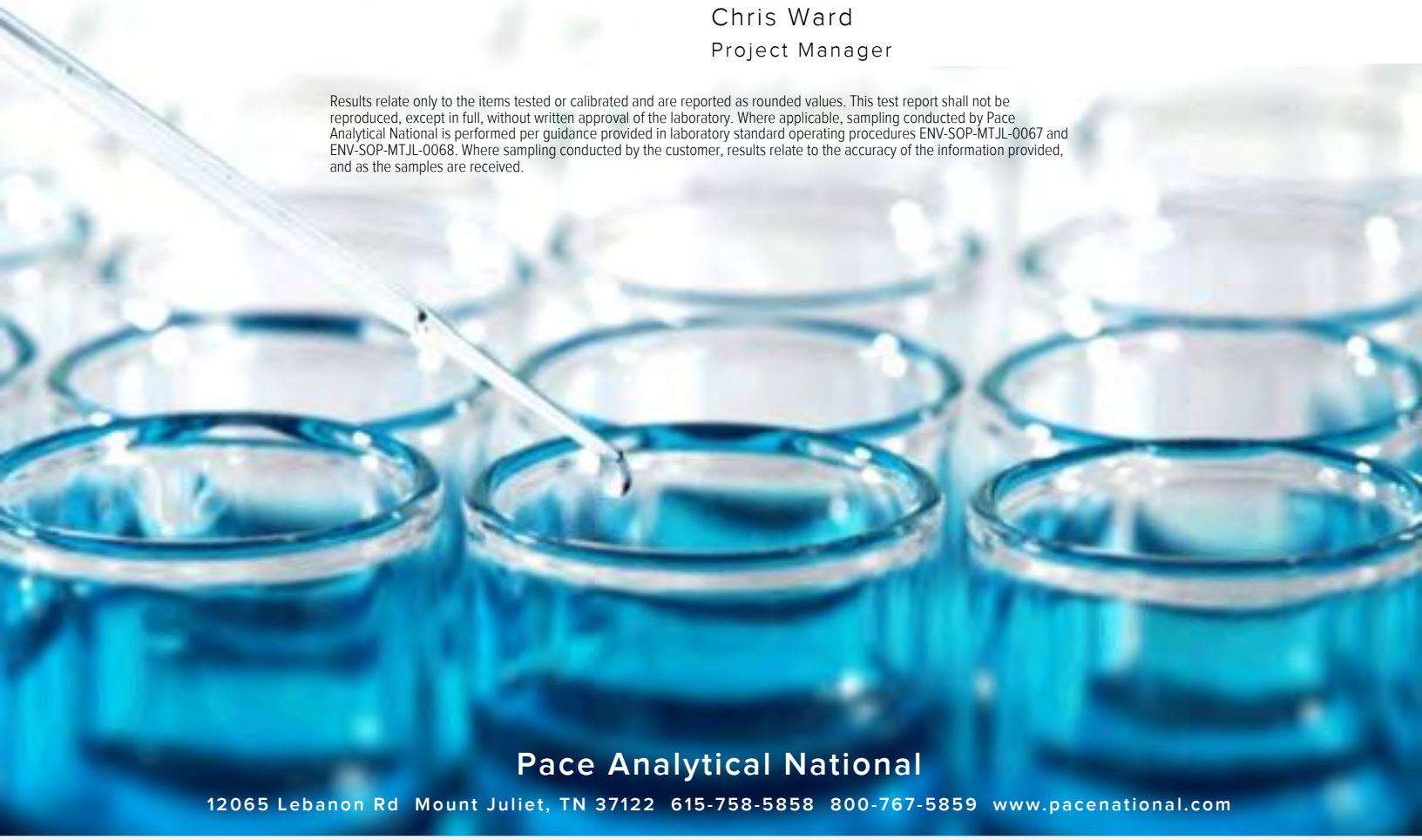
February 28, 2023

Caerus Oil and Gas

Sample Delivery Group:	L1587927
Samples Received:	02/21/2023
Project Number:	OB4 TANK RELEASE
Description:	OB4 Tank Release
Site:	OB4
Report To:	Blair R., Jake J., Brett M. 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward
Project Manager



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

TABLE OF CONTENTS

20230216-OB4(PH1)@1' L1587927-01 Solid

Collected by: Alex Slorby | Collected date/time: 02/16/23 15:15 | Received date/time: 02/21/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2010596	1	02/23/23 10:54	02/23/23 10:54	ABL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2011268	1	02/22/23 22:33	02/27/23 10:59	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2011036	1	02/22/23 17:00	02/22/23 19:14	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2011108	1	02/22/23 17:10	02/23/23 11:50	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2010529	1	02/22/23 11:26	02/26/23 19:34	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2011133	5	02/22/23 17:34	02/22/23 20:40	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2011684	1	02/22/23 13:46	02/23/23 13:43	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2012619	1	02/22/23 13:46	02/25/23 02:50	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2012119	1	02/24/23 17:17	02/24/23 23:26	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2012109	1	02/24/23 05:57	02/24/23 16:14	JNJ	Mt. Juliet, TN

20230216-OB4(PH2)@1' L1587927-02 Solid

Collected by: Alex Slorby | Collected date/time: 02/16/23 15:25 | Received date/time: 02/21/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2010596	1	02/23/23 11:02	02/23/23 11:02	ABL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2011268	1	02/22/23 22:33	02/27/23 11:04	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2011036	1	02/22/23 17:00	02/22/23 19:14	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2011113	1	02/22/23 17:35	02/23/23 09:10	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2010529	1	02/22/23 11:26	02/26/23 19:36	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2011133	5	02/22/23 17:34	02/22/23 20:43	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2011684	1	02/22/23 13:46	02/23/23 14:06	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2012636	1	02/22/23 13:46	02/24/23 21:25	BAM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2012119	1	02/24/23 17:17	02/24/23 23:38	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2012110	1	02/24/23 05:48	02/24/23 16:38	AMM	Mt. Juliet, TN

20230216-OB4(PH6)@1' L1587927-03 Solid

Collected by: Alex Slorby | Collected date/time: 02/16/23 15:40 | Received date/time: 02/21/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2010596	1	02/23/23 11:05	02/23/23 11:05	ABL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2011268	1	02/22/23 22:33	02/27/23 11:09	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2011036	1	02/22/23 17:00	02/22/23 19:14	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2011113	1	02/22/23 17:35	02/23/23 09:10	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2010529	1	02/22/23 11:26	02/26/23 19:39	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2011133	5	02/22/23 17:34	02/22/23 20:47	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2011684	1	02/22/23 13:46	02/23/23 14:29	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2012636	1	02/22/23 13:46	02/24/23 21:44	BAM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2012692	1	02/25/23 05:45	02/25/23 10:27	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2012110	1	02/24/23 05:48	02/24/23 16:58	AMM	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	5.05		1	02/23/2023 10:54	WG2010596

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	02/27/2023 10:59	WG2011268

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.16	T8	1	02/22/2023 19:14	WG2011036

Sample Narrative:
L1587927-01 WG2011036: 8.16 at 22.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1890		10.0	1	02/23/2023 11:50	WG2011108

Sample Narrative:
L1587927-01 WG2011108: at 25C

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.359		0.0167	0.200	1	02/26/2023 19:34	WG2010529

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.11		0.100	1.00	5	02/22/2023 20:40	WG2011133
Barium	177		0.152	2.50	5	02/22/2023 20:40	WG2011133
Cadmium	0.222	J	0.0855	1.00	5	02/22/2023 20:40	WG2011133
Copper	9.10		0.132	5.00	5	02/22/2023 20:40	WG2011133
Lead	7.96		0.0990	2.00	5	02/22/2023 20:40	WG2011133
Nickel	9.32		0.197	2.50	5	02/22/2023 20:40	WG2011133
Selenium	0.321	J	0.180	2.50	5	02/22/2023 20:40	WG2011133
Silver	U		0.0865	0.500	5	02/22/2023 20:40	WG2011133
Zinc	27.5		0.740	25.0	5	02/22/2023 20:40	WG2011133

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.396		0.0217	0.100	1	02/23/2023 13:43	WG2011684
(S) a,a,a-Trifluorotoluene(FID)	*98.7*			*77.0-120*		*02/23/2023 13:43*	WG2011684

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.000850	J	0.000467	0.00100	1	02/25/2023 02:50	WG2012619
Toluene	0.0155		0.00130	0.00500	1	02/25/2023 02:50	WG2012619
Ethylbenzene	0.00173	J	0.000737	0.00250	1	02/25/2023 02:50	WG2012619
Xylenes, Total	0.0364		0.000880	0.00650	1	02/25/2023 02:50	WG2012619
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	02/25/2023 02:50	WG2012619
1,3,5-Trimethylbenzene	0.00232	J	0.00200	0.00500	1	02/25/2023 02:50	WG2012619
(S) Toluene-d8	*102*			*75.0-131*		*02/25/2023 02:50*	WG2012619
(S) 4-Bromofluorobenzene	*78.6*			*67.0-138*		*02/25/2023 02:50*	WG2012619
(S) 1,2-Dichloroethane-d4	*86.5*			*70.0-130*		*02/25/2023 02:50*	WG2012619

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.61	4.00	1	02/24/2023 23:26	WG2012119
C28-C36 Motor Oil Range	U		0.274	4.00	1	02/24/2023 23:26	WG2012119
(S) o-Terphenyl	*54.8*			*18.0-148*		*02/24/2023 23:26*	WG2012119

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	02/24/2023 16:14	WG2012109
Anthracene	U		0.00230	0.00600	1	02/24/2023 16:14	WG2012109
Benzo(a)anthracene	U		0.00173	0.00600	1	02/24/2023 16:14	WG2012109
Benzo(b)fluoranthene	U		0.00153	0.00600	1	02/24/2023 16:14	WG2012109
Benzo(k)fluoranthene	U		0.00215	0.00600	1	02/24/2023 16:14	WG2012109
Benzo(a)pyrene	U		0.00179	0.00600	1	02/24/2023 16:14	WG2012109
Chrysene	U		0.00232	0.00600	1	02/24/2023 16:14	WG2012109
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	02/24/2023 16:14	WG2012109
Fluoranthene	U		0.00227	0.00600	1	02/24/2023 16:14	WG2012109
Fluorene	U		0.00205	0.00600	1	02/24/2023 16:14	WG2012109
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	02/24/2023 16:14	WG2012109
1-Methylnaphthalene	U		0.00449	0.0200	1	02/24/2023 16:14	WG2012109
2-Methylnaphthalene	U		0.00427	0.0200	1	02/24/2023 16:14	WG2012109
Naphthalene	U		0.00408	0.0200	1	02/24/2023 16:14	WG2012109
Pyrene	U		0.00200	0.00600	1	02/24/2023 16:14	WG2012109
(S) p-Terphenyl-d14	*58.7*			*23.0-120*		*02/24/2023 16:14*	WG2012109
(S) Nitrobenzene-d5	*66.5*			*14.0-149*		*02/24/2023 16:14*	WG2012109
(S) 2-Fluorobiphenyl	*65.4*			*34.0-125*		*02/24/2023 16:14*	WG2012109

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.92		1	02/23/2023 11:02	WG2010596

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	02/27/2023 11:04	WG2011268

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.34	T8	1	02/22/2023 19:14	WG2011036

Sample Narrative:

L1587927-02 WG2011036: 8.34 at 22.1C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	459		10.0	1	02/23/2023 09:10	WG2011113

Sample Narrative:

L1587927-02 WG2011113: at 25C

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.326		0.0167	0.200	1	02/26/2023 19:36	WG2010529

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.18		0.100	1.00	5	02/22/2023 20:43	WG2011133
Barium	114		0.152	2.50	5	02/22/2023 20:43	WG2011133
Cadmium	0.156	J	0.0855	1.00	5	02/22/2023 20:43	WG2011133
Copper	6.70		0.132	5.00	5	02/22/2023 20:43	WG2011133
Lead	6.01		0.0990	2.00	5	02/22/2023 20:43	WG2011133
Nickel	6.17		0.197	2.50	5	02/22/2023 20:43	WG2011133
Selenium	0.193	J	0.180	2.50	5	02/22/2023 20:43	WG2011133
Silver	U		0.0865	0.500	5	02/22/2023 20:43	WG2011133
Zinc	17.4	J	0.740	25.0	5	02/22/2023 20:43	WG2011133

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.338		0.0217	0.100	1	02/23/2023 14:06	WG2011684
(S) a,a,a-Trifluorotoluene(FID)	*99.9*			*77.0-120*		*02/23/2023 14:06*	WG2011684

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00173		0.000467	0.00100	1	02/24/2023 21:25	WG2012636
Toluene	0.0315		0.00130	0.00500	1	02/24/2023 21:25	WG2012636
Ethylbenzene	U		0.000737	0.00250	1	02/24/2023 21:25	WG2012636
Xylenes, Total	0.0458		0.000880	0.00650	1	02/24/2023 21:25	WG2012636
1,2,4-Trimethylbenzene	0.00228	J	0.00158	0.00500	1	02/24/2023 21:25	WG2012636
1,3,5-Trimethylbenzene	0.00545		0.00200	0.00500	1	02/24/2023 21:25	WG2012636
(S) Toluene-d8	*104*			*75.0-131*		*02/24/2023 21:25*	WG2012636
(S) 4-Bromofluorobenzene	*88.7*			*67.0-138*		*02/24/2023 21:25*	WG2012636
(S) 1,2-Dichloroethane-d4	*87.2*			*70.0-130*		*02/24/2023 21:25*	WG2012636

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.61	4.00	1	02/24/2023 23:38	WG2012119
C28-C36 Motor Oil Range	U		0.274	4.00	1	02/24/2023 23:38	WG2012119
(S) o-Terphenyl	*53.5*			*18.0-148*		*02/24/2023 23:38*	WG2012119

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	02/24/2023 16:38	WG2012110
Anthracene	U		0.00230	0.00600	1	02/24/2023 16:38	WG2012110
Benzo(a)anthracene	U		0.00173	0.00600	1	02/24/2023 16:38	WG2012110
Benzo(b)fluoranthene	U		0.00153	0.00600	1	02/24/2023 16:38	WG2012110
Benzo(k)fluoranthene	U		0.00215	0.00600	1	02/24/2023 16:38	WG2012110
Benzo(a)pyrene	U		0.00179	0.00600	1	02/24/2023 16:38	WG2012110
Chrysene	U		0.00232	0.00600	1	02/24/2023 16:38	WG2012110
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	02/24/2023 16:38	WG2012110
Fluoranthene	U		0.00227	0.00600	1	02/24/2023 16:38	WG2012110
Fluorene	U		0.00205	0.00600	1	02/24/2023 16:38	WG2012110
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	02/24/2023 16:38	WG2012110
1-Methylnaphthalene	U		0.00449	0.0200	1	02/24/2023 16:38	WG2012110
2-Methylnaphthalene	U		0.00427	0.0200	1	02/24/2023 16:38	WG2012110
Naphthalene	U		0.00408	0.0200	1	02/24/2023 16:38	WG2012110
Pyrene	U		0.00200	0.00600	1	02/24/2023 16:38	WG2012110
(S) p-Terphenyl-d14	*73.7*			*23.0-120*		*02/24/2023 16:38*	WG2012110
(S) Nitrobenzene-d5	*67.8*			*14.0-149*		*02/24/2023 16:38*	WG2012110
(S) 2-Fluorobiphenyl	*72.1*			*34.0-125*		*02/24/2023 16:38*	WG2012110

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.24		1	02/23/2023 11:05	WG2010596

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	02/27/2023 11:09	WG2011268

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.18	T8	1	02/22/2023 19:14	WG2011036

Sample Narrative:

L1587927-03 WG2011036: 8.18 at 22.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1360		10.0	1	02/23/2023 09:10	WG2011113

Sample Narrative:

L1587927-03 WG2011113: at 25C

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.416		0.0167	0.200	1	02/26/2023 19:39	WG2010529

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.99		0.100	1.00	5	02/22/2023 20:47	WG2011133
Barium	636		0.152	2.50	5	02/22/2023 20:47	WG2011133
Cadmium	0.207	J	0.0855	1.00	5	02/22/2023 20:47	WG2011133
Copper	9.58		0.132	5.00	5	02/22/2023 20:47	WG2011133
Lead	8.27		0.0990	2.00	5	02/22/2023 20:47	WG2011133
Nickel	9.15		0.197	2.50	5	02/22/2023 20:47	WG2011133
Selenium	0.305	J	0.180	2.50	5	02/22/2023 20:47	WG2011133
Silver	U		0.0865	0.500	5	02/22/2023 20:47	WG2011133
Zinc	25.2		0.740	25.0	5	02/22/2023 20:47	WG2011133

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.433		0.0217	0.100	1	02/23/2023 14:29	WG2011684
(S) a,a,a-Trifluorotoluene(FID)	*99.3*			*77.0-120*		*02/23/2023 14:29*	WG2011684

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	02/24/2023 21:44	WG2012636
Toluene	U		0.00130	0.00500	1	02/24/2023 21:44	WG2012636
Ethylbenzene	U		0.000737	0.00250	1	02/24/2023 21:44	WG2012636
Xylenes, Total	0.0170		0.000880	0.00650	1	02/24/2023 21:44	WG2012636
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	02/24/2023 21:44	WG2012636
1,3,5-Trimethylbenzene	0.00458	J	0.00200	0.00500	1	02/24/2023 21:44	WG2012636
(S) Toluene-d8	*99.4*			*75.0-131*		*02/24/2023 21:44*	WG2012636
(S) 4-Bromofluorobenzene	*88.8*			*67.0-138*		*02/24/2023 21:44*	WG2012636
(S) 1,2-Dichloroethane-d4	*84.1*			*70.0-130*		*02/24/2023 21:44*	WG2012636

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	1.68	J	1.61	4.00	1	02/25/2023 10:27	WG2012692
C28-C36 Motor Oil Range	1.54	J	0.274	4.00	1	02/25/2023 10:27	WG2012692
(S) o-Terphenyl	*45.3*			*18.0-148*		*02/25/2023 10:27*	WG2012692

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	02/24/2023 16:58	WG2012110
Anthracene	U		0.00230	0.00600	1	02/24/2023 16:58	WG2012110
Benzo(a)anthracene	U		0.00173	0.00600	1	02/24/2023 16:58	WG2012110
Benzo(b)fluoranthene	U		0.00153	0.00600	1	02/24/2023 16:58	WG2012110
Benzo(k)fluoranthene	U		0.00215	0.00600	1	02/24/2023 16:58	WG2012110
Benzo(a)pyrene	U		0.00179	0.00600	1	02/24/2023 16:58	WG2012110
Chrysene	U		0.00232	0.00600	1	02/24/2023 16:58	WG2012110
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	02/24/2023 16:58	WG2012110
Fluoranthene	U		0.00227	0.00600	1	02/24/2023 16:58	WG2012110
Fluorene	U		0.00205	0.00600	1	02/24/2023 16:58	WG2012110
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	02/24/2023 16:58	WG2012110
1-Methylnaphthalene	U		0.00449	0.0200	1	02/24/2023 16:58	WG2012110
2-Methylnaphthalene	U		0.00427	0.0200	1	02/24/2023 16:58	WG2012110
Naphthalene	U		0.00408	0.0200	1	02/24/2023 16:58	WG2012110
Pyrene	U		0.00200	0.00600	1	02/24/2023 16:58	WG2012110
(S) p-Terphenyl-d14	*63.6*			*23.0-120*		*02/24/2023 16:58*	WG2012110
(S) Nitrobenzene-d5	*58.7*			*14.0-149*		*02/24/2023 16:58*	WG2012110
(S) 2-Fluorobiphenyl	*62.2*			*34.0-125*		*02/24/2023 16:58*	WG2012110

Method Blank (MB)

(MB) R3895293-1 02/27/23 08:01

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

L1587810-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1587810-02 02/27/23 10:07 • (DUP) R3895293-8 02/27/23 10:12

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

L1588235-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1588235-01 02/27/23 11:20 • (DUP) R3895293-9 02/27/23 11:25

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	0.575	U	1	200	P1	20

Laboratory Control Sample (LCS)

(LCS) R3895293-2 02/27/23 08:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	11.5	115	80.0-120	

L1587611-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1587611-01 02/27/23 08:57 • (MS) R3895293-4 02/27/23 09:10 • (MSD) R3895293-5 02/27/23 09:15

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	20.3	20.9	101	104	1	75.0-125			2.91	20

L1587611-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1587611-01 02/27/23 08:57 • (MS) R3895293-7 02/27/23 09:20

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	638	U	441	69.1	50	75.0-125	J6

L1587636-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1587636-01 02/22/23 19:14 • (DUP) R3893788-2 02/22/23 19:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	3.61	3.63	1	0.552		1

Sample Narrative:

OS: 3.61 at 22.7C

DUP: 3.63 at 23.2C

L1587921-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1587921-01 02/22/23 19:14 • (DUP) R3893788-3 02/22/23 19:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	7.92	7.94	1	0.252		1

Sample Narrative:

OS: 7.92 at 22.7C

DUP: 7.94 at 22.4C

Laboratory Control Sample (LCS)

(LCS) R3893788-1 02/22/23 19:14

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.94	99.4	99.0-101	

Sample Narrative:

LCS: 9.94 at 22.3C

Method Blank (MB)

(MB) R3894048-1 02/23/23 11:50

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

L1587307-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1587307-01 02/23/23 11:50 • (DUP) R3894048-3 02/23/23 11:50

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	482	491	1	1.85		20

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

L1587927-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1587927-01 02/23/23 11:50 • (DUP) R3894048-4 02/23/23 11:50

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1890	1870	1	0.959		20

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

Laboratory Control Sample (LCS)

(LCS) R3894048-2 02/23/23 11:50

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1110	98.8	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3893936-1 02/23/23 09:10

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

Sample Narrative:
BLANK: at 25C

L1587945-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1587945-02 02/23/23 09:10 • (DUP) R3893936-3 02/23/23 09:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	3600	3560	1	1.12		20

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

L1588114-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1588114-02 02/23/23 09:10 • (DUP) R3893936-4 02/23/23 09:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	169	170	1	0.710		20

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

Laboratory Control Sample (LCS)

(LCS) R3893936-2 02/23/23 09:10

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1200	107	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3895057-1 02/26/23 19:26

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) R3895057-2 02/26/23 19:28 • (LCSD) R3895057-3 02/26/23 19:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.05	1.04	105	104	80.0-120			1.03	20

Method Blank (MB)

(MB) R3893803-1 02/22/23 19:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	0.138	J	0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R3893803-2 02/22/23 19:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	92.5	92.5	80.0-120	
Barium	100	96.4	96.4	80.0-120	
Cadmium	100	105	105	80.0-120	
Copper	100	98.2	98.2	80.0-120	
Lead	100	92.9	92.9	80.0-120	
Nickel	100	98.9	98.9	80.0-120	
Selenium	100	105	105	80.0-120	
Silver	20.0	19.7	98.5	80.0-120	
Zinc	100	94.4	94.4	80.0-120	

L1587945-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1587945-02 02/22/23 19:53 • (MS) R3893803-5 02/22/23 20:03 • (MSD) R3893803-6 02/22/23 20:06

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	5.90	89.4	89.3	83.5	83.4	5	75.0-125			0.101	20
Barium	100	80.7	142	141	61.6	60.0	5	75.0-125	J6	J6	1.11	20
Cadmium	100	0.220	94.0	95.1	93.7	94.9	5	75.0-125			1.19	20
Copper	100	10.9	94.6	95.1	83.7	84.2	5	75.0-125			0.496	20
Lead	100	13.4	96.7	102	83.3	89.1	5	75.0-125			5.86	20
Nickel	100	11.9	97.4	98.5	85.5	86.6	5	75.0-125			1.11	20
Selenium	100	1.03	96.0	90.3	95.0	89.2	5	75.0-125			6.22	20
Silver	20.0	U	18.2	18.3	90.8	91.5	5	75.0-125			0.731	20
Zinc	100	44.9	129	128	84.4	83.3	5	75.0-125			0.850	20

Method Blank (MB)

(MB) R3894394-2 02/23/23 11:50

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

Laboratory Control Sample (LCS)

(LCS) R3894394-1 02/23/23 11:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.04	91.6	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*107*	*77.0-120*	

Method Blank (MB)

(MB) R3895251-2 02/24/23 21:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*101*			*75.0-131*
(S) 4-Bromofluorobenzene	*93.9*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*84.3*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3895251-1 02/24/23 20:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.128	102	70.0-123	
Toluene	0.125	0.124	99.2	75.0-121	
Ethylbenzene	0.125	0.131	105	74.0-126	
Xylenes, Total	0.375	0.362	96.5	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.112	89.6	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.104	83.2	73.0-127	
(S) Toluene-d8			*108*	*75.0-131*	
(S) 4-Bromofluorobenzene			*94.9*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*87.2*	*70.0-130*	

L1587910-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1587910-05 02/24/23 21:55 • (MS) R3895251-3 02/25/23 04:28 • (MSD) R3895251-4 02/25/23 04:48

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 %
Benzene	0.144	U	0.101	0.0964	71.6	68.4	1.13	10.0-149			4.66	37
Toluene	0.144	U	0.112	0.0992	79.4	70.4	1.13	10.0-156			12.1	38
Ethylbenzene	0.144	U	0.103	0.102	73.0	72.3	1.13	10.0-160			0.976	38
Xylenes, Total	0.432	U	0.322	0.307	76.1	72.6	1.13	10.0-160			4.77	38
1,2,4-Trimethylbenzene	0.144	U	0.0847	0.0796	60.1	56.5	1.13	10.0-160			6.21	36
1,3,5-Trimethylbenzene	0.144	U	0.0785	0.0842	55.7	59.7	1.13	10.0-160			7.01	38
(S) Toluene-d8					*112*	*109*		*75.0-131*				
(S) 4-Bromofluorobenzene					*89.8*	*87.8*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*85.2*	*83.9*		*70.0-130*				

Method Blank (MB)

(MB) R3895281-3 02/24/23 20:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*103*			*75.0-131*
(S) 4-Bromofluorobenzene	*88.3*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*78.6*			*70.0-130*

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

(LCS) R3895281-1 02/24/23 19:21 • (LCSD) R3895281-2 02/24/23 19:40

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	0.126	0.116	101	92.8	70.0-123			8.26	20
Toluene	0.125	0.127	0.124	102	99.2	75.0-121			2.39	20
Ethylbenzene	0.125	0.119	0.112	95.2	89.6	74.0-126			6.06	20
Xylenes, Total	0.375	0.360	0.362	96.0	96.5	72.0-127			0.554	20
1,2,4-Trimethylbenzene	0.125	0.132	0.132	106	106	70.0-126			0.000	20
1,3,5-Trimethylbenzene	0.125	0.123	0.124	98.4	99.2	73.0-127			0.810	20
(S) Toluene-d8				*94.2*	*98.2*	*75.0-131*				
(S) 4-Bromofluorobenzene				*91.0*	*92.8*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*91.4*	*88.0*	*70.0-130*				

Method Blank (MB)

(MB) R3894815-1 02/24/23 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	U		0.274	4.00
(S) o-Terphenyl	*88.7*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3894815-2 02/24/23 22:36

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	34.9	69.8	50.0-150	
(S) o-Terphenyl			*81.7*	*18.0-148*	

L1587627-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1587627-06 02/25/23 00:29 • (MS) R3894815-3 02/25/23 00:41 • (MSD) R3894815-4 02/25/23 00:54

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	47.6	U	27.2	23.0	57.1	47.7	1	50.0-150		J6	16.7	20
(S) o-Terphenyl					*58.4*	*55.9*		*18.0-148*				

Method Blank (MB)

(MB) R3894898-1 02/25/23 10:01

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*67.1*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3894898-2 02/25/23 10:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	34.0	68.0	50.0-150	
(S) o-Terphenyl			*76.4*	*18.0-148*	

L1587707-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1587707-02 02/25/23 11:52 • (MS) R3894892-2 02/25/23 12:18 • (MSD) R3894892-1 02/25/23 12:05

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	47.7	289	382	375	195	178	1	50.0-150	E V	E V	1.85	20
(S) o-Terphenyl					*40.7*	*46.9*		*18.0-148*				

Method Blank (MB)

(MB) R3894749-2 02/24/23 10:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	*75.1*			*23.0-120*
(S) Nitrobenzene-d5	*66.2*			*14.0-149*
(S) 2-Fluorobiphenyl	*73.6*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3894749-1 02/24/23 10:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0670	83.8	50.0-120	
Anthracene	0.0800	0.0617	77.1	50.0-126	
Benzo(a)anthracene	0.0800	0.0650	81.3	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0684	85.5	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0652	81.5	49.0-125	
Benzo(a)pyrene	0.0800	0.0482	60.3	42.0-120	
Chrysene	0.0800	0.0685	85.6	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0607	75.9	47.0-125	
Fluoranthene	0.0800	0.0680	85.0	49.0-129	
Fluorene	0.0800	0.0698	87.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0637	79.6	46.0-125	
1-Methylnaphthalene	0.0800	0.0653	81.6	51.0-121	
2-Methylnaphthalene	0.0800	0.0690	86.3	50.0-120	
Naphthalene	0.0800	0.0637	79.6	50.0-120	
Pyrene	0.0800	0.0666	83.3	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3894749-1 02/24/23 10:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*78.4*	*23.0-120*	
(S) Nitrobenzene-d5			*82.5*	*14.0-149*	
(S) 2-Fluorobiphenyl			*85.3*	*34.0-125*	

L1587910-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1587910-04 02/24/23 12:59 • (MS) R3894749-3 02/24/23 13:17 • (MSD) R3894749-4 02/24/23 13:35

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0768	U	0.0574	0.0586	74.7	75.1	1	14.0-127			2.07	27
Anthracene	0.0768	U	0.0518	0.0517	67.4	66.3	1	10.0-145			0.193	30
Benzo(a)anthracene	0.0768	U	0.0530	0.0531	69.0	68.1	1	10.0-139			0.189	30
Benzo(b)fluoranthene	0.0768	U	0.0544	0.0555	70.8	71.2	1	10.0-140			2.00	36
Benzo(k)fluoranthene	0.0768	U	0.0634	0.0686	82.6	87.9	1	10.0-137			7.88	31
Benzo(a)pyrene	0.0768	U	0.0568	0.0583	74.0	74.7	1	10.0-141			2.61	31
Chrysene	0.0768	U	0.0652	0.0691	84.9	88.6	1	10.0-145			5.81	30
Dibenz(a,h)anthracene	0.0768	U	0.0482	0.0482	62.8	61.8	1	10.0-132			0.000	31
Fluoranthene	0.0768	U	0.0559	0.0580	72.8	74.4	1	10.0-153			3.69	33
Fluorene	0.0768	U	0.0575	0.0591	74.9	75.8	1	11.0-130			2.74	29
Indeno(1,2,3-cd)pyrene	0.0768	U	0.0510	0.0520	66.4	66.7	1	10.0-137			1.94	32
1-Methylnaphthalene	0.0768	U	0.0557	0.0572	72.5	73.3	1	10.0-142			2.66	28
2-Methylnaphthalene	0.0768	U	0.0576	0.0597	75.0	76.5	1	10.0-137			3.58	28
Naphthalene	0.0768	U	0.0539	0.0554	70.2	71.0	1	10.0-135			2.74	27
Pyrene	0.0768	U	0.0577	0.0601	75.1	77.1	1	10.0-148			4.07	35
(S) p-Terphenyl-d14					*71.7*	*76.8*		*23.0-120*				
(S) Nitrobenzene-d5					*68.3*	*73.3*		*14.0-149*				
(S) 2-Fluorobiphenyl					*75.5*	*81.2*		*34.0-125*				

Method Blank (MB)

(MB) R3895141-2 02/24/23 11:01

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	*74.1*			*23.0-120*
(S) Nitrobenzene-d5	*72.1*			*14.0-149*
(S) 2-Fluorobiphenyl	*74.8*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3895141-1 02/24/23 10:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0628	78.5	50.0-120	
Anthracene	0.0800	0.0624	78.0	50.0-126	
Benzo(a)anthracene	0.0800	0.0678	84.8	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0633	79.1	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0632	79.0	49.0-125	
Benzo(a)pyrene	0.0800	0.0429	53.6	42.0-120	
Chrysene	0.0800	0.0671	83.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0614	76.8	47.0-125	
Fluoranthene	0.0800	0.0689	86.1	49.0-129	
Fluorene	0.0800	0.0713	89.1	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0650	81.3	46.0-125	
1-Methylnaphthalene	0.0800	0.0618	77.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0665	83.1	50.0-120	
Naphthalene	0.0800	0.0619	77.4	50.0-120	
Pyrene	0.0800	0.0643	80.4	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3895141-1 02/24/23 10:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*76.4*	*23.0-120*	
(S) Nitrobenzene-d5			*79.0*	*14.0-149*	
(S) 2-Fluorobiphenyl			*80.0*	*34.0-125*	

L1586957-27 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1586957-27 02/24/23 12:00 • (MS) R3895141-3 02/24/23 12:20 • (MSD) R3895141-4 02/24/23 12:40

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 %
Acenaphthene	0.0776	U	0.0472	0.0454	60.8	58.5	1	14.0-127			3.89	27
Anthracene	0.0776	U	0.0502	0.0493	64.7	63.5	1	10.0-145			1.81	30
Benzo(a)anthracene	0.0776	U	0.0548	0.0536	70.6	69.1	1	10.0-139			2.21	30
Benzo(b)fluoranthene	0.0776	U	0.0507	0.0512	65.3	66.0	1	10.0-140			0.981	36
Benzo(k)fluoranthene	0.0776	U	0.0512	0.0517	66.0	66.6	1	10.0-137			0.972	31
Benzo(a)pyrene	0.0776	U	0.0563	0.0559	72.6	72.0	1	10.0-141			0.713	31
Chrysene	0.0776	U	0.0573	0.0561	73.8	72.3	1	10.0-145			2.12	30
Dibenz(a,h)anthracene	0.0776	U	0.0514	0.0512	66.2	66.0	1	10.0-132			0.390	31
Fluoranthene	0.0776	U	0.0516	0.0509	66.5	65.6	1	10.0-153			1.37	33
Fluorene	0.0776	U	0.0551	0.0543	71.0	70.0	1	11.0-130			1.46	29
Indeno(1,2,3-cd)pyrene	0.0776	U	0.0558	0.0527	71.9	67.9	1	10.0-137			5.71	32
1-Methylnaphthalene	0.0776	0.00967	0.0576	0.0599	61.8	64.7	1	10.0-142			3.91	28
2-Methylnaphthalene	0.0776	0.0259	0.0804	0.0888	70.2	81.1	1	10.0-137			9.93	28
Naphthalene	0.0776	U	0.0508	0.0474	65.5	61.1	1	10.0-135			6.92	27
Pyrene	0.0776	U	0.0507	0.0502	65.3	64.7	1	10.0-148			0.991	35
(S) p-Terphenyl-d14					*65.9*	*66.9*		*23.0-120*				
(S) Nitrobenzene-d5					*74.4*	*85.4*		*14.0-149*				
(S) 2-Fluorobiphenyl					*66.9*	*68.5*		*34.0-125*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDL	Method Detection Limit.
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
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

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

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

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

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

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

L1587927

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC
Address: Info on file
Billing Information: Info on file

Report To: Jake Janicek, Brett Middleton, Blair Rollins
Email To: info on file

Copy To: Chris McKisson, remediation@confluence-cc.com
Site Collection Info/Address:

Customer Project Name/Number: OB4 Tank Release
State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET

Container Preservative Type **

Lab Project Manager:

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

Phone:
Email:

Site/Facility ID #: OB4

Compliance Monitoring? [ ] Yes [X] No

Collected By (print): Alex Slorby

Purchase Order # :
Quote #:

DW PWS ID #:
DW Location Code:

Collected By (signature): Alex Slorby

Turnaround Date Required: Standard Turnaround

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

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

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

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

Analysis: _____

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Table 915-1 VOCs	TPH (ORO, GRO, DRO)	Table 915-1 Metal's	Table 915-1 PAHs	pH, EC, SAR	Boron (Hot Water Soluble Soil)	CR6IC				Lab Sample # / Comments:
20230216-OB4(PH1)@1'	SL	G	2/16/2023	1515				3	G/P	X	X	X	X	X	X	X				-01
20230216-OB4(PH2)@1'	SL	G	2/16/2023	1525				3	G/P	X	X	X	X	X	X	X				-02
20230216-OB4(PH6)@1'	SL	G	2/16/2023	1540				3	G/P	X	X	X	X	X	X	X				-03

Analyses

Lab Profile/Line:

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

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

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

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

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: 2.5 oC
Comments:

H167

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Alex Slorby	2/20/23 1100		
	2/20/23 1300		
			2/21/23 0845

Acctnum:
Template:
Prelogin:
PM:
PB:

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

Non Conformance(s): YES / NO

Page: _____ of: _____

ANALYTICAL REPORT

October 21, 2021

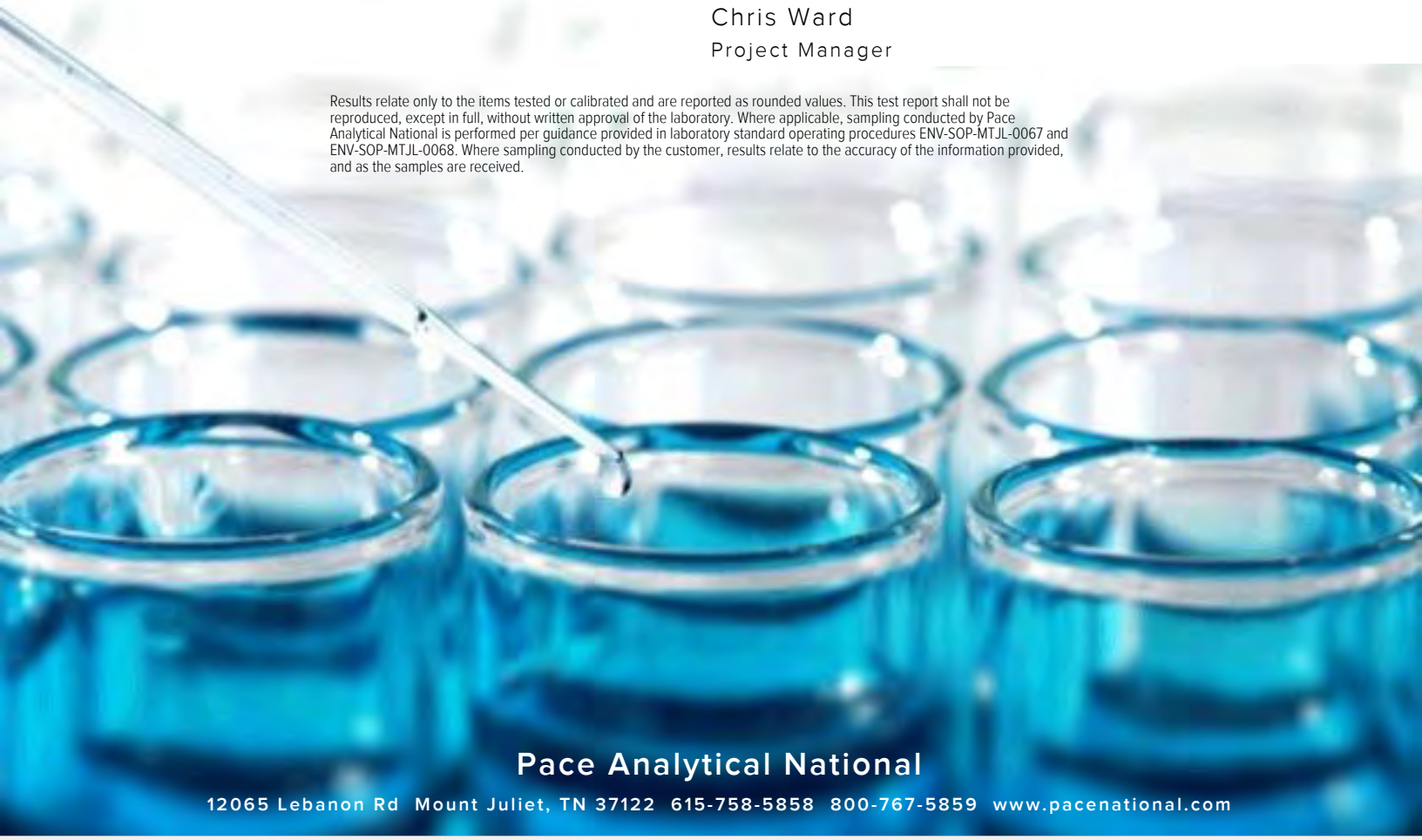
1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Caerus Oil and Gas

Sample Delivery Group:	L1416123
Samples Received:	10/09/2021
Project Number:	OL34
Description:	OL34
Site:	OL34
Report To:	Steve Sivigliano 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager



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

TABLE OF CONTENTS

20211007-OL34(FL-SEP)@6' L1416123-01 Solid

Collected by: Evan Mason | Collected date/time: 10/07/21 12:00 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1757939	1	10/18/21 11:37	10/18/21 11:37	EL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1758621	1	10/17/21 18:00	10/18/21 14:27	MCG	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1757656	1	10/15/21 13:00	10/15/21 15:00	AW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1757497	1	10/17/21 15:32	10/17/21 18:36	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1757728	1	10/15/21 13:05	10/16/21 13:06	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1757952	5	10/16/21 16:55	10/18/21 14:10	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1757806	5	10/15/21 13:02	10/16/21 14:10	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1758220	1	10/14/21 20:49	10/17/21 23:32	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758209	1	10/14/21 20:49	10/17/21 09:35	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1758457	1	10/17/21 04:32	10/18/21 13:50	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1758738	1	10/18/21 09:09	10/18/21 19:16	LEA	Mt. Juliet, TN

20211007-OL34(FL-WELL)@6' L1416123-02 Solid

Collected by: Evan Mason | Collected date/time: 10/07/21 12:15 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1757939	1	10/18/21 11:39	10/18/21 11:39	EL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1758621	1	10/17/21 18:00	10/18/21 14:33	MCG	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1757656	1	10/15/21 13:00	10/15/21 15:00	AW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1757497	1	10/17/21 15:32	10/17/21 18:36	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1757728	1	10/15/21 13:05	10/16/21 13:09	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1757952	5	10/16/21 16:55	10/18/21 14:12	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1757806	5	10/15/21 13:02	10/16/21 14:13	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1758220	1	10/14/21 20:49	10/17/21 23:56	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758209	1	10/14/21 20:49	10/17/21 09:54	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1758457	1	10/17/21 04:32	10/18/21 14:04	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1758738	1	10/18/21 09:09	10/18/21 19:33	LEA	Mt. Juliet, TN

20211007-OL34(SEP-STOCK) L1416123-03 Solid

Collected by: Evan Mason | Collected date/time: 10/07/21 12:30 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1757939	1	10/18/21 11:42	10/18/21 11:42	EL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1758621	1	10/17/21 18:00	10/18/21 14:43	MCG	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1757656	1	10/15/21 13:00	10/15/21 15:00	AW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1757497	1	10/17/21 15:32	10/17/21 18:36	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1757728	1	10/15/21 13:05	10/16/21 13:12	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1757952	5	10/16/21 16:55	10/18/21 14:15	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1757806	5	10/15/21 13:02	10/16/21 14:16	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1758220	1	10/14/21 20:49	10/18/21 00:19	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758209	1	10/14/21 20:49	10/17/21 10:13	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1758457	1	10/17/21 04:32	10/18/21 16:47	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1758738	1	10/18/21 09:09	10/18/21 19:51	LEA	Mt. Juliet, TN

20211007-OL34(WELL-STOCK) L1416123-04 Solid

Collected by: Evan Mason | Collected date/time: 10/07/21 12:45 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1757939	1	10/18/21 11:45	10/18/21 11:45	EL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1758621	1	10/17/21 18:00	10/18/21 15:21	MCG	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1757656	1	10/15/21 13:00	10/15/21 15:00	AW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1757497	1	10/17/21 15:32	10/17/21 18:36	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1757728	1	10/15/21 13:05	10/16/21 13:15	EL	Mt. Juliet, TN

20211007-OL34(WELL-STOCK) L1416123-04 Solid

Collected by: Evan Mason | Collected date/time: 10/07/21 12:45 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1757952	5	10/16/21 16:55	10/18/21 14:18	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1757806	5	10/15/21 13:02	10/16/21 14:20	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1758220	1	10/14/21 20:49	10/18/21 00:43	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758209	1	10/14/21 20:49	10/17/21 10:32	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1758457	1	10/17/21 04:32	10/18/21 17:00	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1758738	1	10/18/21 09:09	10/18/21 20:09	LEA	Mt. Juliet, TN

20211007-OL3A(BG-S)@.5' L1416123-05 Solid

Collected by: Evan Mason | Collected date/time: 10/07/21 13:00 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1757939	1	10/18/21 11:48	10/18/21 11:48	EL	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1757656	1	10/15/21 13:00	10/15/21 15:00	AW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1757497	1	10/17/21 15:32	10/17/21 18:36	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1757952	5	10/16/21 16:55	10/18/21 14:20	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1757857	5	10/16/21 00:26	10/16/21 18:06	JPD	Mt. Juliet, TN

20211007-OL3A(BG-W)@1' L1416123-06 Solid

Collected by: Evan Mason | Collected date/time: 10/07/21 13:15 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1757939	1	10/18/21 11:50	10/18/21 11:50	EL	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1757656	1	10/15/21 13:00	10/15/21 15:00	AW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1757497	1	10/17/21 15:32	10/17/21 18:36	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1757952	5	10/16/21 16:55	10/18/21 14:23	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1757857	5	10/16/21 00:26	10/16/21 18:09	JPD	Mt. Juliet, TN

20211007-OL3A(BG-N)@1.5' L1416123-07 Solid

Collected by: Evan Mason | Collected date/time: 10/07/21 13:30 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1757939	1	10/18/21 11:53	10/18/21 11:53	EL	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1757656	1	10/15/21 13:00	10/15/21 15:00	AW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1757497	1	10/17/21 15:32	10/17/21 18:36	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1757952	5	10/16/21 16:55	10/18/21 14:26	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1757857	5	10/16/21 00:26	10/16/21 18:12	JPD	Mt. Juliet, TN

CASE NARRATIVE

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

Chris Ward
Project Manager

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.00		1	10/18/2021 11:37	WG1757939

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	10/18/2021 14:27	WG1758621

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.51	T8	1	10/15/2021 15:00	WG1757656

Sample Narrative:

L1416123-01 WG1757656: 8.51 at 20.6C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	239		10.0	1	10/17/2021 18:36	WG1757497

Sample Narrative:

L1416123-01 WG1757497: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	187		0.0852	0.500	1	10/16/2021 13:06	WG1757728
Cadmium	0.374	J	0.0471	0.500	1	10/16/2021 13:06	WG1757728
Copper	13.1		0.400	2.00	1	10/16/2021 13:06	WG1757728
Lead	10.1		0.208	0.500	1	10/16/2021 13:06	WG1757728
Nickel	14.9		0.132	2.00	1	10/16/2021 13:06	WG1757728
Selenium	0.985	J	0.764	2.00	1	10/16/2021 13:06	WG1757728
Silver	U		0.127	1.00	1	10/16/2021 13:06	WG1757728
Zinc	39.7		0.832	5.00	1	10/16/2021 13:06	WG1757728

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.412	J	0.0835	1.00	5	10/18/2021 14:10	WG1757952

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.44		0.100	1.00	5	10/16/2021 14:10	WG1757806

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0587	J	0.0217	0.100	1	10/17/2021 23:32	WG1758220
(S) a,a,a-Trifluorotoluene(FID)	*99.4*			*77.0-120*		*10/17/2021 23:32*	WG1758220

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	10/17/2021 09:35	WG1758209
Toluene	U		0.00130	0.00500	1	10/17/2021 09:35	WG1758209
Ethylbenzene	U		0.000737	0.00250	1	10/17/2021 09:35	WG1758209
Xylenes, Total	U		0.000880	0.00650	1	10/17/2021 09:35	WG1758209
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	10/17/2021 09:35	WG1758209
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	10/17/2021 09:35	WG1758209
(S) Toluene-d8	*112*			*75.0-131*		*10/17/2021 09:35*	WG1758209
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*10/17/2021 09:35*	WG1758209
(S) 1,2-Dichloroethane-d4	*92.8*			*70.0-130*		*10/17/2021 09:35*	WG1758209

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	4.04		1.61	4.00	1	10/18/2021 13:50	WG1758457
C28-C36 Motor Oil Range	8.67		0.274	4.00	1	10/18/2021 13:50	WG1758457
(S) o-Terphenyl	*54.8*			*18.0-148*		*10/18/2021 13:50*	WG1758457

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	10/18/2021 19:16	WG1758738
Acenaphthene	U		0.00209	0.00600	1	10/18/2021 19:16	WG1758738
Acenaphthylene	U		0.00216	0.00600	1	10/18/2021 19:16	WG1758738
Benzo(a)anthracene	U		0.00173	0.00600	1	10/18/2021 19:16	WG1758738
Benzo(a)pyrene	U		0.00179	0.00600	1	10/18/2021 19:16	WG1758738
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/18/2021 19:16	WG1758738
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	10/18/2021 19:16	WG1758738
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/18/2021 19:16	WG1758738
Chrysene	U		0.00232	0.00600	1	10/18/2021 19:16	WG1758738
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/18/2021 19:16	WG1758738
Fluoranthene	U		0.00227	0.00600	1	10/18/2021 19:16	WG1758738
Fluorene	U		0.00205	0.00600	1	10/18/2021 19:16	WG1758738
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/18/2021 19:16	WG1758738
Naphthalene	U		0.00408	0.0200	1	10/18/2021 19:16	WG1758738
Phenanthrene	U		0.00231	0.00600	1	10/18/2021 19:16	WG1758738
Pyrene	U		0.00200	0.00600	1	10/18/2021 19:16	WG1758738
1-Methylnaphthalene	U		0.00449	0.0200	1	10/18/2021 19:16	WG1758738
2-Methylnaphthalene	U		0.00427	0.0200	1	10/18/2021 19:16	WG1758738
2-Chloronaphthalene	U		0.00466	0.0200	1	10/18/2021 19:16	WG1758738
(S) p-Terphenyl-d14	*97.7*			*23.0-120*		*10/18/2021 19:16*	WG1758738
(S) Nitrobenzene-d5	*57.0*			*14.0-149*		*10/18/2021 19:16*	WG1758738
(S) 2-Fluorobiphenyl	*79.6*			*34.0-125*		*10/18/2021 19:16*	WG1758738

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.96		1	10/18/2021 11:39	WG1757939

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	10/18/2021 14:33	WG1758621

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.23	T8	1	10/15/2021 15:00	WG1757656

Sample Narrative:

L1416123-02 WG1757656: 8.23 at 20.6C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	418		10.0	1	10/17/2021 18:36	WG1757497

Sample Narrative:

L1416123-02 WG1757497: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	215		0.0852	0.500	1	10/16/2021 13:09	WG1757728
Cadmium	0.372	J	0.0471	0.500	1	10/16/2021 13:09	WG1757728
Copper	27.7		0.400	2.00	1	10/16/2021 13:09	WG1757728
Lead	10.9		0.208	0.500	1	10/16/2021 13:09	WG1757728
Nickel	15.4		0.132	2.00	1	10/16/2021 13:09	WG1757728
Selenium	1.18	J	0.764	2.00	1	10/16/2021 13:09	WG1757728
Silver	U		0.127	1.00	1	10/16/2021 13:09	WG1757728
Zinc	40.2		0.832	5.00	1	10/16/2021 13:09	WG1757728

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.160	J	0.0835	1.00	5	10/18/2021 14:12	WG1757952

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.06		0.100	1.00	5	10/16/2021 14:13	WG1757806

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0578	J	0.0217	0.100	1	10/17/2021 23:56	WG1758220
(S) a,a,a-Trifluorotoluene(FID)	*99.6*			*77.0-120*		*10/17/2021 23:56*	WG1758220

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	10/17/2021 09:54	WG1758209
Toluene	U		0.00130	0.00500	1	10/17/2021 09:54	WG1758209
Ethylbenzene	U		0.000737	0.00250	1	10/17/2021 09:54	WG1758209
Xylenes, Total	U		0.000880	0.00650	1	10/17/2021 09:54	WG1758209
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	10/17/2021 09:54	WG1758209
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	10/17/2021 09:54	WG1758209
(S) Toluene-d8	*110*			*75.0-131*		*10/17/2021 09:54*	WG1758209
(S) 4-Bromofluorobenzene	*99.9*			*67.0-138*		*10/17/2021 09:54*	WG1758209
(S) 1,2-Dichloroethane-d4	*92.1*			*70.0-130*		*10/17/2021 09:54*	WG1758209

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	9.33		1.61	4.00	1	10/18/2021 14:04	WG1758457
C28-C36 Motor Oil Range	19.3		0.274	4.00	1	10/18/2021 14:04	WG1758457
(S) o-Terphenyl	*56.2*			*18.0-148*		*10/18/2021 14:04*	WG1758457

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	10/18/2021 19:33	WG1758738
Acenaphthene	U		0.00209	0.00600	1	10/18/2021 19:33	WG1758738
Acenaphthylene	U		0.00216	0.00600	1	10/18/2021 19:33	WG1758738
Benzo(a)anthracene	U		0.00173	0.00600	1	10/18/2021 19:33	WG1758738
Benzo(a)pyrene	U		0.00179	0.00600	1	10/18/2021 19:33	WG1758738
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/18/2021 19:33	WG1758738
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	10/18/2021 19:33	WG1758738
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/18/2021 19:33	WG1758738
Chrysene	U		0.00232	0.00600	1	10/18/2021 19:33	WG1758738
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/18/2021 19:33	WG1758738
Fluoranthene	U		0.00227	0.00600	1	10/18/2021 19:33	WG1758738
Fluorene	U		0.00205	0.00600	1	10/18/2021 19:33	WG1758738
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/18/2021 19:33	WG1758738
Naphthalene	U		0.00408	0.0200	1	10/18/2021 19:33	WG1758738
Phenanthrene	U		0.00231	0.00600	1	10/18/2021 19:33	WG1758738
Pyrene	U		0.00200	0.00600	1	10/18/2021 19:33	WG1758738
1-Methylnaphthalene	U		0.00449	0.0200	1	10/18/2021 19:33	WG1758738
2-Methylnaphthalene	U		0.00427	0.0200	1	10/18/2021 19:33	WG1758738
2-Chloronaphthalene	U		0.00466	0.0200	1	10/18/2021 19:33	WG1758738
(S) p-Terphenyl-d14	*82.5*			*23.0-120*		*10/18/2021 19:33*	WG1758738
(S) Nitrobenzene-d5	*51.0*			*14.0-149*		*10/18/2021 19:33*	WG1758738
(S) 2-Fluorobiphenyl	*65.7*			*34.0-125*		*10/18/2021 19:33*	WG1758738

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.91		1	10/18/2021 11:42	WG1757939

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	10/18/2021 14:43	WG1758621

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.00	T8	1	10/15/2021 15:00	WG1757656

Sample Narrative:

L1416123-03 WG1757656: 9 at 20.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	313		10.0	1	10/17/2021 18:36	WG1757497

Sample Narrative:

L1416123-03 WG1757497: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	203		0.0852	0.500	1	10/16/2021 13:12	WG1757728
Cadmium	0.410	J	0.0471	0.500	1	10/16/2021 13:12	WG1757728
Copper	14.3		0.400	2.00	1	10/16/2021 13:12	WG1757728
Lead	11.1		0.208	0.500	1	10/16/2021 13:12	WG1757728
Nickel	15.5		0.132	2.00	1	10/16/2021 13:12	WG1757728
Selenium	1.93	J	0.764	2.00	1	10/16/2021 13:12	WG1757728
Silver	U		0.127	1.00	1	10/16/2021 13:12	WG1757728
Zinc	43.5		0.832	5.00	1	10/16/2021 13:12	WG1757728

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.241	J	0.0835	1.00	5	10/18/2021 14:15	WG1757952

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.89		0.100	1.00	5	10/16/2021 14:16	WG1757806

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0578	J	0.0217	0.100	1	10/18/2021 00:19	WG1758220
(S) a,a,a-Trifluorotoluene(FID)	*99.1*			*77.0-120*		*10/18/2021 00:19*	WG1758220

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	10/17/2021 10:13	WG1758209
Toluene	U		0.00130	0.00500	1	10/17/2021 10:13	WG1758209
Ethylbenzene	U		0.000737	0.00250	1	10/17/2021 10:13	WG1758209
Xylenes, Total	U		0.000880	0.00650	1	10/17/2021 10:13	WG1758209
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	10/17/2021 10:13	WG1758209
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	10/17/2021 10:13	WG1758209
(S) Toluene-d8	*111*			*75.0-131*		*10/17/2021 10:13*	WG1758209
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*10/17/2021 10:13*	WG1758209
(S) 1,2-Dichloroethane-d4	*92.6*			*70.0-130*		*10/17/2021 10:13*	WG1758209

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	8.74		1.61	4.00	1	10/18/2021 16:47	WG1758457
C28-C36 Motor Oil Range	30.4		0.274	4.00	1	10/18/2021 16:47	WG1758457
(S) o-Terphenyl	*64.5*			*18.0-148*		*10/18/2021 16:47*	WG1758457

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	10/18/2021 19:51	WG1758738
Acenaphthene	U		0.00209	0.00600	1	10/18/2021 19:51	WG1758738
Acenaphthylene	U		0.00216	0.00600	1	10/18/2021 19:51	WG1758738
Benzo(a)anthracene	U		0.00173	0.00600	1	10/18/2021 19:51	WG1758738
Benzo(a)pyrene	U		0.00179	0.00600	1	10/18/2021 19:51	WG1758738
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/18/2021 19:51	WG1758738
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	10/18/2021 19:51	WG1758738
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/18/2021 19:51	WG1758738
Chrysene	U		0.00232	0.00600	1	10/18/2021 19:51	WG1758738
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/18/2021 19:51	WG1758738
Fluoranthene	U		0.00227	0.00600	1	10/18/2021 19:51	WG1758738
Fluorene	U		0.00205	0.00600	1	10/18/2021 19:51	WG1758738
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/18/2021 19:51	WG1758738
Naphthalene	U		0.00408	0.0200	1	10/18/2021 19:51	WG1758738
Phenanthrene	U		0.00231	0.00600	1	10/18/2021 19:51	WG1758738
Pyrene	U		0.00200	0.00600	1	10/18/2021 19:51	WG1758738
1-Methylnaphthalene	U		0.00449	0.0200	1	10/18/2021 19:51	WG1758738
2-Methylnaphthalene	U		0.00427	0.0200	1	10/18/2021 19:51	WG1758738
2-Chloronaphthalene	U		0.00466	0.0200	1	10/18/2021 19:51	WG1758738
(S) p-Terphenyl-d14	*97.2*			*23.0-120*		*10/18/2021 19:51*	WG1758738
(S) Nitrobenzene-d5	*56.5*			*14.0-149*		*10/18/2021 19:51*	WG1758738
(S) 2-Fluorobiphenyl	*77.2*			*34.0-125*		*10/18/2021 19:51*	WG1758738

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	10.4		1	10/18/2021 11:45	WG1757939

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	10/18/2021 15:21	WG1758621

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.95	T8	1	10/15/2021 15:00	WG1757656

Sample Narrative:

L1416123-04 WG1757656: 8.95 at 20.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	844		10.0	1	10/17/2021 18:36	WG1757497

Sample Narrative:

L1416123-04 WG1757497: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	320		0.0852	0.500	1	10/16/2021 13:15	WG1757728
Cadmium	0.467	J	0.0471	0.500	1	10/16/2021 13:15	WG1757728
Copper	17.9		0.400	2.00	1	10/16/2021 13:15	WG1757728
Lead	15.0		0.208	0.500	1	10/16/2021 13:15	WG1757728
Nickel	14.8		0.132	2.00	1	10/16/2021 13:15	WG1757728
Selenium	1.48	J	0.764	2.00	1	10/16/2021 13:15	WG1757728
Silver	U		0.127	1.00	1	10/16/2021 13:15	WG1757728
Zinc	64.7		0.832	5.00	1	10/16/2021 13:15	WG1757728

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.369	J	0.0835	1.00	5	10/18/2021 14:18	WG1757952

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.52		0.100	1.00	5	10/16/2021 14:20	WG1757806

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0548	J	0.0217	0.100	1	10/18/2021 00:43	WG1758220
(S) a,a,a-Trifluorotoluene(FID)	*99.1*			*77.0-120*		*10/18/2021 00:43*	WG1758220

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	10/17/2021 10:32	WG1758209
Toluene	U		0.00130	0.00500	1	10/17/2021 10:32	WG1758209
Ethylbenzene	U		0.000737	0.00250	1	10/17/2021 10:32	WG1758209
Xylenes, Total	U		0.000880	0.00650	1	10/17/2021 10:32	WG1758209
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	10/17/2021 10:32	WG1758209
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	10/17/2021 10:32	WG1758209
(S) Toluene-d8	*109*			*75.0-131*		*10/17/2021 10:32*	WG1758209
(S) 4-Bromofluorobenzene	*98.4*			*67.0-138*		*10/17/2021 10:32*	WG1758209
(S) 1,2-Dichloroethane-d4	*93.8*			*70.0-130*		*10/17/2021 10:32*	WG1758209

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	14.0	J3	1.61	4.00	1	10/18/2021 17:00	WG1758457
C28-C36 Motor Oil Range	33.3		0.274	4.00	1	10/18/2021 17:00	WG1758457
(S) o-Terphenyl	*39.7*			*18.0-148*		*10/18/2021 17:00*	WG1758457

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	10/18/2021 20:09	WG1758738
Acenaphthene	U		0.00209	0.00600	1	10/18/2021 20:09	WG1758738
Acenaphthylene	U		0.00216	0.00600	1	10/18/2021 20:09	WG1758738
Benzo(a)anthracene	U		0.00173	0.00600	1	10/18/2021 20:09	WG1758738
Benzo(a)pyrene	U		0.00179	0.00600	1	10/18/2021 20:09	WG1758738
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/18/2021 20:09	WG1758738
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	10/18/2021 20:09	WG1758738
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/18/2021 20:09	WG1758738
Chrysene	U		0.00232	0.00600	1	10/18/2021 20:09	WG1758738
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/18/2021 20:09	WG1758738
Fluoranthene	U		0.00227	0.00600	1	10/18/2021 20:09	WG1758738
Fluorene	U		0.00205	0.00600	1	10/18/2021 20:09	WG1758738
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/18/2021 20:09	WG1758738
Naphthalene	U		0.00408	0.0200	1	10/18/2021 20:09	WG1758738
Phenanthrene	U		0.00231	0.00600	1	10/18/2021 20:09	WG1758738
Pyrene	U		0.00200	0.00600	1	10/18/2021 20:09	WG1758738
1-Methylnaphthalene	U		0.00449	0.0200	1	10/18/2021 20:09	WG1758738
2-Methylnaphthalene	U		0.00427	0.0200	1	10/18/2021 20:09	WG1758738
2-Chloronaphthalene	U		0.00466	0.0200	1	10/18/2021 20:09	WG1758738
(S) p-Terphenyl-d14	*74.4*			*23.0-120*		*10/18/2021 20:09*	WG1758738
(S) Nitrobenzene-d5	*45.4*			*14.0-149*		*10/18/2021 20:09*	WG1758738
(S) 2-Fluorobiphenyl	*60.4*			*34.0-125*		*10/18/2021 20:09*	WG1758738

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.0969		1	10/18/2021 11:48	WG1757939

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.21	T8	1	10/15/2021 15:00	WG1757656

Sample Narrative:
L1416123-05 WG1757656: 8.21 at 20.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	341		10.0	1	10/17/2021 18:36	WG1757497

Sample Narrative:
L1416123-05 WG1757497: at 25C

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.345	J	0.0835	1.00	5	10/18/2021 14:20	WG1757952

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.50		0.100	1.00	5	10/16/2021 18:06	WG1757857

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.460		1	10/18/2021 11:50	WG1757939

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.46	T8	1	10/15/2021 15:00	WG1757656

Sample Narrative:
L1416123-06 WG1757656: 8.46 at 20.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	301		10.0	1	10/17/2021 18:36	WG1757497

Sample Narrative:
L1416123-06 WG1757497: at 25C

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.692	J	0.0835	1.00	5	10/18/2021 14:23	WG1757952

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.42		0.100	1.00	5	10/16/2021 18:09	WG1757857

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.37		1	10/18/2021 11:53	WG1757939

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.67	T8	1	10/15/2021 15:00	WG1757656

Sample Narrative:
L1416123-07 WG1757656: 8.67 at 20.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	342		10.0	1	10/17/2021 18:36	WG1757497

Sample Narrative:
L1416123-07 WG1757497: at 25C

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.429	J	0.0835	1.00	5	10/18/2021 14:26	WG1757952

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.04		0.100	1.00	5	10/16/2021 18:12	WG1757857

Method Blank (MB)

(MB) R3718020-1 10/18/21 14:01

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

L1416123-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1416123-02 10/18/21 14:33 • (DUP) R3718020-3 10/18/21 14:38

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

L1416125-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1416125-03 10/18/21 15:39 • (DUP) R3718020-4 10/18/21 15:44

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

Laboratory Control Sample (LCS)

(LCS) R3718020-2 10/18/21 14:07

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

L1416125-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416125-04 10/18/21 16:05 • (MS) R3718020-5 10/18/21 16:10 • (MSD) R3718020-6 10/18/21 16:16

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 %
Hexavalent Chromium	20.0	U	11.8	15.2	59.1	76.1	1	75.0-125	J6	J3	25.1	20

L1416125-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1416125-04 10/18/21 16:05 • (MS) R3718020-7 10/18/21 16:21

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	665	U	1570	237	50	75.0-125	J5

L1414970-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1414970-03 10/15/21 15:00 • (DUP) R3717054-2 10/15/21 15:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.56	7.60	1	0.528		1

Sample Narrative:

OS: 7.56 at 20.9C

DUP: 7.6 at 20.9C

L1415598-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1415598-02 10/15/21 15:00 • (DUP) R3717054-3 10/15/21 15:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	11.0	11.0	1	0.000		1

Sample Narrative:

OS: 10.99 at 20.6C

DUP: 10.99 at 20.8C

Laboratory Control Sample (LCS)

(LCS) R3717054-1 10/15/21 15:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	10.1	101	99.0-101	

Sample Narrative:

LCS: 10.05 at 20.5C

Method Blank (MB)

(MB) R3717562-1 10/17/21 18:36

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

L1416123-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1416123-03 10/17/21 18:36 • (DUP) R3717562-3 10/17/21 18:36

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	313	315	1	0.637		20

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

L1416125-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1416125-02 10/17/21 18:36 • (DUP) R3717562-4 10/17/21 18:36

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2090	1920	1	8.41		20

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

Laboratory Control Sample (LCS)

(LCS) R3717562-2 10/17/21 18:36

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	276	103	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3717616-1 10/16/21 12:26

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) R3717616-2 10/16/21 12:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	109	109	80.0-120	
Cadmium	100	105	105	80.0-120	
Copper	100	109	109	80.0-120	
Lead	100	105	105	80.0-120	
Nickel	100	107	107	80.0-120	
Selenium	100	106	106	80.0-120	
Silver	20.0	18.9	94.5	80.0-120	
Zinc	100	102	102	80.0-120	

L1416124-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416124-02 10/16/21 12:31 • (MS) R3717616-5 10/16/21 12:41 • (MSD) R3717616-6 10/16/21 12:44

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	427	608	540	181	113	1	75.0-125	V		11.9	20
Cadmium	100	0.338	101	104	100	104	1	75.0-125			3.67	20
Copper	100	15.0	114	119	99.3	104	1	75.0-125			4.20	20
Lead	100	13.1	114	113	101	99.7	1	75.0-125			0.975	20
Nickel	100	26.2	126	127	99.4	101	1	75.0-125			1.41	20
Selenium	100	1.74	102	106	101	104	1	75.0-125			3.28	20
Silver	20.0	U	18.7	19.3	93.5	96.6	1	75.0-125			3.27	20
Zinc	100	39.8	123	127	83.0	87.4	1	75.0-125			3.58	20

Method Blank (MB)

(MB) R3717952-1 10/18/21 14:02

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) R3717952-2 10/18/21 14:04 • (LCSD) R3717952-3 10/18/21 14:07

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	0.988	0.993	98.8	99.3	80.0-120			0.595	20

Method Blank (MB)

(MB) R3717337-1 10/16/21 13:25

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) R3717337-2 10/16/21 13:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	103	103	80.0-120	

L1416124-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416124-02 10/16/21 13:32 • (MS) R3717337-5 10/16/21 13:42 • (MSD) R3717337-6 10/16/21 13:45

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	8.63	101	105	92.6	96.3	5	75.0-125			3.60	20

Method Blank (MB)

(MB) R3717385-1 10/16/21 16:51

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) R3717385-2 10/16/21 16:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	87.8	87.8	80.0-120	

L1416099-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416099-03 10/16/21 16:58 • (MS) R3717385-5 10/16/21 17:08 • (MSD) R3717385-6 10/16/21 17:12

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	5.16	84.2	88.7	79.0	83.5	5	75.0-125			5.21	20

Method Blank (MB)

(MB) R3719586-2 10/17/21 16:39

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)	*100*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3719586-1 10/17/21 15:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.20	94.5	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*100*	*77.0-120*	

Method Blank (MB)

(MB) R3719218-3 10/17/21 09:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*112*			*75.0-131*
(S) 4-Bromofluorobenzene	*101*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*92.9*			*70.0-130*

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

(LCS) R3719218-1 10/17/21 07:59 • (LCSD) R3719218-2 10/17/21 08:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.127	0.123	102	98.4	70.0-123			3.20	20
Ethylbenzene	0.125	0.129	0.125	103	100	74.0-126			3.15	20
Toluene	0.125	0.125	0.123	100	98.4	75.0-121			1.61	20
1,2,4-Trimethylbenzene	0.125	0.123	0.122	98.4	97.6	70.0-126			0.816	20
1,3,5-Trimethylbenzene	0.125	0.124	0.122	99.2	97.6	73.0-127			1.63	20
Xylenes, Total	0.375	0.380	0.382	101	102	72.0-127			0.525	20
(S) Toluene-d8				*107*	*107*	*75.0-131*				
(S) 4-Bromofluorobenzene				*104*	*106*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*98.8*	*96.9*	*70.0-130*				

L1416126-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416126-05 10/17/21 15:17 • (MS) R3719218-4 10/17/21 15:55 • (MSD) R3719218-5 10/17/21 16:14

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	U	0.103	0.0678	82.4	54.2	1	10.0-149		J3	41.2	37
Ethylbenzene	0.125	U	0.107	0.0708	85.6	56.6	1	10.0-160		J3	40.7	38
Toluene	0.125	U	0.115	0.0745	92.0	59.6	1	10.0-156		J3	42.7	38
1,2,4-Trimethylbenzene	0.125	U	0.105	0.0781	84.0	62.5	1	10.0-160			29.4	36
1,3,5-Trimethylbenzene	0.125	0.00643	0.106	0.0738	79.7	53.9	1	10.0-160			35.8	38
Xylenes, Total	0.375	U	0.331	0.225	88.3	60.0	1	10.0-160		J3	38.1	38
(S) Toluene-d8					*112*	*110*		*75.0-131*				
(S) 4-Bromofluorobenzene					*101*	*101*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*89.1*	*87.1*		*70.0-130*				

Method Blank (MB)

(MB) R3718051-1 10/18/21 13:23

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	0.825	J	0.274	4.00
(S) o-Terphenyl	*49.7*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3718051-2 10/18/21 13:36

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	37.2	74.4	50.0-150	
(S) o-Terphenyl			*58.3*	*18.0-148*	

L1416123-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416123-04 10/18/21 17:00 • (MS) R3718051-3 10/18/21 17:14 • (MSD) R3718051-4 10/18/21 17:27

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	48.5	14.0	58.8	46.5	92.4	67.0	1	50.0-150		J3	23.4	20
(S) o-Terphenyl					*33.1*	*31.7*		*18.0-148*				

Method Blank (MB)

(MB) R3718052-2 10/18/21 14:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	*60.9*			*14.0-149*
(S) 2-Fluorobiphenyl	*84.7*			*34.0-125*
(S) p-Terphenyl-d14	*109*			*23.0-120*

Laboratory Control Sample (LCS)

(LCS) R3718052-1 10/18/21 14:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0733	91.6	50.0-126	
Acenaphthene	0.0800	0.0681	85.1	50.0-120	
Acenaphthylene	0.0800	0.0736	92.0	50.0-120	
Benzo(a)anthracene	0.0800	0.0746	93.3	45.0-120	
Benzo(a)pyrene	0.0800	0.0700	87.5	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0702	87.8	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0687	85.9	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0692	86.5	49.0-125	
Chrysene	0.0800	0.0738	92.3	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0716	89.5	47.0-125	
Fluoranthene	0.0800	0.0781	97.6	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3718052-1 10/18/21 14:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0730	91.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0718	89.8	46.0-125	
Naphthalene	0.0800	0.0683	85.4	50.0-120	
Phenanthrene	0.0800	0.0723	90.4	47.0-120	
Pyrene	0.0800	0.0667	83.4	43.0-123	
1-Methylnaphthalene	0.0800	0.0746	93.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0710	88.8	50.0-120	
2-Chloronaphthalene	0.0800	0.0672	84.0	50.0-120	
(S) Nitrobenzene-d5			*64.4*	*14.0-149*	
(S) 2-Fluorobiphenyl			*91.4*	*34.0-125*	
(S) p-Terphenyl-d14			*112*	*23.0-120*	

L1416095-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416095-04 10/18/21 16:00 • (MS) R3718052-3 10/18/21 16:18 • (MSD) R3718052-4 10/18/21 16:36

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0792	U	0.0604	0.0615	76.3	77.7	1	10.0-145			1.80	30
Acenaphthene	0.0792	U	0.0569	0.0595	71.8	75.1	1	14.0-127			4.47	27
Acenaphthylene	0.0792	U	0.0607	0.0639	76.6	80.7	1	21.0-124			5.14	25
Benzo(a)anthracene	0.0792	U	0.0599	0.0639	75.6	80.7	1	10.0-139			6.46	30
Benzo(a)pyrene	0.0792	U	0.0588	0.0620	74.2	78.3	1	10.0-141			5.30	31
Benzo(b)fluoranthene	0.0792	U	0.0566	0.0594	71.5	75.0	1	10.0-140			4.83	36
Benzo(g,h,i)perylene	0.0792	U	0.0571	0.0597	72.1	75.4	1	10.0-140			4.45	33
Benzo(k)fluoranthene	0.0792	U	0.0565	0.0590	71.3	74.5	1	10.0-137			4.33	31
Chrysene	0.0792	U	0.0595	0.0622	75.1	78.5	1	10.0-145			4.44	30
Dibenz(a,h)anthracene	0.0792	U	0.0608	0.0629	76.8	79.4	1	10.0-132			3.40	31
Fluoranthene	0.0792	U	0.0635	0.0667	80.2	84.2	1	10.0-153			4.92	33
Fluorene	0.0792	U	0.0624	0.0633	78.8	79.9	1	11.0-130			1.43	29
Indeno(1,2,3-cd)pyrene	0.0792	U	0.0601	0.0628	75.9	79.3	1	10.0-137			4.39	32
Naphthalene	0.0792	0.0149	0.0928	0.0998	98.4	107	1	10.0-135			7.27	27
Phenanthrene	0.0792	U	0.0587	0.0612	74.1	77.3	1	10.0-144			4.17	31
Pyrene	0.0792	U	0.0552	0.0576	69.7	72.7	1	10.0-148			4.26	35
1-Methylnaphthalene	0.0792	U	0.0659	0.0693	83.2	87.5	1	10.0-142			5.03	28
2-Methylnaphthalene	0.0792	0.00499	0.0690	0.0723	80.8	85.0	1	10.0-137			4.67	28
2-Chloronaphthalene	0.0792	U	0.0559	0.0591	70.6	74.6	1	29.0-120			5.57	24
(S) Nitrobenzene-d5					*73.2*	*61.6*		*14.0-149*				
(S) 2-Fluorobiphenyl					*83.5*	*85.1*		*34.0-125*				
(S) p-Terphenyl-d14					*101*	*100*		*23.0-120*				

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.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

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 Account: CAERUSPCO
Address: 1401 Blake St. Denver, CO 80202	
Report To: Steve Sivigliano	Email To: steve.sivigliano@camposepc.com
Copy To: Evan Mason - evan.mason@camposepc.com	Site Collection Info/Address:
Customer Project Name/Number: OL34	State: / County/City: Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET
Phone: 970-619-0600 Email: same as above	Site/Facility ID #: OL34 — Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): Evan Mason	Purchase Order #: Quote #: — DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: — 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: _____

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

Container Preservative Type **

Lab Project Manager:

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

Analyses

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	COGCC Table 915-1	pH, EC, SAR, Arsenic, Boron (Hot Water Sol.)
20211007-OL34(FL-SEP)@6'	SL	Grab	10/7/21	1200				2	X	
20211007-OL34(FL-WELL)@6'		↓		1215				2	X	
20211007-OL34(SEP-STOCK)		Comp		1230				2	X	
20211007-OL34(WELL-STOCK)		Comp		1245				2	X	
20211007-OL34(BG-S)@.5'		Grab		1300				1		X
20211007-OL34(BG-W)@1'		↓		1315				1		X
20211007-OL34(BG-N)@1.5'	↓	↓	↓	1330				1		X

Lab Profile/Line:

Lab Sample Receipt Checklist:

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

LAB USE ONLY:
Lab Sample # / Comments:
L1416123
-01
-02
-03
-04
-05
-06

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: IR60T
Cooler 1 Temp Upon Receipt: 4 oC
Cooler 1 Therm Corr. Factor: 0 oC
Cooler 1 Corrected Temp: 4 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time: 10/8/21 1630	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time: 10/9/21 930
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

B098

Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____