October 19, 2023

Jake Janicek
EHS Specialist
Caerus Oil & Gas LLC
jjanicek@caerusoilandgas.com

Report of Work Completed – Well P&A

ECMC Location Name (ID)	DUNN-67S92W/4SESE (334855)
Operator Location Name	P4E
ECMC Well Name	Hill 10-4B
ECMC Remediation Project Number	28630
Legal Description	SESE Sec. 4 T7S-R92W
Coordinates (Lat/Long)	39.469740 / -107.663150
County	Garfield County, Colorado

Mr. Janicek,

Confluence Compliance Companies, LLC (Confluence) prepared this Report of Work Completed (ROWC) for Caerus Oil & Gas LLC (Caerus) to document findings of site assessments conducted in association with well plugging and abandonment (P&A) of the Hill 10-4B (API #05-045-09214) and associated production lines at the P4E well pad (Location). The Location is 7.6 miles southeast of Rifle, Colorado, in Garfield County as illustrated in the attached Topographic Map. Additional information on the Location and the associated remediation project is provided in the title block above, the attached Site Diagrams, and laboratory analytical reports. This ROWC provides background on the Location, methods used to complete the assessment, results of the assessment, and recommendations for how to proceed with this information.

Background

On March 3, 2023, Caerus submitted Energy & Carbon Management Commission (ECMC) Form 27 Document 403337130 to comply with notification requirements and open Remediation Project 28630. The form and associated investigation plan were approved on April 7, 2023.

On May 9, 2023, following the decommissioning and removal of the Hill 10-4B flowline and dumpline, personnel from a third-party consultant completed an initial site assessment at the Location. Soil samples were collected from the base of four excavations at 4 to 5 feet below ground surface (bgs) where flowline and dumpline connections to production equipment were removed. Samples were submitted for laboratory analysis of all constituents listed on ECMC Table 915-1. Analytical results indicated compliance for all samples as compared to ECMC Table 915-1 Residential Soil Screening Levels (RSSLs), except for arsenic in all samples. Arsenic concentrations ranged from 4.28 to 4.95 milligrams per kilogram (mg/kg). Additionally, four background soil samples were collected from nearby, undisturbed, non-impacted areas and submitted for laboratory analysis to establish native levels of inorganic constituents of concern. Analytical results indicated arsenic concentrations ranging from 3.98 to 5.89 mg/kg. Laboratory

analytical reports are attached and summarized in the Laboratory Results Summary Table. Soil sample locations are presented in the attached Site Diagrams.

Methodology

On July 24, 2023, following cut and cap operations for Hill 10-4B wellhead, Confluence personnel completed a post-P&A site assessment. One soil sample was collected from the base of the excavation adjacent to the capped well at 8 feet bgs. The soil sample was characterized using visual and olfactory observations and field screened using a photoionization detector (PID).

The sample was collected in laboratory provided jars, immediately placed on ice, and shipped under a completed chain-of-custody form to Pace Analytical Services (Pace) for analysis of ECMC Table 915-1 soil constituents of concern. Soil sample locations are presented 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 site investigation 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 silty clay. Groundwater is expected to flow northeast toward Dry Hollow Creek and ultimately to the Colorado River, located 4.8 miles north of the Location. Division of Water Resources well permit 286196, located approximately 0.47 miles east-northeast of the Location, lists static depth to groundwater at 63 feet bgs. The well sits at approximately equal elevation to the Location. Based on this information, it is estimated that depth to groundwater at the Location is greater than 50 feet bgs. No groundwater was observed during sampling activities.

Wellhead Assessment Results

Field screening results indicated no hydrocarbon staining or odor within the wellhead excavation. The PID reading was 2.3 parts per million (ppm). Laboratory results of the soil sample indicate compliance with ECMC Table 915-1 RSSLs except for arsenic at a concentration of 4.43 mg/kg.

Analysis and Recommendations

Based on the estimated depth to groundwater, Confluence recommends that Caerus request to compare analytical results for this project to ECMC Table 915-1 RSSLs as no reasonable pathway to groundwater appears to exist.

Assuming the proposed request for comparison to ECMC Table 915-1 RSSLs is approved, arsenic is the only constituent of concern detected at the Hill 10-4B wellhead and associated equipment exceeding ECMC Table 915-1 RSSLs.

Analytical results for background samples indicate native levels of arsenic ranging from 3.98 to 5.89 mg/kg. Based on these results, Confluence recommends Caerus request an alternative allowable limit of 5.89 mg/kg for arsenic per ECMC Table 915-1 Footnote 1.

Assuming the proposed request to use ECMC Table 915-1 Footnote 1 is approved, all soil samples are compliant with ECMC Table 915-1 RSSLs. Based on these investigative results, Confluence concludes historical impacts are not present at the Hill 10-4B wellhead or associated equipment and recommends Caerus request closure of Remediation Project Number 28630 with a no further action 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.

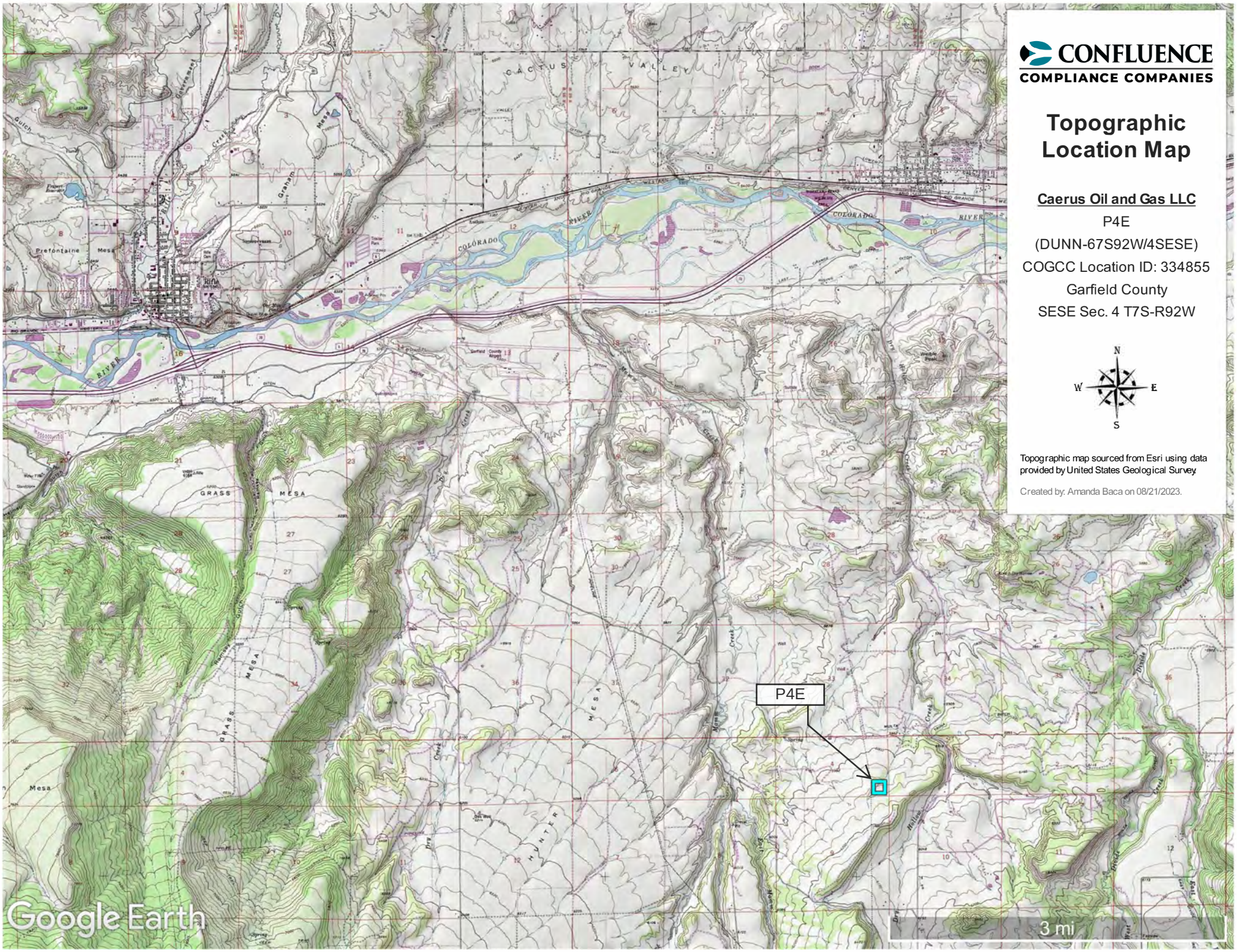
Regards,

Steve Sivigliano
Senior Project Manager
(970) 619-0600
steve.sivigliano@confluence-cc.com

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

Attachments

- Topographic Location Diagram
- Site Diagram – Initial Assessment
- Site Diagram – Post P&A Assessment
- Analytical Results Summary Table – Soil
- Laboratory Reports



CONFLUENCE
COMPLIANCE COMPANIES

Topographic Location Map

Caerus Oil and Gas LLC

P4E

(DUNN-67S92W/4SESE)

COGCC Location ID: 334855

Garfield County

SESE Sec. 4 T7S-R92W

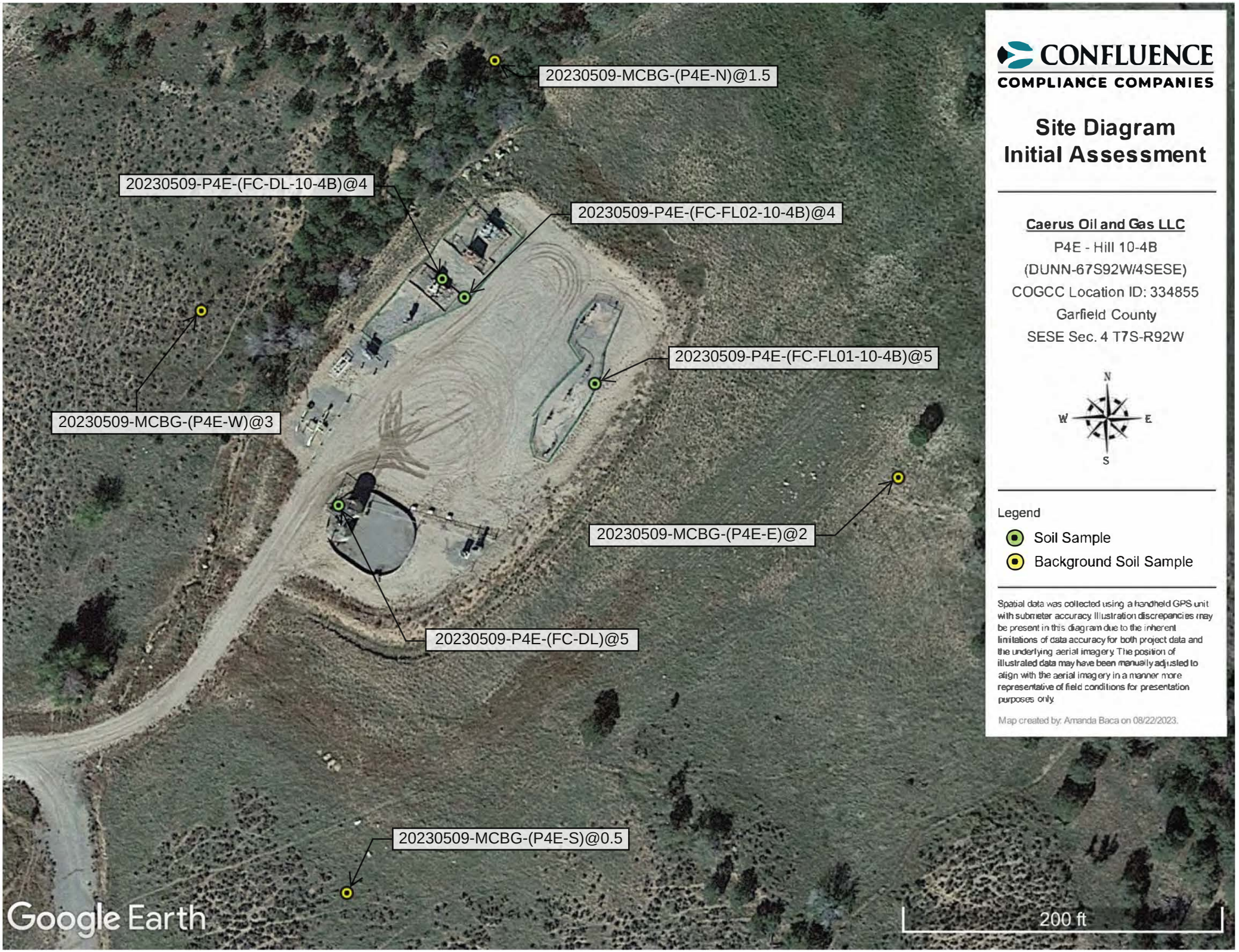
N

W E

S

Topographic map sourced from Esri using data provided by United States Geological Survey.

Created by: Amanda Baca on 08/21/2023.



CONFLUENCE
COMPLIANCE COMPANIES

Site Diagram
Initial Assessment

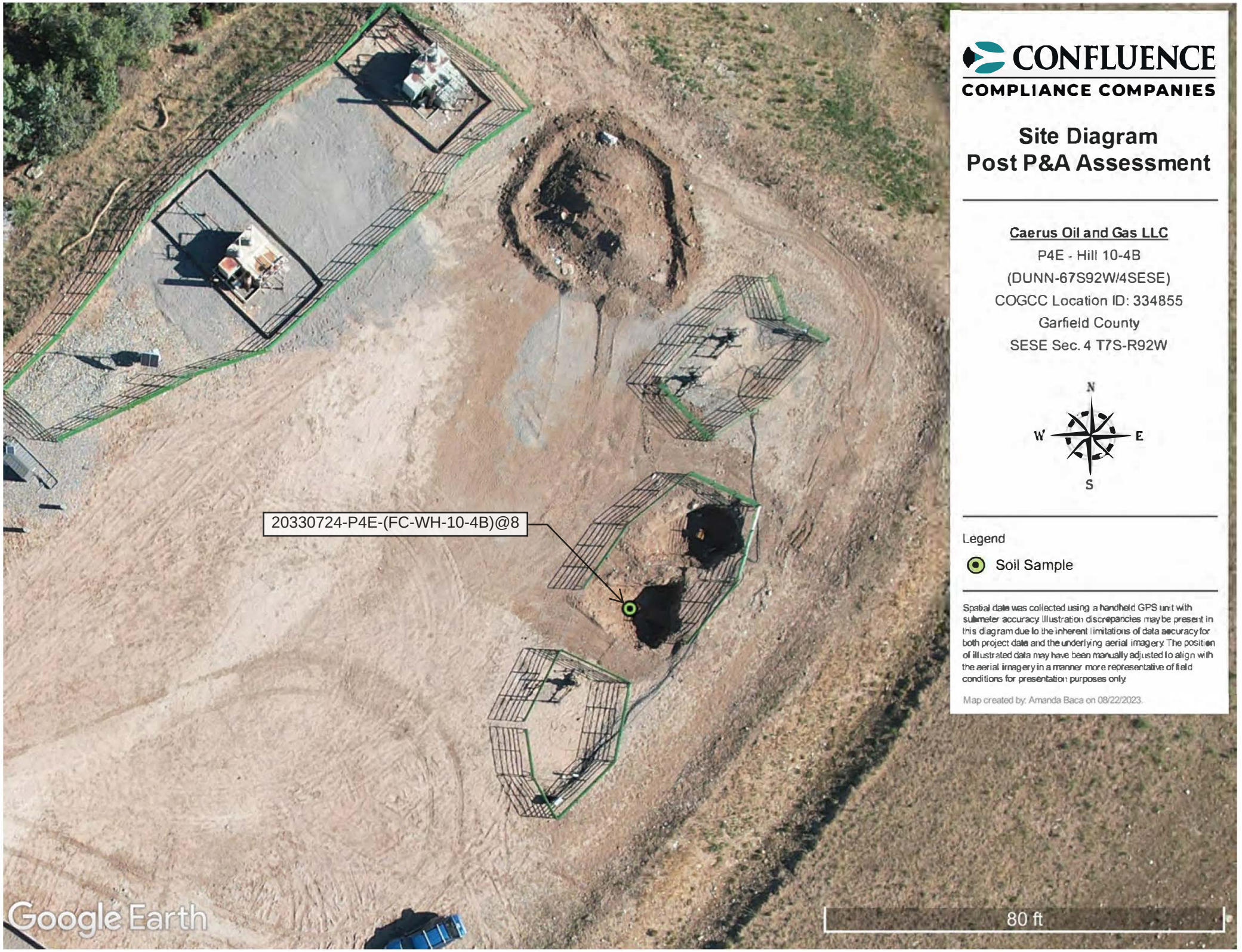
Caerus Oil and Gas LLC
P4E - Hill 10-4B
(DUNN-67S92W/4SESE)
COGCC Location ID: 334855
Garfield County
SESE Sec. 4 T7S-R92W

N
W E
S

Legend
- Soil Sample
- Background Soil Sample

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

Map created by: Amanda Baca on 08/22/2023.



CONFLUENCE
COMPLIANCE COMPANIES

Site Diagram
Post P&A Assessment

Caerus Oil and Gas LLC
P4E - Hill 10-4B
(DUNN-67S92W/4SESE)
COGCC Location ID: 334855
Garfield County
SESE Sec. 4 T7S-R92W

N
W E
S

Legend

Soil Sample

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

Map created by: Amanda Baca on 08/22/2023.

CONFLUENCE

Laboratory Results Summary Table - Soil
HILL 10-4B

8/18/2023

					Organic Compounds (mg/kg [ppm])																									
ECMC Soil Screening Levels																														
ECMC Table 915-1 Residential -->				NA	500	NA	NA	NA	1.2	490	5.8	58	30	27	360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	18	24	2	180
Sample Date	Solid/Soil Source (Equipment) [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
7/24/2023	Wellhead	-8	**20230724-P4E-(FC-WH-10-4B)@8**	**2.3**	**13.53**	**0.0328**	**5.38**	**8.12**	*<0.00100*	*<0.00500*	*<0.00250*	*<0.00650*	*<0.00500*	*<0.00500*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.0200*	**0.00461**	*<0.0200*	*<0.00600*
5/9/2023	Flowline	-5	**20230509-P4E-(FC-FL01-10-4B)@5**	**35.7**	**35.9**	**0.189**	**14.5**	**21.2**	*<0.00100*	**0.00258**	**0.00245**	**0.00568**	*<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*	*<0.0200*	*<0.0200*	*<0.0200*	*<0.00600*
5/9/2023	Flowline	-4	**20230509-P4E-(FC-FL02-10-4B)@4**	**223**	**103.2**	**0.0308**	**32.2**	**71.0**	*<0.00100*	**0.00230**	**0.00319**	**0.00495**	*<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*	*<0.0200*	*<0.0200*	*<0.0200*	*<0.00600*
5/9/2023	Dumpline	-4	**20230509-P4E-(FC-DL-10-4B)@4**	0.0	**1.07**	**0.0341**	*<4.00*	**1.04**	*<0.00100*	**0.00255**	**0.00358**	**0.00633**	*<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*	*<0.0200*	*<0.0200*	*<0.0200*	*<0.00600*
5/9/2023	Dumpline	-5	**20230509-P4E-(FC-DL)@5**	**0.8**	**2.64**	*<0.100*	*<4.00*	**2.64**	*<0.00100*	**0.00265**	**0.00350**	**0.00630**	*<0.00500*	*<0.00500*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	**0.00482**	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.0200*	*<0.0200*	*<0.0200*	*<0.00600*
5/9/2023	Background	-1.5	**20230509-MCBG-(P4E-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*
5/9/2023	Background	-2	**20230509-MCBG-(P4E-E)@2**	*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*
5/9/2023	Background	-0.5	**20230509-MCBG-(P4E-S)@0.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
5/9/2023	Background	-3	**20230509-MCBG-(P4E-W)@3**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*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
HILL 10-4B

8/18/2023

ECMC Soil Screening Levels					Soil Suitability for Reclamation				Metals (mg/kg [ppm])										
ECMC Table 915-1 Residential -->				NA	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	PID (ppm)	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
7/24/2023	Wellhead	-8	20230724-P4E-(FC-WH-10-4B)@8	2.3	0.273	0.545	8.08	0.314	4.43	396	0.273	<1.00	11.6	11.5	12.4	0.376	<0.500	46.5
5/9/2023	Flowline	-5	20230509-P4E-(FC-FL01-10-4B)@5	35.7	0.253	0.278	8.00	0.282	4.95	166	0.210	<1.00	9.50	8.87	11.1	0.446	<0.500	36.4
5/9/2023	Flowline	-4	20230509-P4E-(FC-FL02-10-4B)@4	223	0.173	0.422	7.90	0.295	4.65	667	0.208	<1.00	9.71	9.46	11.3	0.380	<0.500	41.0
5/9/2023	Dumpline	-4	20230509-P4E-(FC-DL-10-4B)@4	0.0	0.214	0.194	8.12	0.318	4.28	251	0.234	<1.00	12.0	10.4	12.9	0.390	<0.500	50.1
5/9/2023	Dumpline	-5	20230509-P4E-(FC-DL)@5	0.8	0.178	0.273	8.18	0.476	4.71	153	0.206	<1.00	9.98	9.10	11.9	0.480	<0.500	41.6
5/9/2023	Background	-1.5	20230509-MCBG-(P4E-N)@1.5	NA	0.201	0.172	7.89	0.297	3.98	200	0.208	0.441	10.4	9.34	11.3	0.395	<0.500	43.5
5/9/2023	Background	-2	20230509-MCBG-(P4E-E)@2	NA	0.176	0.160	7.47	0.311	5.89	283	0.230	<1.00	11.0	9.97	12.0	0.404	<0.500	42.1
5/9/2023	Background	-0.5	20230509-MCBG-(P4E-S)@0.5	NA	0.119	0.123	7.74	0.325	4.09	153	0.185	<1.00	11.4	10.2	12.8	0.397	<0.500	44.7
5/9/2023	Background	-3	20230509-MCBG-(P4E-W)@3	NA	0.170	0.389	7.78	0.181	4.52	181	0.248	<1.00	11.7	10.2	14.0	0.376	<0.500	46.0

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

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

ANALYTICAL REPORT

August 04, 2023

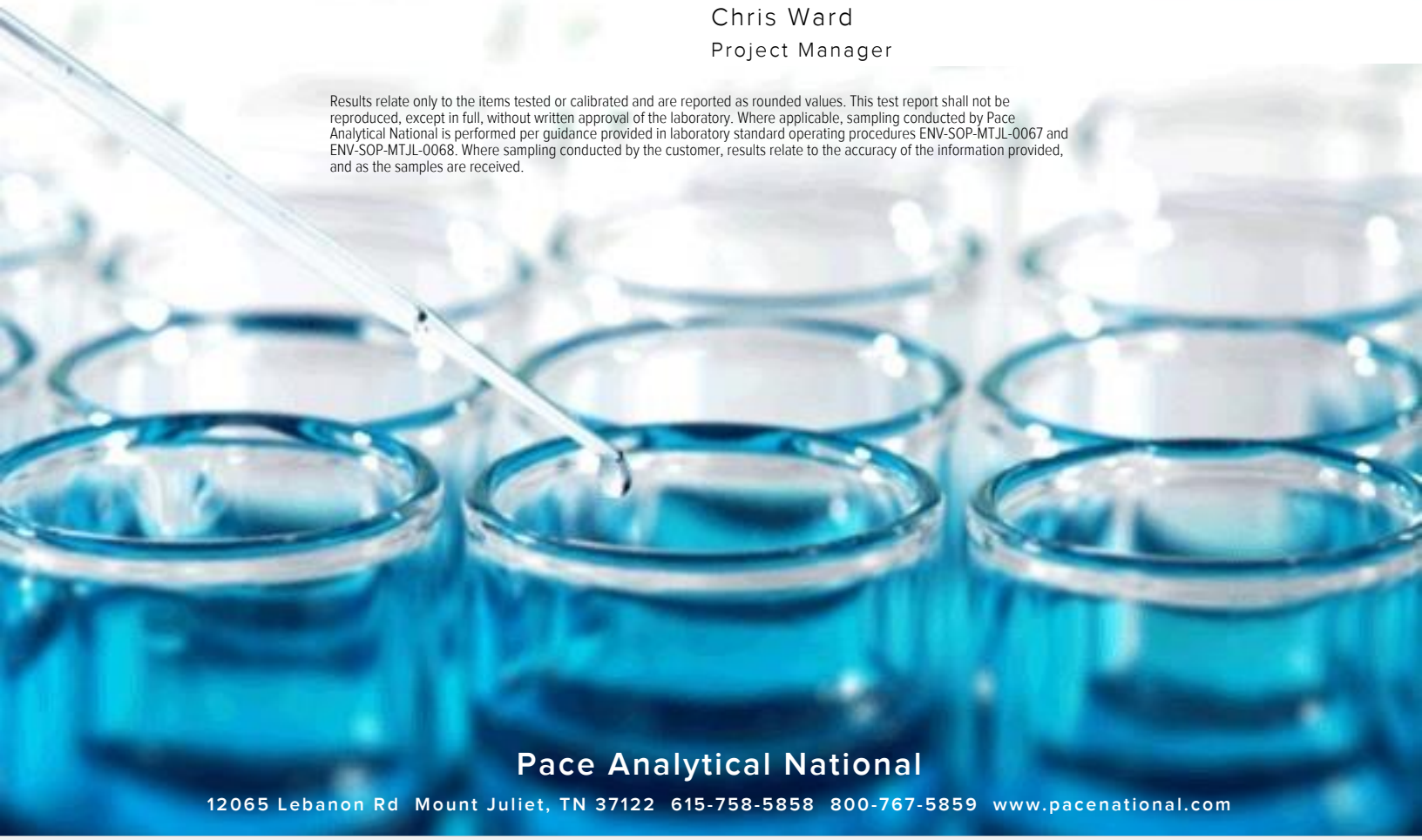
Caerus Oil and Gas

Sample Delivery Group:	L1639206
Samples Received:	07/26/2023
Project Number:	
Description:	P4E Wellhead 10-4B P&A

Report To: Blair Rollins
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward
Project Manager



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

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SAMPLE SUMMARY

20230724-P4E-(FC-WH-10-4B)@8 L1639206-01 Solid

Collected by: Olivia Floyd
Collected date/time: 07/24/23 08:50
Received date/time: 07/26/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2104745	1	08/02/23 09:48	08/02/23 09:48	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2103429	1	07/28/23 09:00	07/31/23 06:09	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2104666	1	07/31/23 09:14	07/31/23 13:14	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2103969	1	07/29/23 16:30	07/29/23 18:23	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2106737	1	08/03/23 10:58	08/03/23 22:17	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2103220	5	07/28/23 07:56	08/02/23 15:23	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2104462	1	07/27/23 16:10	07/31/23 03:39	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2104099	1	07/27/23 16:10	07/29/23 23:31	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2103927	1	07/30/23 06:56	07/30/23 15:02	JSS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2105183	1	08/01/23 08:43	08/01/23 20:14	AGW	Mt. Juliet, TN

ANALYTICAL REPORT

May 19, 2023

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:	L1614573
Samples Received:	05/10/2023
Project Number:	
Description:	P4E
Site:	P4E
Report To:	Brett M. , Jake J. , Blair R. 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward

Chris Ward
Project Manager

Pace Analytical National

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

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20230509-P4E-(FC-FL01-10-4B)@5 L1614573-01 Solid

Collected by: S. Sivigliano | Collected date/time: 05/09/23 09:00 | Received date/time: 05/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2057987	1	05/17/23 12:19	05/17/23 12:19	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2057948	1	05/12/23 10:28	05/15/23 23:37	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2057827	1	05/11/23 12:35	05/11/23 17:39	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2059904	1	05/15/23 10:13	05/16/23 11:43	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2062149	1	05/18/23 09:21	05/18/23 20:12	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2057983	5	05/11/23 11:50	05/12/23 13:35	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2059385	1	05/11/23 17:46	05/13/23 13:52	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2060108	1	05/11/23 17:46	05/15/23 15:02	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2059883	1	05/15/23 15:56	05/16/23 03:38	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2062100	1	05/18/23 11:40	05/18/23 19:17	JRM	Mt. Juliet, TN

20230509-P4E-(FC-FL01-4-16)@5 L1614573-02 Solid

Collected by: S. Sivigliano | Collected date/time: 05/09/23 09:05 | Received date/time: 05/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2057987	1	05/17/23 12:21	05/17/23 12:21	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2057948	1	05/12/23 10:28	05/15/23 23:42	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2057827	1	05/11/23 12:35	05/11/23 17:39	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2059904	1	05/15/23 10:13	05/16/23 11:43	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2062149	1	05/18/23 09:21	05/18/23 20:20	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2057983	5	05/11/23 11:50	05/12/23 13:39	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2059385	1	05/11/23 17:46	05/13/23 14:13	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2060108	1	05/11/23 17:46	05/15/23 15:21	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2059883	1	05/15/23 15:56	05/16/23 02:11	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2060521	1	05/17/23 07:58	05/17/23 14:58	JRM	Mt. Juliet, TN

20230509-P4E-(FC-DL-10-4B)@4 L1614573-03 Solid

Collected by: S. Sivigliano | Collected date/time: 05/09/23 09:20 | Received date/time: 05/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2057987	1	05/17/23 12:24	05/17/23 12:24	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2057948	1	05/12/23 10:28	05/15/23 23:47	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2057827	1	05/11/23 12:35	05/11/23 17:39	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2059904	1	05/15/23 10:13	05/16/23 11:43	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2062149	1	05/18/23 09:21	05/18/23 20:23	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2057983	5	05/11/23 11:50	05/12/23 13:56	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2059385	1	05/11/23 17:46	05/13/23 14:33	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2060108	1	05/11/23 17:46	05/15/23 15:39	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2059883	1	05/15/23 15:56	05/16/23 01:46	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2060521	1	05/17/23 07:58	05/17/23 15:18	JRM	Mt. Juliet, TN

20230509-P4E-(FC-DL-4-16)@4 L1614573-04 Solid

Collected by: S. Sivigliano | Collected date/time: 05/09/23 09:25 | Received date/time: 05/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2057987	1	05/17/23 12:27	05/17/23 12:27	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2057948	1	05/12/23 10:28	05/15/23 23:52	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2057827	1	05/11/23 12:35	05/11/23 17:39	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2059904	1	05/15/23 10:13	05/16/23 11:43	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2062149	1	05/18/23 09:21	05/18/23 20:26	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2057983	5	05/11/23 11:50	05/12/23 13:19	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2059723	100	05/11/23 17:46	05/14/23 21:03	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2060108	8	05/11/23 17:46	05/15/23 17:51	KSD	Mt. Juliet, TN

20230509-P4E-(FC-DL-4-16)@4 L1614573-04 Solid

Collected by: S. Sivigliano | Collected date/time: 05/09/23 09:25 | Received date/time: 05/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2059883	1	05/15/23 15:56	05/16/23 03:13	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2062100	1	05/18/23 11:40	05/18/23 19:36	JRM	Mt. Juliet, TN

20230509-P4E-(FC-SEP-4-16)@1 L1614573-05 Solid

Collected by: S. Sivigliano | Collected date/time: 05/09/23 09:30 | Received date/time: 05/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2057987	1	05/17/23 12:30	05/17/23 12:30	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2057948	1	05/12/23 10:28	05/15/23 23:57	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2057827	1	05/11/23 12:35	05/11/23 17:39	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2059904	1	05/15/23 10:13	05/16/23 11:43	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2062149	1	05/18/23 09:21	05/18/23 20:29	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2057983	5	05/11/23 11:50	05/12/23 13:59	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2059385	1	05/11/23 17:46	05/13/23 14:54	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2060108	1	05/11/23 17:46	05/15/23 15:58	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2059883	5	05/15/23 15:56	05/16/23 03:50	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2062100	1	05/18/23 11:40	05/18/23 21:35	JRM	Mt. Juliet, TN

20230509-P4E-(FC-DL)@5 L1614573-06 Solid

Collected by: S. Sivigliano | Collected date/time: 05/09/23 08:55 | Received date/time: 05/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2057987	1	05/17/23 12:33	05/17/23 12:33	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2057948	1	05/12/23 10:28	05/16/23 00:03	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2057827	1	05/11/23 12:35	05/11/23 17:39	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2059904	1	05/15/23 10:13	05/16/23 11:43	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2062149	1	05/18/23 09:21	05/18/23 20:32	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2057983	5	05/11/23 11:50	05/12/23 14:06	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2059385	1	05/11/23 17:46	05/13/23 15:14	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2060108	1	05/11/23 17:46	05/15/23 16:17	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2059883	1	05/15/23 15:56	05/16/23 03:00	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2060521	1	05/17/23 07:58	05/17/23 16:16	JRM	Mt. Juliet, TN

20230509-P4E-(FC-FL02-10-4B)@4 L1614573-07 Solid

Collected by: S. Sivigliano | Collected date/time: 05/09/23 09:10 | Received date/time: 05/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2057987	1	05/17/23 12:36	05/17/23 12:36	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2057948	1	05/12/23 10:28	05/16/23 00:08	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2058472	1	05/13/23 09:34	05/13/23 19:12	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2059904	1	05/15/23 10:13	05/16/23 11:43	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2062149	1	05/18/23 09:21	05/18/23 20:35	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2057983	5	05/11/23 11:50	05/12/23 14:09	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2059385	1	05/11/23 17:46	05/13/23 15:35	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2060108	1	05/11/23 17:46	05/15/23 16:36	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2059883	1	05/15/23 15:56	05/16/23 02:23	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2060521	1	05/17/23 07:58	05/17/23 16:55	JRM	Mt. Juliet, TN

SAMPLE SUMMARY

20230509-P4E-(FC-FL02-4-16)@4 L1614573-08 Solid

Collected by: S. Sivigliano
Collected date/time: 05/09/23 09:15
Received date/time: 05/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2057987	1	05/17/23 12:45	05/17/23 12:45	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2057948	1	05/12/23 10:28	05/16/23 00:13	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2058472	1	05/13/23 09:34	05/13/23 19:12	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2059904	1	05/15/23 10:13	05/16/23 11:43	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2062149	1	05/18/23 09:21	05/18/23 20:37	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2057983	5	05/11/23 11:50	05/12/23 14:12	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2059556	1	05/11/23 17:46	05/14/23 06:47	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2060108	1	05/11/23 17:46	05/15/23 16:55	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2059883	1	05/15/23 15:56	05/16/23 03:13	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2060521	1	05/17/23 07:58	05/17/23 16:36	JRM	Mt. Juliet, TN

CASE NARRATIVE

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

Chris Ward
Project Manager

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.278		1	05/17/2023 12:19	WG2057987

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	05/15/2023 23:37	WG2057948

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.00	T8	1	05/11/2023 17:39	WG2057827

Sample Narrative:

L1614573-01 WG2057827: 8 at 20.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	253		10.0	1	05/16/2023 11:43	WG2059904

Sample Narrative:

L1614573-01 WG2059904: 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	0.282		0.0167	0.200	1	05/18/2023 20:12	WG2062149

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.95		0.100	1.00	5	05/12/2023 13:35	WG2057983
Barium	166		0.152	2.50	5	05/12/2023 13:35	WG2057983
Cadmium	0.210	J	0.0855	1.00	5	05/12/2023 13:35	WG2057983
Copper	9.50		0.132	5.00	5	05/12/2023 13:35	WG2057983
Lead	8.87		0.0990	2.00	5	05/12/2023 13:35	WG2057983
Nickel	11.1		0.197	2.50	5	05/12/2023 13:35	WG2057983
Selenium	0.446	J	0.180	2.50	5	05/12/2023 13:35	WG2057983
Silver	U		0.0865	0.500	5	05/12/2023 13:35	WG2057983
Zinc	36.4		0.740	25.0	5	05/12/2023 13:35	WG2057983

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	0.189		0.0217	0.100	1	05/13/2023 13:52	WG2059385
(S) a,a,a-Trifluorotoluene(FID)	*96.0*			*77.0-120*		*05/13/2023 13:52*	WG2059385

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	05/15/2023 15:02	WG2060108
Toluene	0.00258	J	0.00130	0.00500	1	05/15/2023 15:02	WG2060108
Ethylbenzene	0.00245	J	0.000737	0.00250	1	05/15/2023 15:02	WG2060108
Xylenes, Total	0.00568	J	0.000880	0.00650	1	05/15/2023 15:02	WG2060108
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/15/2023 15:02	WG2060108
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/15/2023 15:02	WG2060108
(S) Toluene-d8	*110*			*75.0-131*		*05/15/2023 15:02*	WG2060108
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*05/15/2023 15:02*	WG2060108
(S) 1,2-Dichloroethane-d4	*80.2*			*70.0-130*		*05/15/2023 15:02*	WG2060108

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	14.5		1.61	4.00	1	05/16/2023 03:38	WG2059883
C28-C36 Motor Oil Range	21.2		0.274	4.00	1	05/16/2023 03:38	WG2059883
(S) o-Terphenyl	*40.0*			*18.0-148*		*05/16/2023 03:38*	WG2059883

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	05/18/2023 19:17	WG2062100
Anthracene	U		0.00230	0.00600	1	05/18/2023 19:17	WG2062100
Benzo(a)anthracene	U		0.00173	0.00600	1	05/18/2023 19:17	WG2062100
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/18/2023 19:17	WG2062100
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/18/2023 19:17	WG2062100
Benzo(a)pyrene	U		0.00179	0.00600	1	05/18/2023 19:17	WG2062100
Chrysene	U		0.00232	0.00600	1	05/18/2023 19:17	WG2062100
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/18/2023 19:17	WG2062100
Fluoranthene	U		0.00227	0.00600	1	05/18/2023 19:17	WG2062100
Fluorene	U		0.00205	0.00600	1	05/18/2023 19:17	WG2062100
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/18/2023 19:17	WG2062100
1-Methylnaphthalene	U		0.00449	0.0200	1	05/18/2023 19:17	WG2062100
2-Methylnaphthalene	U		0.00427	0.0200	1	05/18/2023 19:17	WG2062100
Naphthalene	U		0.00408	0.0200	1	05/18/2023 19:17	WG2062100
Pyrene	U		0.00200	0.00600	1	05/18/2023 19:17	WG2062100
(S) p-Terphenyl-d14	*80.6*			*23.0-120*		*05/18/2023 19:17*	WG2062100
(S) Nitrobenzene-d5	*83.8*			*14.0-149*		*05/18/2023 19:17*	WG2062100
(S) 2-Fluorobiphenyl	*63.3*			*34.0-125*		*05/18/2023 19:17*	WG2062100

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.537		1	05/17/2023 12:21	WG2057987

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	05/15/2023 23:42	WG2057948

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.27	T8	1	05/11/2023 17:39	WG2057827

Sample Narrative:

L1614573-02 WG2057827: 8.27 at 20.6C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	191		10.0	1	05/16/2023 11:43	WG2059904

Sample Narrative:

L1614573-02 WG2059904: 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	0.328		0.0167	0.200	1	05/18/2023 20:20	WG2062149

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.71		0.100	1.00	5	05/12/2023 13:39	WG2057983
Barium	210		0.152	2.50	5	05/12/2023 13:39	WG2057983
Cadmium	0.196	J	0.0855	1.00	5	05/12/2023 13:39	WG2057983
Copper	9.57		0.132	5.00	5	05/12/2023 13:39	WG2057983
Lead	8.74		0.0990	2.00	5	05/12/2023 13:39	WG2057983
Nickel	11.2		0.197	2.50	5	05/12/2023 13:39	WG2057983
Selenium	0.368	J	0.180	2.50	5	05/12/2023 13:39	WG2057983
Silver	U		0.0865	0.500	5	05/12/2023 13:39	WG2057983
Zinc	38.1		0.740	25.0	5	05/12/2023 13:39	WG2057983

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	0.0556	J	0.0217	0.100	1	05/13/2023 14:13	WG2059385
(S) a,a,a-Trifluorotoluene(FID)	*94.7*			*77.0-120*		*05/13/2023 14:13*	WG2059385

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	05/15/2023 15:21	WG2060108
Toluene	0.00265	J	0.00130	0.00500	1	05/15/2023 15:21	WG2060108
Ethylbenzene	0.00300		0.000737	0.00250	1	05/15/2023 15:21	WG2060108
Xylenes, Total	0.00483	J	0.000880	0.00650	1	05/15/2023 15:21	WG2060108
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/15/2023 15:21	WG2060108
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/15/2023 15:21	WG2060108
(S) Toluene-d8	*112*			*75.0-131*		*05/15/2023 15:21*	WG2060108
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*05/15/2023 15:21*	WG2060108
(S) 1,2-Dichloroethane-d4	*79.5*			*70.0-130*		*05/15/2023 15:21*	WG2060108

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	05/16/2023 02:11	WG2059883
C28-C36 Motor Oil Range	0.722	B J	0.274	4.00	1	05/16/2023 02:11	WG2059883
(S) o-Terphenyl	*39.4*			*18.0-148*		*05/16/2023 02:11*	WG2059883

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	05/17/2023 14:58	WG2060521
Anthracene	U		0.00230	0.00600	1	05/17/2023 14:58	WG2060521
Benzo(a)anthracene	U		0.00173	0.00600	1	05/17/2023 14:58	WG2060521
Benzo(b)fluoranthene	U	J4	0.00153	0.00600	1	05/17/2023 14:58	WG2060521
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/17/2023 14:58	WG2060521
Benzo(a)pyrene	U		0.00179	0.00600	1	05/17/2023 14:58	WG2060521
Chrysene	U	J4	0.00232	0.00600	1	05/17/2023 14:58	WG2060521
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/17/2023 14:58	WG2060521
Fluoranthene	U		0.00227	0.00600	1	05/17/2023 14:58	WG2060521
Fluorene	U	J4	0.00205	0.00600	1	05/17/2023 14:58	WG2060521
Indeno(1,2,3-cd)pyrene	U	J4	0.00181	0.00600	1	05/17/2023 14:58	WG2060521
1-Methylnaphthalene	U		0.00449	0.0200	1	05/17/2023 14:58	WG2060521
2-Methylnaphthalene	U		0.00427	0.0200	1	05/17/2023 14:58	WG2060521
Naphthalene	U		0.00408	0.0200	1	05/17/2023 14:58	WG2060521
Pyrene	U	J4	0.00200	0.00600	1	05/17/2023 14:58	WG2060521
(S) p-Terphenyl-d14	*99.4*			*23.0-120*		*05/17/2023 14:58*	WG2060521
(S) Nitrobenzene-d5	*95.3*			*14.0-149*		*05/17/2023 14:58*	WG2060521
(S) 2-Fluorobiphenyl	*104*			*34.0-125*		*05/17/2023 14:58*	WG2060521

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.194		1	05/17/2023 12:24	WG2057987

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	05/15/2023 23:47	WG2057948

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.12	T8	1	05/11/2023 17:39	WG2057827

Sample Narrative:

L1614573-03 WG2057827: 8.12 at 19.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	214		10.0	1	05/16/2023 11:43	WG2059904

Sample Narrative:

L1614573-03 WG2059904: 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	0.318		0.0167	0.200	1	05/18/2023 20:23	WG2062149

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.28		0.100	1.00	5	05/12/2023 13:56	WG2057983
Barium	251		0.152	2.50	5	05/12/2023 13:56	WG2057983
Cadmium	0.234	J	0.0855	1.00	5	05/12/2023 13:56	WG2057983
Copper	12.0		0.132	5.00	5	05/12/2023 13:56	WG2057983
Lead	10.4		0.0990	2.00	5	05/12/2023 13:56	WG2057983
Nickel	12.9		0.197	2.50	5	05/12/2023 13:56	WG2057983
Selenium	0.390	J	0.180	2.50	5	05/12/2023 13:56	WG2057983
Silver	U		0.0865	0.500	5	05/12/2023 13:56	WG2057983
Zinc	50.1		0.740	25.0	5	05/12/2023 13:56	WG2057983

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	0.0341	J	0.0217	0.100	1	05/13/2023 14:33	WG2059385
(S) a,a,a-Trifluorotoluene(FID)	*97.3*			*77.0-120*		*05/13/2023 14:33*	WG2059385

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	05/15/2023 15:39	WG2060108
Toluene	0.00255	J	0.00130	0.00500	1	05/15/2023 15:39	WG2060108
Ethylbenzene	0.00358		0.000737	0.00250	1	05/15/2023 15:39	WG2060108
Xylenes, Total	0.00633	J	0.000880	0.00650	1	05/15/2023 15:39	WG2060108
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/15/2023 15:39	WG2060108
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/15/2023 15:39	WG2060108
(S) Toluene-d8	*111*			*75.0-131*		*05/15/2023 15:39*	WG2060108
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*05/15/2023 15:39*	WG2060108
(S) 1,2-Dichloroethane-d4	*83.3*			*70.0-130*		*05/15/2023 15:39*	WG2060108

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	J3 J6	1.61	4.00	1	05/16/2023 01:46	WG2059883
C28-C36 Motor Oil Range	1.04	B J	0.274	4.00	1	05/16/2023 01:46	WG2059883
(S) o-Terphenyl	*46.4*			*18.0-148*		*05/16/2023 01:46*	WG2059883

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	05/17/2023 15:18	WG2060521
Anthracene	U		0.00230	0.00600	1	05/17/2023 15:18	WG2060521
Benzo(a)anthracene	U		0.00173	0.00600	1	05/17/2023 15:18	WG2060521
Benzo(b)fluoranthene	U	J4	0.00153	0.00600	1	05/17/2023 15:18	WG2060521
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/17/2023 15:18	WG2060521
Benzo(a)pyrene	U		0.00179	0.00600	1	05/17/2023 15:18	WG2060521
Chrysene	U	J4	0.00232	0.00600	1	05/17/2023 15:18	WG2060521
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/17/2023 15:18	WG2060521
Fluoranthene	U		0.00227	0.00600	1	05/17/2023 15:18	WG2060521
Fluorene	U	J4	0.00205	0.00600	1	05/17/2023 15:18	WG2060521
Indeno(1,2,3-cd)pyrene	U	J4	0.00181	0.00600	1	05/17/2023 15:18	WG2060521
1-Methylnaphthalene	U		0.00449	0.0200	1	05/17/2023 15:18	WG2060521
2-Methylnaphthalene	U		0.00427	0.0200	1	05/17/2023 15:18	WG2060521
Naphthalene	U		0.00408	0.0200	1	05/17/2023 15:18	WG2060521
Pyrene	U	J4	0.00200	0.00600	1	05/17/2023 15:18	WG2060521
(S) p-Terphenyl-d14	*87.4*			*23.0-120*		*05/17/2023 15:18*	WG2060521
(S) Nitrobenzene-d5	*107*			*14.0-149*		*05/17/2023 15:18*	WG2060521
(S) 2-Fluorobiphenyl	*67.3*			*34.0-125*		*05/17/2023 15:18*	WG2060521

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.595		1	05/17/2023 12:27	WG2057987

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	05/15/2023 23:52	WG2057948

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.11	T8	1	05/11/2023 17:39	WG2057827

Sample Narrative:

L1614573-04 WG2057827: 8.11 at 20.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	276		10.0	1	05/16/2023 11:43	WG2059904

Sample Narrative:

L1614573-04 WG2059904: 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	1.00		0.0167	0.200	1	05/18/2023 20:26	WG2062149

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	05/12/2023 13:19	WG2057983
Barium	1530	O1 V	0.152	2.50	5	05/12/2023 13:19	WG2057983
Cadmium	0.252	J	0.0855	1.00	5	05/12/2023 13:19	WG2057983
Copper	11.0		0.132	5.00	5	05/12/2023 13:19	WG2057983
Lead	10.3		0.0990	2.00	5	05/12/2023 13:19	WG2057983
Nickel	10.8		0.197	2.50	5	05/12/2023 13:19	WG2057983
Selenium	0.360	J	0.180	2.50	5	05/12/2023 13:19	WG2057983
Silver	U		0.0865	0.500	5	05/12/2023 13:19	WG2057983
Zinc	42.2		0.740	25.0	5	05/12/2023 13:19	WG2057983

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	65.9		2.17	10.0	100	05/14/2023 21:03	WG2059723
(S) a,a,a-Trifluorotoluene(FID)	*97.6*			*77.0-120*		*05/14/2023 21:03*	WG2059723

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	0.00614	J	0.00374	0.00800	8	05/15/2023 17:51	WG2060108
Toluene	0.242		0.0104	0.0400	8	05/15/2023 17:51	WG2060108
Ethylbenzene	0.102		0.00590	0.0200	8	05/15/2023 17:51	WG2060108
Xylenes, Total	1.89		0.00704	0.0520	8	05/15/2023 17:51	WG2060108
1,2,4-Trimethylbenzene	0.767		0.0126	0.0400	8	05/15/2023 17:51	WG2060108
1,3,5-Trimethylbenzene	0.458		0.0160	0.0400	8	05/15/2023 17:51	WG2060108
(S) Toluene-d8	*109*			*75.0-131*		*05/15/2023 17:51*	WG2060108
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*05/15/2023 17:51*	WG2060108
(S) 1,2-Dichloroethane-d4	*84.6*			*70.0-130*		*05/15/2023 17:51*	WG2060108

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	154		1.61	4.00	1	05/16/2023 03:13	WG2059883
C28-C36 Motor Oil Range	62.4		0.274	4.00	1	05/16/2023 03:13	WG2059883
(S) o-Terphenyl	*59.6*			*18.0-148*		*05/16/2023 03:13*	WG2059883

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	J5	0.00209	0.00600	1	05/18/2023 19:36	WG2062100
Anthracene	0.0599	J6	0.00230	0.00600	1	05/18/2023 19:36	WG2062100
Benzo(a)anthracene	0.00945		0.00173	0.00600	1	05/18/2023 19:36	WG2062100
Benzo(b)fluoranthene	0.00504	J	0.00153	0.00600	1	05/18/2023 19:36	WG2062100
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/18/2023 19:36	WG2062100
Benzo(a)pyrene	U		0.00179	0.00600	1	05/18/2023 19:36	WG2062100
Chrysene	0.00694		0.00232	0.00600	1	05/18/2023 19:36	WG2062100
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/18/2023 19:36	WG2062100
Fluoranthene	0.0104		0.00227	0.00600	1	05/18/2023 19:36	WG2062100
Fluorene	0.177	J5	0.00205	0.00600	1	05/18/2023 19:36	WG2062100
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/18/2023 19:36	WG2062100
1-Methylnaphthalene	0.899	V	0.00449	0.0200	1	05/18/2023 19:36	WG2062100
2-Methylnaphthalene	1.40	V	0.00427	0.0200	1	05/18/2023 19:36	WG2062100
Naphthalene	0.111	J5	0.00408	0.0200	1	05/18/2023 19:36	WG2062100
Pyrene	0.0196		0.00200	0.00600	1	05/18/2023 19:36	WG2062100
(S) p-Terphenyl-d14	*79.2*			*23.0-120*		*05/18/2023 19:36*	WG2062100
(S) Nitrobenzene-d5	*0.000*	J2		*14.0-149*		*05/18/2023 19:36*	WG2062100
(S) 2-Fluorobiphenyl	*71.6*			*34.0-125*		*05/18/2023 19:36*	WG2062100

Sample Narrative:

L1614573-04 WG2062100: Surrogate failure due to matrix interference

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.121		1	05/17/2023 12:30	WG2057987

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	05/15/2023 23:57	WG2057948

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.14	T8	1	05/11/2023 17:39	WG2057827

Sample Narrative:

L1614573-05 WG2057827: 8.14 at 19.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	145		10.0	1	05/16/2023 11:43	WG2059904

Sample Narrative:

L1614573-05 WG2059904: 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	0.314		0.0167	0.200	1	05/18/2023 20:29	WG2062149

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.69		0.100	1.00	5	05/12/2023 13:59	WG2057983
Barium	885		0.152	2.50	5	05/12/2023 13:59	WG2057983
Cadmium	0.376	J	0.0855	1.00	5	05/12/2023 13:59	WG2057983
Copper	10.8		0.132	5.00	5	05/12/2023 13:59	WG2057983
Lead	10.2		0.0990	2.00	5	05/12/2023 13:59	WG2057983
Nickel	12.2		0.197	2.50	5	05/12/2023 13:59	WG2057983
Selenium	0.395	J	0.180	2.50	5	05/12/2023 13:59	WG2057983
Silver	U		0.0865	0.500	5	05/12/2023 13:59	WG2057983
Zinc	55.6		0.740	25.0	5	05/12/2023 13:59	WG2057983

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	0.0513	J	0.0217	0.100	1	05/13/2023 14:54	WG2059385
(S) a,a,a-Trifluorotoluene(FID)	*96.1*			*77.0-120*		*05/13/2023 14:54*	WG2059385

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	05/15/2023 15:58	WG2060108
Toluene	0.00245	J	0.00130	0.00500	1	05/15/2023 15:58	WG2060108
Ethylbenzene	0.00342		0.000737	0.00250	1	05/15/2023 15:58	WG2060108
Xylenes, Total	0.00688		0.000880	0.00650	1	05/15/2023 15:58	WG2060108
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/15/2023 15:58	WG2060108
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/15/2023 15:58	WG2060108
(S) Toluene-d8	*110*			*75.0-131*		*05/15/2023 15:58*	WG2060108
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*05/15/2023 15:58*	WG2060108
(S) 1,2-Dichloroethane-d4	*79.8*			*70.0-130*		*05/15/2023 15:58*	WG2060108

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	75.2		8.05	20.0	5	05/16/2023 03:50	WG2059883
C28-C36 Motor Oil Range	83.9		1.37	20.0	5	05/16/2023 03:50	WG2059883
(S) o-Terphenyl	*41.4*			*18.0-148*		*05/16/2023 03:50*	WG2059883

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	05/18/2023 21:35	WG2062100
Anthracene	U		0.00230	0.00600	1	05/18/2023 21:35	WG2062100
Benzo(a)anthracene	U		0.00173	0.00600	1	05/18/2023 21:35	WG2062100
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/18/2023 21:35	WG2062100
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/18/2023 21:35	WG2062100
Benzo(a)pyrene	U		0.00179	0.00600	1	05/18/2023 21:35	WG2062100
Chrysene	0.00443	J	0.00232	0.00600	1	05/18/2023 21:35	WG2062100
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/18/2023 21:35	WG2062100
Fluoranthene	U		0.00227	0.00600	1	05/18/2023 21:35	WG2062100
Fluorene	U		0.00205	0.00600	1	05/18/2023 21:35	WG2062100
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/18/2023 21:35	WG2062100
1-Methylnaphthalene	U		0.00449	0.0200	1	05/18/2023 21:35	WG2062100
2-Methylnaphthalene	0.00747	J	0.00427	0.0200	1	05/18/2023 21:35	WG2062100
Naphthalene	U		0.00408	0.0200	1	05/18/2023 21:35	WG2062100
Pyrene	0.00338	J	0.00200	0.00600	1	05/18/2023 21:35	WG2062100
(S) p-Terphenyl-d14	*78.8*			*23.0-120*		*05/18/2023 21:35*	WG2062100
(S) Nitrobenzene-d5	*76.9*			*14.0-149*		*05/18/2023 21:35*	WG2062100
(S) 2-Fluorobiphenyl	*66.4*			*34.0-125*		*05/18/2023 21:35*	WG2062100

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.273		1	05/17/2023 12:33	WG2057987

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	05/16/2023 00:03	WG2057948

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.18	T8	1	05/11/2023 17:39	WG2057827

Sample Narrative:

L1614573-06 WG2057827: 8.18 at 19.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	178		10.0	1	05/16/2023 11:43	WG2059904

Sample Narrative:

L1614573-06 WG2059904: 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	0.476		0.0167	0.200	1	05/18/2023 20:32	WG2062149

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.71		0.100	1.00	5	05/12/2023 14:06	WG2057983
Barium	153		0.152	2.50	5	05/12/2023 14:06	WG2057983
Cadmium	0.206	J	0.0855	1.00	5	05/12/2023 14:06	WG2057983
Copper	9.98		0.132	5.00	5	05/12/2023 14:06	WG2057983
Lead	9.10		0.0990	2.00	5	05/12/2023 14:06	WG2057983
Nickel	11.9		0.197	2.50	5	05/12/2023 14:06	WG2057983
Selenium	0.480	J	0.180	2.50	5	05/12/2023 14:06	WG2057983
Silver	U		0.0865	0.500	5	05/12/2023 14:06	WG2057983
Zinc	41.6		0.740	25.0	5	05/12/2023 14:06	WG2057983

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0217	0.100	1	05/13/2023 15:14	WG2059385
(S) a,a,a-Trifluorotoluene(FID)	*96.8*			*77.0-120*		*05/13/2023 15:14*	WG2059385

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	05/15/2023 16:17	WG2060108
Toluene	0.00265	J	0.00130	0.00500	1	05/15/2023 16:17	WG2060108
Ethylbenzene	0.00350		0.000737	0.00250	1	05/15/2023 16:17	WG2060108
Xylenes, Total	0.00630	J	0.000880	0.00650	1	05/15/2023 16:17	WG2060108
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/15/2023 16:17	WG2060108
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/15/2023 16:17	WG2060108
(S) Toluene-d8	*111*			*75.0-131*		*05/15/2023 16:17*	WG2060108
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*05/15/2023 16:17*	WG2060108
(S) 1,2-Dichloroethane-d4	*81.0*			*70.0-130*		*05/15/2023 16:17*	WG2060108

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	05/16/2023 03:00	WG2059883
C28-C36 Motor Oil Range	2.64	B J	0.274	4.00	1	05/16/2023 03:00	WG2059883
(S) o-Terphenyl	*42.7*			*18.0-148*		*05/16/2023 03:00*	WG2059883

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	05/17/2023 16:16	WG2060521
Anthracene	U		0.00230	0.00600	1	05/17/2023 16:16	WG2060521
Benzo(a)anthracene	U		0.00173	0.00600	1	05/17/2023 16:16	WG2060521
Benzo(b)fluoranthene	U	J4	0.00153	0.00600	1	05/17/2023 16:16	WG2060521
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/17/2023 16:16	WG2060521
Benzo(a)pyrene	U		0.00179	0.00600	1	05/17/2023 16:16	WG2060521
Chrysene	0.00482	J J4	0.00232	0.00600	1	05/17/2023 16:16	WG2060521
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/17/2023 16:16	WG2060521
Fluoranthene	U		0.00227	0.00600	1	05/17/2023 16:16	WG2060521
Fluorene	U	J4	0.00205	0.00600	1	05/17/2023 16:16	WG2060521
Indeno(1,2,3-cd)pyrene	U	J4	0.00181	0.00600	1	05/17/2023 16:16	WG2060521
1-Methylnaphthalene	U		0.00449	0.0200	1	05/17/2023 16:16	WG2060521
2-Methylnaphthalene	U		0.00427	0.0200	1	05/17/2023 16:16	WG2060521
Naphthalene	U		0.00408	0.0200	1	05/17/2023 16:16	WG2060521
Pyrene	U	J4	0.00200	0.00600	1	05/17/2023 16:16	WG2060521
(S) p-Terphenyl-d14	*117*			*23.0-120*		*05/17/2023 16:16*	WG2060521
(S) Nitrobenzene-d5	*130*			*14.0-149*		*05/17/2023 16:16*	WG2060521
(S) 2-Fluorobiphenyl	*117*			*34.0-125*		*05/17/2023 16:16*	WG2060521

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.422		1	05/17/2023 12:36	WG2057987

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	05/16/2023 00:08	WG2057948

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.90	T8	1	05/13/2023 19:12	WG2058472

Sample Narrative:

L1614573-07 WG2058472: 7.9 at 21.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	173		10.0	1	05/16/2023 11:43	WG2059904

Sample Narrative:

L1614573-07 WG2059904: 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	0.295		0.0167	0.200	1	05/18/2023 20:35	WG2062149

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.65		0.100	1.00	5	05/12/2023 14:09	WG2057983
Barium	667		0.152	2.50	5	05/12/2023 14:09	WG2057983
Cadmium	0.208	J	0.0855	1.00	5	05/12/2023 14:09	WG2057983
Copper	9.71		0.132	5.00	5	05/12/2023 14:09	WG2057983
Lead	9.46		0.0990	2.00	5	05/12/2023 14:09	WG2057983
Nickel	11.3		0.197	2.50	5	05/12/2023 14:09	WG2057983
Selenium	0.380	J	0.180	2.50	5	05/12/2023 14:09	WG2057983
Silver	U		0.0865	0.500	5	05/12/2023 14:09	WG2057983
Zinc	41.0		0.740	25.0	5	05/12/2023 14:09	WG2057983

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	0.0308	J	0.0217	0.100	1	05/13/2023 15:35	WG2059385
(S) a,a,a-Trifluorotoluene(FID)	*95.9*			*77.0-120*		*05/13/2023 15:35*	WG2059385

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	05/15/2023 16:36	WG2060108
Toluene	0.00230	J	0.00130	0.00500	1	05/15/2023 16:36	WG2060108
Ethylbenzene	0.00319		0.000737	0.00250	1	05/15/2023 16:36	WG2060108
Xylenes, Total	0.00495	J	0.000880	0.00650	1	05/15/2023 16:36	WG2060108
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/15/2023 16:36	WG2060108
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/15/2023 16:36	WG2060108
(S) Toluene-d8	*111*			*75.0-131*		*05/15/2023 16:36*	WG2060108
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*05/15/2023 16:36*	WG2060108
(S) 1,2-Dichloroethane-d4	*83.3*			*70.0-130*		*05/15/2023 16:36*	WG2060108

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	32.2		1.61	4.00	1	05/16/2023 02:23	WG2059883
C28-C36 Motor Oil Range	71.0		0.274	4.00	1	05/16/2023 02:23	WG2059883
(S) o-Terphenyl	*38.1*			*18.0-148*		*05/16/2023 02:23*	WG2059883

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	05/17/2023 16:55	WG2060521
Anthracene	U		0.00230	0.00600	1	05/17/2023 16:55	WG2060521
Benzo(a)anthracene	U		0.00173	0.00600	1	05/17/2023 16:55	WG2060521
Benzo(b)fluoranthene	U	J4	0.00153	0.00600	1	05/17/2023 16:55	WG2060521
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/17/2023 16:55	WG2060521
Benzo(a)pyrene	U		0.00179	0.00600	1	05/17/2023 16:55	WG2060521
Chrysene	U	J4	0.00232	0.00600	1	05/17/2023 16:55	WG2060521
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/17/2023 16:55	WG2060521
Fluoranthene	U		0.00227	0.00600	1	05/17/2023 16:55	WG2060521
Fluorene	U	J4	0.00205	0.00600	1	05/17/2023 16:55	WG2060521
Indeno(1,2,3-cd)pyrene	U	J4	0.00181	0.00600	1	05/17/2023 16:55	WG2060521
1-Methylnaphthalene	U		0.00449	0.0200	1	05/17/2023 16:55	WG2060521
2-Methylnaphthalene	U		0.00427	0.0200	1	05/17/2023 16:55	WG2060521
Naphthalene	U		0.00408	0.0200	1	05/17/2023 16:55	WG2060521
Pyrene	U	J4	0.00200	0.00600	1	05/17/2023 16:55	WG2060521
(S) p-Terphenyl-d14	*94.1*			*23.0-120*		*05/17/2023 16:55*	WG2060521
(S) Nitrobenzene-d5	*104*			*14.0-149*		*05/17/2023 16:55*	WG2060521
(S) 2-Fluorobiphenyl	*88.5*			*34.0-125*		*05/17/2023 16:55*	WG2060521

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	1.01		1	05/17/2023 12:45	WG2057987

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	05/16/2023 00:13	WG2057948

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.93	T8	1	05/13/2023 19:12	WG2058472

Sample Narrative:

L1614573-08 WG2058472: 7.93 at 21.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	278		10.0	1	05/16/2023 11:43	WG2059904

Sample Narrative:

L1614573-08 WG2059904: 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	0.330		0.0167	0.200	1	05/18/2023 20:37	WG2062149

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.88		0.100	1.00	5	05/12/2023 14:12	WG2057983
Barium	240		0.152	2.50	5	05/12/2023 14:12	WG2057983
Cadmium	0.223	J	0.0855	1.00	5	05/12/2023 14:12	WG2057983
Copper	10.5		0.132	5.00	5	05/12/2023 14:12	WG2057983
Lead	10.6		0.0990	2.00	5	05/12/2023 14:12	WG2057983
Nickel	12.2		0.197	2.50	5	05/12/2023 14:12	WG2057983
Selenium	0.426	J	0.180	2.50	5	05/12/2023 14:12	WG2057983
Silver	U		0.0865	0.500	5	05/12/2023 14:12	WG2057983
Zinc	42.0		0.740	25.0	5	05/12/2023 14:12	WG2057983

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0217	0.100	1	05/14/2023 06:47	WG2059556
(S) a,a,a-Trifluorotoluene(FID)	*92.2*			*77.0-120*		*05/14/2023 06:47*	WG2059556

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	05/15/2023 16:55	WG2060108
Toluene	0.00143	J	0.00130	0.00500	1	05/15/2023 16:55	WG2060108
Ethylbenzene	0.00120	J	0.000737	0.00250	1	05/15/2023 16:55	WG2060108
Xylenes, Total	0.00363	J	0.000880	0.00650	1	05/15/2023 16:55	WG2060108
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/15/2023 16:55	WG2060108
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/15/2023 16:55	WG2060108
(S) Toluene-d8	*110*			*75.0-131*		*05/15/2023 16:55*	WG2060108
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*05/15/2023 16:55*	WG2060108
(S) 1,2-Dichloroethane-d4	*82.3*			*70.0-130*		*05/15/2023 16:55*	WG2060108

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.41	J	1.61	4.00	1	05/16/2023 03:13	WG2059883
C28-C36 Motor Oil Range	3.36	J	0.274	4.00	1	05/16/2023 03:13	WG2059883
(S) o-Terphenyl	*41.0*			*18.0-148*		*05/16/2023 03:13*	WG2059883

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	05/17/2023 16:36	WG2060521
Anthracene	U		0.00230	0.00600	1	05/17/2023 16:36	WG2060521
Benzo(a)anthracene	U		0.00173	0.00600	1	05/17/2023 16:36	WG2060521
Benzo(b)fluoranthene	U	J4	0.00153	0.00600	1	05/17/2023 16:36	WG2060521
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/17/2023 16:36	WG2060521
Benzo(a)pyrene	U		0.00179	0.00600	1	05/17/2023 16:36	WG2060521
Chrysene	U	J4	0.00232	0.00600	1	05/17/2023 16:36	WG2060521
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/17/2023 16:36	WG2060521
Fluoranthene	U		0.00227	0.00600	1	05/17/2023 16:36	WG2060521
Fluorene	U	J4	0.00205	0.00600	1	05/17/2023 16:36	WG2060521
Indeno(1,2,3-cd)pyrene	U	J4	0.00181	0.00600	1	05/17/2023 16:36	WG2060521
1-Methylnaphthalene	U		0.00449	0.0200	1	05/17/2023 16:36	WG2060521
2-Methylnaphthalene	U		0.00427	0.0200	1	05/17/2023 16:36	WG2060521
Naphthalene	U		0.00408	0.0200	1	05/17/2023 16:36	WG2060521
Pyrene	U	J4	0.00200	0.00600	1	05/17/2023 16:36	WG2060521
(S) p-Terphenyl-d14	*89.2*			*23.0-120*		*05/17/2023 16:36*	WG2060521
(S) Nitrobenzene-d5	*96.5*			*14.0-149*		*05/17/2023 16:36*	WG2060521
(S) 2-Fluorobiphenyl	*90.0*			*34.0-125*		*05/17/2023 16:36*	WG2060521

Method Blank (MB)

(MB) R3925160-1 05/15/23 23:24

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

L1614580-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1614580-01 05/16/23 00:28 • (DUP) R3925160-3 05/16/23 00:34

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

L1614580-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1614580-06 05/16/23 01:00 • (DUP) R3925160-4 05/16/23 01:05

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) R3925160-2 05/15/23 23:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.37	93.7	80.0-120	

L1614220-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1614220-03 05/11/23 17:39 • (DUP) R3923806-2 05/11/23 17:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.96	8.95	1	0.112		1

Sample Narrative:

OS: 8.96 at 20.5C

DUP: 8.95 at 20.5C

L1614573-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1614573-02 05/11/23 17:39 • (DUP) R3923806-3 05/11/23 17:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.27	8.34	1	0.843		1

Sample Narrative:

OS: 8.27 at 20.6C

DUP: 8.34 at 20.1C

Laboratory Control Sample (LCS)

(LCS) R3923806-1 05/11/23 17:39

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

Sample Narrative:

LCS: 10 at 20.6C

L1614588-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1614588-03 05/13/23 19:12 • (DUP) R3924553-2 05/13/23 19:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	7.82	7.85	1	0.383		1

Sample Narrative:

OS: 7.82 at 21.7C

DUP: 7.85 at 21.7C

L1614731-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1614731-04 05/13/23 19:12 • (DUP) R3924553-3 05/13/23 19:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.10	8.03	1	0.868		1

Sample Narrative:

OS: 8.1 at 22C

DUP: 8.03 at 22.9C

Laboratory Control Sample (LCS)

(LCS) R3924553-1 05/13/23 19:12

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

Sample Narrative:

LCS: 10 at 21.5C

Method Blank (MB)

(MB) R3925327-1 05/16/23 11:43

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

L1614223-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1614223-04 05/16/23 11:43 • (DUP) R3925327-3 05/16/23 11:43

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	224	232	1	3.65		20

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

L1614573-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1614573-05 05/16/23 11:43 • (DUP) R3925327-4 05/16/23 11:43

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	145	140	1	3.02		20

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

Laboratory Control Sample (LCS)

(LCS) R3925327-2 05/16/23 11:43

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1070	95.5	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3926777-1 05/18/23 19:46

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

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

(LCS) R3926777-2 05/18/23 19:49 • (LCSD) R3926777-3 05/18/23 19:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.02	1.03	102	103	80.0-120			1.44	20

Method Blank (MB)

(MB) R3924156-1 05/12/23 13:13

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) R3924156-7 05/12/23 14:02

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	92.6	92.6	80.0-120	
Barium	100	93.0	93.0	80.0-120	
Cadmium	100	97.6	97.6	80.0-120	
Copper	100	91.8	91.8	80.0-120	
Lead	100	93.8	93.8	80.0-120	
Nickel	100	95.3	95.3	80.0-120	
Selenium	100	97.7	97.7	80.0-120	
Silver	20.0	19.0	95.2	80.0-120	
Zinc	100	92.2	92.2	80.0-120	

L1614573-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1614573-04 05/12/23 13:19 • (MS) R3924156-5 05/12/23 13:29 • (MSD) R3924156-6 05/12/23 13:32

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	4.42	90.2	89.8	85.8	85.3	5	75.0-125			0.547	20
Barium	100	1530	1120	1330	0.000	0.000	5	75.0-125	V	V	17.0	20
Cadmium	100	0.252	97.6	94.5	97.4	94.3	5	75.0-125			3.22	20
Copper	100	11.0	96.7	90.4	85.7	79.4	5	75.0-125			6.74	20
Lead	100	10.3	100	94.3	90.1	84.0	5	75.0-125			6.22	20
Nickel	100	10.8	98.0	97.6	87.1	86.7	5	75.0-125			0.427	20
Selenium	100	0.360	98.4	96.2	98.1	95.8	5	75.0-125			2.30	20
Silver	20.0	U	18.3	17.6	91.5	87.8	5	75.0-125			4.15	20
Zinc	100	42.2	126	128	83.9	86.1	5	75.0-125			1.75	20

Method Blank (MB)

(MB) R3924601-2 05/13/23 08:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*96.9*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3924601-1 05/13/23 08:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.78	105	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*109*	*77.0-120*	

L1614573-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1614573-02 05/13/23 14:13 • (MS) R3924601-3 05/13/23 16:16 • (MSD) R3924601-4 05/13/23 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 %
TPH (GC/FID) Low Fraction	5.50	0.0556	4.20	5.25	75.4	94.4	1	10.0-151			22.2	28
(S) a,a,a-Trifluorotoluene(FID)					*106*	*109*		*77.0-120*				

Method Blank (MB)

(MB) R3924720-2 05/14/23 01:52

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)	*95.5*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3924720-1 05/14/23 00:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.18	76.0	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*101*	*77.0-120*	

Method Blank (MB)

(MB) R3925388-2 05/14/23 11:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	1.33	J	0.543	2.50
(S) a,a,a-Trifluorotoluene(FID)	*97.4*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3925388-1 05/14/23 10:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.11	111	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*102*	*77.0-120*	

Method Blank (MB)

(MB) R3925833-2 05/15/23 11:35

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	*111*			*75.0-131*
(S) 4-Bromofluorobenzene	*98.8*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*85.6*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3925833-1 05/15/23 10:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.105	84.0	70.0-123	
Toluene	0.125	0.113	90.4	75.0-121	
Ethylbenzene	0.125	0.123	98.4	74.0-126	
Xylenes, Total	0.375	0.352	93.9	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.0999	79.9	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.101	80.8	73.0-127	
(S) Toluene-d8			*105*	*75.0-131*	
(S) 4-Bromofluorobenzene			*99.2*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*87.6*	*70.0-130*	

L1614573-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1614573-01 05/15/23 15:02 • (MS) R3925833-3 05/15/23 18:28 • (MSD) R3925833-4 05/15/23 18:46

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	U	0.134	0.142	107	114	1	10.0-149			5.80	37
Toluene	0.125	0.00258	0.148	0.155	116	122	1	10.0-156			4.62	38
Ethylbenzene	0.125	0.00245	0.159	0.168	125	132	1	10.0-160			5.50	38
Xylenes, Total	0.375	0.00568	0.461	0.483	121	127	1	10.0-160			4.66	38
1,2,4-Trimethylbenzene	0.125	U	0.121	0.123	96.8	98.4	1	10.0-160			1.64	36
1,3,5-Trimethylbenzene	0.125	U	0.120	0.127	96.0	102	1	10.0-160			5.67	38
(S) Toluene-d8					*107*	*108*		*75.0-131*				
(S) 4-Bromofluorobenzene					*104*	*105*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*86.0*	*85.4*		*70.0-130*				

Method Blank (MB)

(MB) R3925216-1 05/16/23 01:46

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	0.333	J	0.274	4.00
(S) o-Terphenyl	*75.7*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3925216-2 05/16/23 01:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	25.3	50.6	50.0-150	
(S) o-Terphenyl			*53.3*	*18.0-148*	

L1614573-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1614573-03 05/16/23 01:46 • (MS) R3925216-3 05/16/23 01:58 • (MSD) R3925216-4 05/16/23 02:11

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	47.8	U	19.9	26.2	41.6	55.4	1	50.0-150	J6	J3	27.3	20
(S) o-Terphenyl					*38.9*	*50.8*		*18.0-148*				

Method Blank (MB)

(MB) R3926171-2 05/17/23 14:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	*125*	J1		*23.0-120*
(S) Nitrobenzene-d5	*112*			*14.0-149*
(S) 2-Fluorobiphenyl	*121*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3926171-1 05/17/23 13:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0869	109	50.0-120	
Anthracene	0.0800	0.0840	105	50.0-126	
Benzo(a)anthracene	0.0800	0.0878	110	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0989	124	42.0-121	J4
Benzo(k)fluoranthene	0.0800	0.0939	117	49.0-125	
Benzo(a)pyrene	0.0800	0.0904	113	42.0-120	
Chrysene	0.0800	0.104	130	49.0-122	J4
Dibenz(a,h)anthracene	0.0800	0.0984	123	47.0-125	
Fluoranthene	0.0800	0.0957	120	49.0-129	
Fluorene	0.0800	0.0968	121	49.0-120	J4
Indeno(1,2,3-cd)pyrene	0.0800	0.104	130	46.0-125	J4
1-Methylnaphthalene	0.0800	0.0950	119	51.0-121	
2-Methylnaphthalene	0.0800	0.0913	114	50.0-120	
Naphthalene	0.0800	0.0920	115	50.0-120	
Pyrene	0.0800	0.107	134	43.0-123	J4

Laboratory Control Sample (LCS)

(LCS) R3926171-1 05/17/23 13:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*127*	*23.0-120*	J1
(S) Nitrobenzene-d5			*120*	*14.0-149*	
(S) 2-Fluorobiphenyl			*125*	*34.0-125*	

L1614804-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1614804-02 05/17/23 17:35 • (MS) R3926171-3 05/17/23 17:54 • (MSD) R3926171-4 05/17/23 18:14

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0796	U	0.0703	0.0564	88.3	71.6	1	14.0-127			21.9	27
Anthracene	0.0796	U	0.0729	0.0577	91.6	73.2	1	10.0-145			23.3	30
Benzo(a)anthracene	0.0796	U	0.0705	0.0596	88.6	75.6	1	10.0-139			16.8	30
Benzo(b)fluoranthene	0.0796	U	0.0745	0.0657	93.6	83.4	1	10.0-140			12.6	36
Benzo(k)fluoranthene	0.0796	U	0.0722	0.0630	90.7	79.9	1	10.0-137			13.6	31
Benzo(a)pyrene	0.0796	U	0.0750	0.0660	94.2	83.8	1	10.0-141			12.8	31
Chrysene	0.0796	U	0.0814	0.0678	102	86.0	1	10.0-145			18.2	30
Dibenz(a,h)anthracene	0.0796	U	0.0699	0.0665	87.8	84.4	1	10.0-132			4.99	31
Fluoranthene	0.0796	U	0.0806	0.0636	101	80.7	1	10.0-153			23.6	33
Fluorene	0.0796	U	0.0788	0.0619	99.0	78.6	1	11.0-130			24.0	29
Indeno(1,2,3-cd)pyrene	0.0796	U	0.0744	0.0689	93.5	87.4	1	10.0-137			7.68	32
1-Methylnaphthalene	0.0796	U	0.0797	0.0628	100	79.7	1	10.0-142			23.7	28
2-Methylnaphthalene	0.0796	U	0.0742	0.0597	93.2	75.8	1	10.0-137			21.7	28
Naphthalene	0.0796	U	0.0733	0.0588	92.1	74.6	1	10.0-135			22.0	27
Pyrene	0.0796	U	0.0830	0.0683	104	86.7	1	10.0-148			19.4	35
(S) p-Terphenyl-d14					*91.7*	*88.1*		*23.0-120*				
(S) Nitrobenzene-d5					*97.8*	*86.6*		*14.0-149*				
(S) 2-Fluorobiphenyl					*95.5*	*86.8*		*34.0-125*				

Method Blank (MB)

(MB) R3926683-2 05/18/23 18:57

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	*97.6*			*23.0-120*
(S) Nitrobenzene-d5	*64.1*			*14.0-149*
(S) 2-Fluorobiphenyl	*68.3*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3926683-1 05/18/23 18:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0760	95.0	50.0-120	
Anthracene	0.0800	0.0785	98.1	50.0-126	
Benzo(a)anthracene	0.0800	0.0779	97.4	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0855	107	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0845	106	49.0-125	
Benzo(a)pyrene	0.0800	0.0802	100	42.0-120	
Chrysene	0.0800	0.0831	104	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0840	105	47.0-125	
Fluoranthene	0.0800	0.0867	108	49.0-129	
Fluorene	0.0800	0.0771	96.4	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0902	113	46.0-125	
1-Methylnaphthalene	0.0800	0.0784	98.0	51.0-121	
2-Methylnaphthalene	0.0800	0.0775	96.9	50.0-120	
Naphthalene	0.0800	0.0759	94.9	50.0-120	
Pyrene	0.0800	0.0818	102	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3926683-1 05/18/23 18:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*85.4*	*23.0-120*	
(S) Nitrobenzene-d5			*70.9*	*14.0-149*	
(S) 2-Fluorobiphenyl			*68.9*	*34.0-125*	

L1614573-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1614573-04 05/18/23 19:36 • (MS) R3926683-3 05/18/23 19:56 • (MSD) R3926683-4 05/18/23 20:16

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0792	U	0.147	0.165	186	207	1	14.0-127	J5	J5	11.5	27
Anthracene	0.0792	0.0599	0.0548	0.0577	0.000	0.000	1	10.0-145	J6	J6	5.16	30
Benzo(a)anthracene	0.0792	0.00945	0.0788	0.0846	87.6	94.4	1	10.0-139			7.10	30
Benzo(b)fluoranthene	0.0792	0.00504	0.0718	0.0778	84.3	91.4	1	10.0-140			8.02	36
Benzo(k)fluoranthene	0.0792	U	0.0696	0.0709	87.9	89.1	1	10.0-137			1.85	31
Benzo(a)pyrene	0.0792	U	0.0775	0.0808	97.9	102	1	10.0-141			4.17	31
Chrysene	0.0792	0.00694	0.0847	0.0921	98.2	107	1	10.0-145			8.37	30
Dibenz(a,h)anthracene	0.0792	U	0.0760	0.0726	96.0	91.2	1	10.0-132			4.58	31
Fluoranthene	0.0792	0.0104	0.0854	0.0915	94.7	102	1	10.0-153			6.90	33
Fluorene	0.0792	0.177	0.307	0.353	164	221	1	11.0-130	J5	J5	13.9	29
Indeno(1,2,3-cd)pyrene	0.0792	U	0.0777	0.0813	98.1	102	1	10.0-137			4.53	32
1-Methylnaphthalene	0.0792	0.899	1.10	1.25	254	441	1	10.0-142	V	V	12.8	28
2-Methylnaphthalene	0.0792	1.40	1.88	2.19	606	992	1	10.0-137	V	V	15.2	28
Naphthalene	0.0792	0.111	0.237	0.258	159	185	1	10.0-135	J5	J5	8.48	27
Pyrene	0.0792	0.0196	0.0916	0.0983	90.9	98.9	1	10.0-148			7.06	35
(S) p-Terphenyl-d14					*78.2*	*81.0*		*23.0-120*				
(S) Nitrobenzene-d5					*0.000*	*0.000*		*14.0-149*	J2	J2		
(S) 2-Fluorobiphenyl					*77.4*	*80.4*		*34.0-125*				

Sample Narrative:

OS: Surrogate failure due to matrix interference

MS: Surrogate failure due to matrix interference

MSD: Surrogate failure due to matrix interference

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.

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Abbreviations and Definitions

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

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
T8	Sample(s) received past/too close to holding time expiration.
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	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

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

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

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

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

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Numbr
MTJL Log-In Number Here: B103

ALL SHADED AREAS are for LAB L ONLY

Company: Campos EPC	Billing Information: Caerus Oil and Gas, LLC Account: CAERUSPCO
Address: 1401 Blake St. Denver, CO 80202	
Report To: Brett Middleton	Email To: bmiddleton@caerusoilandgas.com
Copy To: jjanicek@caerusoilandgas.com	Site Collection Info/Address:
Customer Project Name/Number: P4E	State: CO / County/City: Time Zone Collected: [ ] PT [✓] MT [ ] CT [ ] ET
Phone: 970-778-2514 Email: same as above	Site/Facility ID #: P4E; Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): S. Sivigliano	Purchase Order #: Quote #: DW PWS ID #: DW Location Code:
Collected By (signature): S. Sivigliano	Turnaround Date Required: STANDARD; Immediately Packed on Ice: [✓] Yes [ ] No
Sample Disposal: [✓] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [✓] 5 Day (Expedite Charges Apply); Field Filtered (if applicable): [ ] Yes [✓] No Analysis: _____

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

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Analyses: COGCC TABLE 915-1 (FULL LIST)	EC, SAR, pH, Boron (hot water sol.)	Metals list from COGCC Table 915-1	Lab Profile/Line: Lab Sample # / Comments:
20230509-P4E-(FC-FL01-10-48)@5	SS		5/9/23	09:00				2	X	X	X	LL[illegible]573 -01
20230509-P4E-(FC-FL01-4-16)@5	SS			09:05				2	X	X	X	-02
20230509-P4E-(FC-DL-10-48)@4	SS			09:20				2	X	X	X	-03
20230509-P4E-(FC-DL-4-16)@4	SS			09:25				2	X	X	X	-04
20230509-P4E-(FC-SEP-4-16)@1	SS			09:30				2	X	X	X	-05
~~20230509-P4E-(FC-SEP-~~	~~SS~~							~~2~~				
20230509-P4E-(FC-DL)@5	SS			08:55				2	X	X	X	-06
20230509-P4E-(FC-FL02-10-48)@4	SS			09:10				2	X	X	X	-07
20230509-P4E-(FC-FL02-4-16)@4	SS		↓	09:15				2	X	X	X	-08

Sample Receipt Checklist

COC Seal Present/Intact:	Y N	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y N	Pres.Correct/Check:	Y N
Correct bottles used:	Y N		
Sufficient volume sent:	Y N		
RAD Screen: <0.5 mR/hr:	Y N		

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:

LL[illegible]573 -01 -02 -03 -04 -05 -06 -07 -08

Vet Blue Dry None

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

tened (<500 cpm): Y N NA

Lab Sample Temperature Info:

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

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
S. Sivigliano	5/9/23 1215		
	5/9/23 1500		5/10/23 0810

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

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

U64573

Tracking Numbers	[redacted]	Temperature
6126 6537 5798	[redacted]	NSA7 4.240=4.2
61266537 5824	[redacted]	NSA7 3.440=3.4
	[redacted]	
	[redacted]	
	[redacted]	
	[redacted]	

ANALYTICAL REPORT

May 18, 2023

Caerus Oil and Gas

Sample Delivery Group:	L1614576
Samples Received:	05/10/2023
Project Number:	
Description:	P4E
Site:	P4E
Report To:	Brett M. , Jake J. , Blair R. 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward
Project Manager

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

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

TABLE OF CONTENTS

SAMPLE SUMMARY

20230509-MCBG-(P4E-N)@1.5 L1614576-01 Solid

Collected by: S. Sivigliano | Collected date/time: 05/09/23 09:35 | Received date/time: 05/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2057989	1	05/17/23 15:33	05/17/23 15:33	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2057052	1	05/11/23 08:06	05/13/23 15:26	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2058472	1	05/13/23 09:34	05/13/23 19:12	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2059904	1	05/15/23 10:13	05/16/23 11:43	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2057994	1	05/16/23 17:36	05/17/23 14:51	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2057983	5	05/11/23 11:50	05/12/23 14:15	JPD	Mt. Juliet, TN

20230509-MCBG-(P4E-E)@2 L1614576-02 Solid

Collected by: S. Sivigliano | Collected date/time: 05/09/23 09:40 | Received date/time: 05/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2057989	1	05/17/23 15:35	05/17/23 15:35	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2057052	1	05/11/23 08:06	05/13/23 15:31	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2058472	1	05/13/23 09:34	05/13/23 19:12	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2059904	1	05/15/23 10:13	05/16/23 11:43	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2057994	1	05/16/23 17:36	05/17/23 14:53	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2057983	5	05/11/23 11:50	05/12/23 14:19	JPD	Mt. Juliet, TN

20230509-MCBG-(P4E-S)@0.5 L1614576-03 Solid

Collected by: S. Sivigliano | Collected date/time: 05/09/23 09:50 | Received date/time: 05/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2057989	1	05/17/23 15:38	05/17/23 15:38	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2057052	1	05/11/23 08:06	05/13/23 15:41	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2058472	1	05/13/23 09:34	05/13/23 19:12	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2059904	1	05/15/23 10:13	05/16/23 11:43	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2057994	1	05/16/23 17:36	05/17/23 14:56	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2057983	5	05/11/23 11:50	05/12/23 14:22	JPD	Mt. Juliet, TN

20230509-MCBG-(P4E-W)@3 L1614576-04 Solid

Collected by: S. Sivigliano | Collected date/time: 05/09/23 09:45 | Received date/time: 05/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2057989	1	05/17/23 15:41	05/17/23 15:41	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2057052	1	05/11/23 08:06	05/13/23 15:47	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2058472	1	05/13/23 09:34	05/13/23 19:12	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2059904	1	05/15/23 10:13	05/16/23 11:43	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2057994	1	05/16/23 17:36	05/17/23 14:59	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2057983	5	05/11/23 11:50	05/12/23 14:32	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
	SAR				
Sodium Adsorption Ratio	0.172		1	05/17/2023 15:33	WG2057989

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.441	J	0.255	1.00	1	05/13/2023 15:26	WG2057052

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.89	T8	1	05/13/2023 19:12	WG2058472

Sample Narrative:

L1614576-01 WG2058472: 7.89 at 21.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	201		10.0	1	05/16/2023 11:43	WG2059904

Sample Narrative:

L1614576-01 WG2059904: 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	0.297		0.0167	0.200	1	05/17/2023 14:51	WG2057994

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.98		0.100	1.00	5	05/12/2023 14:15	WG2057983
Barium	200		0.152	2.50	5	05/12/2023 14:15	WG2057983
Cadmium	0.208	J	0.0855	1.00	5	05/12/2023 14:15	WG2057983
Copper	10.4		0.132	5.00	5	05/12/2023 14:15	WG2057983
Lead	9.34		0.0990	2.00	5	05/12/2023 14:15	WG2057983
Nickel	11.3		0.197	2.50	5	05/12/2023 14:15	WG2057983
Selenium	0.395	J	0.180	2.50	5	05/12/2023 14:15	WG2057983
Silver	U		0.0865	0.500	5	05/12/2023 14:15	WG2057983
Zinc	43.5		0.740	25.0	5	05/12/2023 14:15	WG2057983

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.160		1	05/17/2023 15:35	WG2057989

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	05/13/2023 15:31	WG2057052

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.47	T8	1	05/13/2023 19:12	WG2058472

Sample Narrative:

L1614576-02 WG2058472: 7.47 at 22.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	176		10.0	1	05/16/2023 11:43	WG2059904

Sample Narrative:

L1614576-02 WG2059904: 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	0.311		0.0167	0.200	1	05/17/2023 14:53	WG2057994

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.89		0.100	1.00	5	05/12/2023 14:19	WG2057983
Barium	283		0.152	2.50	5	05/12/2023 14:19	WG2057983
Cadmium	0.230	J	0.0855	1.00	5	05/12/2023 14:19	WG2057983
Copper	11.0		0.132	5.00	5	05/12/2023 14:19	WG2057983
Lead	9.97		0.0990	2.00	5	05/12/2023 14:19	WG2057983
Nickel	12.0		0.197	2.50	5	05/12/2023 14:19	WG2057983
Selenium	0.404	J	0.180	2.50	5	05/12/2023 14:19	WG2057983
Silver	U		0.0865	0.500	5	05/12/2023 14:19	WG2057983
Zinc	42.1		0.740	25.0	5	05/12/2023 14:19	WG2057983

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.123		1	05/17/2023 15:38	WG2057989

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	05/13/2023 15:41	WG2057052

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.74	T8	1	05/13/2023 19:12	WG2058472

Sample Narrative:

L1614576-03 WG2058472: 7.74 at 21.7C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	119		10.0	1	05/16/2023 11:43	WG2059904

Sample Narrative:

L1614576-03 WG2059904: 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	0.325		0.0167	0.200	1	05/17/2023 14:56	WG2057994

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.09		0.100	1.00	5	05/12/2023 14:22	WG2057983
Barium	153		0.152	2.50	5	05/12/2023 14:22	WG2057983
Cadmium	0.185	J	0.0855	1.00	5	05/12/2023 14:22	WG2057983
Copper	11.4		0.132	5.00	5	05/12/2023 14:22	WG2057983
Lead	10.2		0.0990	2.00	5	05/12/2023 14:22	WG2057983
Nickel	12.8		0.197	2.50	5	05/12/2023 14:22	WG2057983
Selenium	0.397	J	0.180	2.50	5	05/12/2023 14:22	WG2057983
Silver	U		0.0865	0.500	5	05/12/2023 14:22	WG2057983
Zinc	44.7		0.740	25.0	5	05/12/2023 14:22	WG2057983

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	0.389		1	05/17/2023 15:41	WG2057989

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	05/13/2023 15:47	WG2057052

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.78	T8	1	05/13/2023 19:12	WG2058472

Sample Narrative:

L1614576-04 WG2058472: 7.78 at 22.1C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	170		10.0	1	05/16/2023 11:43	WG2059904

Sample Narrative:

L1614576-04 WG2059904: 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	0.181	J	0.0167	0.200	1	05/17/2023 14:59	WG2057994

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	05/12/2023 14:32	WG2057983
Barium	181		0.152	2.50	5	05/12/2023 14:32	WG2057983
Cadmium	0.248	J	0.0855	1.00	5	05/12/2023 14:32	WG2057983
Copper	11.7		0.132	5.00	5	05/12/2023 14:32	WG2057983
Lead	10.2		0.0990	2.00	5	05/12/2023 14:32	WG2057983
Nickel	14.0		0.197	2.50	5	05/12/2023 14:32	WG2057983
Selenium	0.376	J	0.180	2.50	5	05/12/2023 14:32	WG2057983
Silver	U		0.0865	0.500	5	05/12/2023 14:32	WG2057983
Zinc	46.0		0.740	25.0	5	05/12/2023 14:32	WG2057983

Method Blank (MB)

(MB) R3924698-1 05/13/23 13:21

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

L1614576-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1614576-02 05/13/23 15:31 • (DUP) R3924698-7 05/13/23 15:36

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

L1613016-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1613016-02 05/13/23 16:02 • (DUP) R3924698-8 05/13/23 16:07

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	1610	1370	100	16.2		20

Laboratory Control Sample (LCS)

(LCS) R3924698-2 05/13/23 13:26

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	10.5	105	80.0-120	

L1613016-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1613016-01 05/13/23 13:32 • (MS) R3924698-3 05/13/23 13:37 • (MSD) R3924698-4 05/13/23 13:42

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	4.93	26.6	26.2	108	106	1	75.0-125			1.53	20

L1613016-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1613016-01 05/13/23 13:32 • (MS) R3924698-5 05/13/23 13:47

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	646	4.93	776	120	50	75.0-125	

L1614588-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1614588-03 05/13/23 19:12 • (DUP) R3924553-2 05/13/23 19:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	7.82	7.85	1	0.383		1

Sample Narrative:

OS: 7.82 at 21.7C

DUP: 7.85 at 21.7C

L1614731-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1614731-04 05/13/23 19:12 • (DUP) R3924553-3 05/13/23 19:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.10	8.03	1	0.868		1

Sample Narrative:

OS: 8.1 at 22C

DUP: 8.03 at 22.9C

Laboratory Control Sample (LCS)

(LCS) R3924553-1 05/13/23 19:12

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

Sample Narrative:

LCS: 10 at 21.5C

Method Blank (MB)

(MB) R3925327-1 05/16/23 11:43

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

L1614223-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1614223-04 05/16/23 11:43 • (DUP) R3925327-3 05/16/23 11:43

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	224	232	1	3.65		20

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

L1614573-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1614573-05 05/16/23 11:43 • (DUP) R3925327-4 05/16/23 11:43

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	145	140	1	3.02		20

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

Laboratory Control Sample (LCS)

(LCS) R3925327-2 05/16/23 11:43

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1070	95.5	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3925993-1 05/17/23 14:43

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) R3925993-2 05/17/23 14:45 • (LCSD) R3925993-3 05/17/23 14:48

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.11	1.13	111	113	80.0-120			1.81	20

Method Blank (MB)

(MB) R3924156-1 05/12/23 13:13

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) R3924156-7 05/12/23 14:02

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	92.6	92.6	80.0-120	
Barium	100	93.0	93.0	80.0-120	
Cadmium	100	97.6	97.6	80.0-120	
Copper	100	91.8	91.8	80.0-120	
Lead	100	93.8	93.8	80.0-120	
Nickel	100	95.3	95.3	80.0-120	
Selenium	100	97.7	97.7	80.0-120	
Silver	20.0	19.0	95.2	80.0-120	
Zinc	100	92.2	92.2	80.0-120	

L1614573-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1614573-04 05/12/23 13:19 • (MS) R3924156-5 05/12/23 13:29 • (MSD) R3924156-6 05/12/23 13:32

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	4.42	90.2	89.8	85.8	85.3	5	75.0-125			0.547	20
Barium	100	1530	1120	1330	0.000	0.000	5	75.0-125	V	V	17.0	20
Cadmium	100	0.252	97.6	94.5	97.4	94.3	5	75.0-125			3.22	20
Copper	100	11.0	96.7	90.4	85.7	79.4	5	75.0-125			6.74	20
Lead	100	10.3	100	94.3	90.1	84.0	5	75.0-125			6.22	20
Nickel	100	10.8	98.0	97.6	87.1	86.7	5	75.0-125			0.427	20
Selenium	100	0.360	98.4	96.2	98.1	95.8	5	75.0-125			2.30	20
Silver	20.0	U	18.3	17.6	91.5	87.8	5	75.0-125			4.15	20
Zinc	100	42.2	126	128	83.9	86.1	5	75.0-125			1.75	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

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

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

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

MTJL Log-in Number Here B104

ALL SHADED AREAS are for LAB USE

Company: Campos EPC	Billing Information: Caerus Oil and Gas, LLC Account: CAERUSPCO
Address: 1401 Blake St. Denver, CO 80202	
Report To: Brett Middleton	Email To: bmiddleton@caerusoilandgas.com
Copy To: jjanicek@caerusoilandgas.com	Site Collection Info/Address:
Customer Project Name/Number: P4E	State: CO / County/City: / Time Zone Collected: [ ] PT [✓] MT [ ] CT [ ] ET
Phone: 970-778-2914 Email: same as above	Site/Facility ID #: P4E
Collected By (print): S. Sivigliano	Purchase Order #: Quote #:
Collected By (signature): S. Sivigliano	Turnaround Date Required: STANDARD
Sample Disposal: [✓] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [✓] 5 Day (Expedite Charges Apply)
	Compliance Monitoring? [ ] Yes [ ] No
	DW PWS ID #: DW Location Code:
	Immediately Packed on Ice: [✓] Yes [ ] No
	Field Filtered (if applicable): [ ] Yes [✓] No Analysis: _____

Container Preservative Type **

Lab Project Manager:

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

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	COGCC TABLE 915-1 (FULL LIST)	EC, SAR, pH, Boron (hot water sol.)	Metals list from COGCC Table 915-1	Lab Sample # / Comments
20230509-MCBG-(P4E-N)@1.5'	SS		5/9/23	09:35				1		X	X	LL9145716 -01
20230509-MCBG-(P4E-E)@2	SS		"	09:40				1		X	X	-02
20230509-MCBG-(P4E-S)@0.5	SS		"	09:50				1		X	X	-03
20230509-MCBG-(P4E-W)@3	SS		"	09:45				1		X	X	-04

Lab Profile/Line:

Lab Sample Receipt Checklist:

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

LAB USE ONLY:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#: _____

Cooler 1 Temp Upon Receipt: _____oC

Cooler 1 Therm Corr. Factor: _____oC

Cooler 1 Corrected Temp: _____oC

Comments:

Relinquished by/Company: (Signature)	Date/Time: 5/9/23-1215	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time: 5/9/23 1506	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time: 5.10.23 9:10

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

U1d45716

Tracking Numbers	[redacted]	Temperature
6126 6537 5778		NSA7 4240 = 4.2
61266537 5824		NSA73.440 = 3.4

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	0.545		1	08/02/2023 09:48	WG2104745

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	07/31/2023 06:09	WG2103429

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.08	T8	1	07/31/2023 13:14	WG2104666

Sample Narrative:

L1639206-01 WG2104666: 8.08 at 24.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	273		10.0	1	07/29/2023 18:23	WG2103969

Sample Narrative:

L1639206-01 WG2103969: 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	0.314		0.0167	0.200	1	08/03/2023 22:17	WG2106737

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.43		0.100	1.00	5	08/02/2023 15:23	WG2103220
Barium	396		0.152	2.50	5	08/02/2023 15:23	WG2103220
Cadmium	0.273	J	0.0855	1.00	5	08/02/2023 15:23	WG2103220
Copper	11.6		0.132	5.00	5	08/02/2023 15:23	WG2103220
Lead	11.5		0.0990	2.00	5	08/02/2023 15:23	WG2103220
Nickel	12.4		0.197	2.50	5	08/02/2023 15:23	WG2103220
Selenium	0.376	J	0.180	2.50	5	08/02/2023 15:23	WG2103220
Silver	U		0.0865	0.500	5	08/02/2023 15:23	WG2103220
Zinc	46.5		0.740	25.0	5	08/02/2023 15:23	WG2103220

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	0.0328	B J	0.0217	0.100	1	07/31/2023 03:39	WG2104462
(S) a,a,a-Trifluorotoluene(FID)	*95.0*			*77.0-120*		*07/31/2023 03:39*	WG2104462

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	07/29/2023 23:31	WG2104099
Toluene	U		0.00130	0.00500	1	07/29/2023 23:31	WG2104099
Ethylbenzene	U		0.000737	0.00250	1	07/29/2023 23:31	WG2104099
Xylenes, Total	U		0.000880	0.00650	1	07/29/2023 23:31	WG2104099
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/29/2023 23:31	WG2104099
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	07/29/2023 23:31	WG2104099
(S) Toluene-d8	*110*			*75.0-131*		*07/29/2023 23:31*	WG2104099
(S) 4-Bromofluorobenzene	*93.1*			*67.0-138*		*07/29/2023 23:31*	WG2104099
(S) 1,2-Dichloroethane-d4	*97.4*			*70.0-130*		*07/29/2023 23:31*	WG2104099

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	5.38		1.61	4.00	1	07/30/2023 15:02	WG2103927
C28-C36 Motor Oil Range	8.12		0.274	4.00	1	07/30/2023 15:02	WG2103927
(S) o-Terphenyl	*53.8*			*18.0-148*		*07/30/2023 15:02*	WG2103927

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	08/01/2023 20:14	WG2105183
Anthracene	U		0.00230	0.00600	1	08/01/2023 20:14	WG2105183
Benzo(a)anthracene	U		0.00173	0.00600	1	08/01/2023 20:14	WG2105183
Benzo(b)fluoranthene	U		0.00153	0.00600	1	08/01/2023 20:14	WG2105183
Benzo(k)fluoranthene	U		0.00215	0.00600	1	08/01/2023 20:14	WG2105183
Benzo(a)pyrene	U		0.00179	0.00600	1	08/01/2023 20:14	WG2105183
Chrysene	U		0.00232	0.00600	1	08/01/2023 20:14	WG2105183
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	08/01/2023 20:14	WG2105183
Fluoranthene	U		0.00227	0.00600	1	08/01/2023 20:14	WG2105183
Fluorene	U		0.00205	0.00600	1	08/01/2023 20:14	WG2105183
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	08/01/2023 20:14	WG2105183
1-Methylnaphthalene	U		0.00449	0.0200	1	08/01/2023 20:14	WG2105183
2-Methylnaphthalene	0.00461	J	0.00427	0.0200	1	08/01/2023 20:14	WG2105183
Naphthalene	U		0.00408	0.0200	1	08/01/2023 20:14	WG2105183
Pyrene	U		0.00200	0.00600	1	08/01/2023 20:14	WG2105183
(S) p-Terphenyl-d14	*78.2*			*23.0-120*		*08/01/2023 20:14*	WG2105183
(S) Nitrobenzene-d5	*79.2*			*14.0-149*		*08/01/2023 20:14*	WG2105183
(S) 2-Fluorobiphenyl	*76.6*			*34.0-125*		*08/01/2023 20:14*	WG2105183

Method Blank (MB)

(MB) R3954601-1 07/31/23 03:05

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

L1638801-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1638801-05 07/31/23 03:54 • (DUP) R3954601-7 07/31/23 05:00

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

L1639203-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1639203-01 07/31/23 05:43 • (DUP) R3954601-8 07/31/23 05:49

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	0.557	U	1	200	P1	20

Laboratory Control Sample (LCS)

(LCS) R3954601-2 07/31/23 03:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	10.1	101	80.0-120	

L1638772-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1638772-07 07/31/23 03:23 • (MS) R3954601-4 07/31/23 03:33 • (MSD) R3954601-5 07/31/23 03:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	19.4	18.6	97.0	92.9	1	75.0-125			4.24	20

L1638772-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1638772-07 07/31/23 03:23 • (MS) R3954601-6 07/31/23 03:44

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	646	U	479	74.1	50	75.0-125	J6

L1639096-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1639096-17 07/31/23 13:14 • (DUP) R3954818-2 07/31/23 13:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.52	7.54	1	0.266		1

Sample Narrative:

OS: 7.52 at 24.9C

DUP: 7.54 at 25.2C

L1639209-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1639209-03 07/31/23 13:14 • (DUP) R3954818-3 07/31/23 13:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.52	8.56	1	0.468		1

Sample Narrative:

OS: 8.52 at 23.4C

DUP: 8.56 at 23.3C

Laboratory Control Sample (LCS)

(LCS) R3954818-1 07/31/23 13:14

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

Sample Narrative:

LCS: 10.02 at 23.9C

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

Method Blank (MB)

(MB) R3954382-1 07/29/23 18:23

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

L1639206-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1639206-01 07/29/23 18:23 • (DUP) R3954382-3 07/29/23 18:23

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	273	272	1	0.478		20

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

L1639339-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1639339-03 07/29/23 18:23 • (DUP) R3954382-4 07/29/23 18:23

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	290	288	1	0.692		20

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

Laboratory Control Sample (LCS)

(LCS) R3954382-2 07/29/23 18:23

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	732	746	102	85.0-115	

Sample Narrative:
LCS: at 25C

QUALITY CONTROL SUMMARY

L1639206-01

Method Blank (MB)

(MB) R3956733-1 08/03/23 21:08

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) R3956733-2 08/03/23 21:11 • (LCSD) R3956733-3 08/03/23 21:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.07	1.11	107	111	80.0-120			3.57	20

QUALITY CONTROL SUMMARY

L1639206-01

Method Blank (MB)

(MB) R3956016-1 08/02/23 14:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	0.704	J	0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Nickel	0.216	J	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) R3956016-2 08/02/23 14:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	102	102	80.0-120	
Barium	100	98.5	98.5	80.0-120	
Cadmium	100	98.8	98.8	80.0-120	
Copper	100	95.9	95.9	80.0-120	
Lead	100	95.2	95.2	80.0-120	
Nickel	100	100	100	80.0-120	
Selenium	100	113	113	80.0-120	
Silver	20.0	19.8	98.9	80.0-120	
Zinc	100	96.6	96.6	80.0-120	

L1639209-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639209-04 08/02/23 14:59 • (MS) R3956016-5 08/02/23 15:09 • (MSD) R3956016-6 08/02/23 15:12

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	5.73	89.0	90.6	83.3	84.8	5	75.0-125			1.75	20
Barium	100	432	482	446	50.3	14.3	5	75.0-125	V	V	7.74	20
Cadmium	100	0.404	87.9	91.1	87.5	90.7	5	75.0-125			3.56	20
Copper	100	11.8	91.6	94.1	79.8	82.2	5	75.0-125			2.64	20
Lead	100	10.1	91.4	96.9	81.4	86.8	5	75.0-125			5.77	20
Nickel	100	10.8	93.1	93.5	82.2	82.7	5	75.0-125			0.497	20
Selenium	100	0.496	94.1	93.8	93.6	93.3	5	75.0-125	E	E	0.310	20
Silver	20.0	U	17.1	18.0	85.6	90.0	5	75.0-125			5.05	20
Zinc	100	35.1	112	112	77.3	77.2	5	75.0-125			0.0832	20

Method Blank (MB)

(MB) R3955543-2 07/30/23 21:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0301	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*96.9*			*77.0-120*

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

(LCS) R3955543-1 07/30/23 19:46 • (LCSD) R3955543-3 07/30/23 21:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	4.75	4.96	86.4	90.2	72.0-127			4.33	20
(S) a,a,a-Trifluorotoluene(FID)				*97.4*	*98.4*	*77.0-120*				

Method Blank (MB)

(MB) R3955966-3 07/29/23 19:24

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*107*			*75.0-131*
(S) 4-Bromofluorobenzene	*91.4*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*97.6*			*70.0-130*

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

(LCS) R3955966-1 07/29/23 17:34 • (LCSD) R3955966-2 07/29/23 17:54

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	0.117	0.119	93.6	95.2	70.0-123			1.69	20
Toluene	0.125	0.116	0.123	92.8	98.4	75.0-121			5.86	20
Ethylbenzene	0.125	0.120	0.129	96.0	103	74.0-126			7.23	20
Xylenes, Total	0.375	0.355	0.361	94.7	96.3	72.0-127			1.68	20
1,2,4-Trimethylbenzene	0.125	0.120	0.129	96.0	103	70.0-126			7.23	20
1,3,5-Trimethylbenzene	0.125	0.126	0.121	101	96.8	73.0-127			4.05	20
(S) Toluene-d8				*103*	*104*	*75.0-131*				
(S) 4-Bromofluorobenzene				*98.4*	*97.5*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*108*	*105*	*70.0-130*				

L1639169-36 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639169-36 07/29/23 21:13 • (MS) R3955966-4 07/30/23 02:10 • (MSD) R3955966-5 07/30/23 02:30

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.136	U	0.110	0.110	88.0	88.0	1	10.0-149			0.000	37
Toluene	0.136	U	0.103	0.104	82.4	83.2	1	10.0-156			0.966	38
Ethylbenzene	0.136	U	0.0980	0.0981	78.4	78.5	1	10.0-160			0.102	38
Xylenes, Total	0.408	U	0.281	0.285	74.9	76.0	1	10.0-160			1.41	38
1,2,4-Trimethylbenzene	0.136	U	0.0985	0.0999	78.8	79.9	1	10.0-160			1.41	36
1,3,5-Trimethylbenzene	0.136	U	0.0973	0.0994	77.8	79.5	1	10.0-160			2.14	38
(S) Toluene-d8					*104*	*103*		*75.0-131*				
(S) 4-Bromofluorobenzene					*93.4*	*94.4*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*97.6*	*102*		*70.0-130*				

Method Blank (MB)

(MB) R3954538-1 07/30/23 14:36

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	0.283	J	0.274	4.00
(S) o-Terphenyl	*81.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3954538-2 07/30/23 14:49

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			*69.5*	*18.0-148*	

Method Blank (MB)

(MB) R3955731-2 08/01/23 16:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	*92.8*			*23.0-120*
(S) Nitrobenzene-d5	*55.6*			*14.0-149*
(S) 2-Fluorobiphenyl	*73.3*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3955731-1 08/01/23 16:36

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0743	92.9	50.0-120	
Anthracene	0.0800	0.0697	87.1	50.0-126	
Benzo(a)anthracene	0.0800	0.0724	90.5	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0754	94.3	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0707	88.4	49.0-125	
Benzo(a)pyrene	0.0800	0.0690	86.3	42.0-120	
Chrysene	0.0800	0.0779	97.4	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0699	87.4	47.0-125	
Fluoranthene	0.0800	0.0740	92.5	49.0-129	
Fluorene	0.0800	0.0797	99.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0721	90.1	46.0-125	
1-Methylnaphthalene	0.0800	0.0738	92.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0762	95.3	50.0-120	
Naphthalene	0.0800	0.0721	90.1	50.0-120	
Pyrene	0.0800	0.0812	102	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3955731-1 08/01/23 16:36

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*101*	*23.0-120*	
(S) Nitrobenzene-d5			*72.9*	*14.0-149*	
(S) 2-Fluorobiphenyl			*87.8*	*34.0-125*	

L1639571-25 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639571-25 08/01/23 17:16 • (MS) R3955731-3 08/01/23 17:36 • (MSD) R3955731-4 08/01/23 17:55

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0779	U	0.0653	0.0617	83.7	78.7	1	14.0-127			5.67	27
Anthracene	0.0779	U	0.0609	0.0576	78.1	73.5	1	10.0-145			5.57	30
Benzo(a)anthracene	0.0779	U	0.0614	0.0624	78.7	79.6	1	10.0-139			1.62	30
Benzo(b)fluoranthene	0.0779	U	0.0653	0.0626	83.7	79.8	1	10.0-140			4.22	36
Benzo(k)fluoranthene	0.0779	U	0.0628	0.0603	80.5	76.9	1	10.0-137			4.06	31
Benzo(a)pyrene	0.0779	U	0.0670	0.0649	85.9	82.8	1	10.0-141			3.18	31
Chrysene	0.0779	U	0.0698	0.0681	89.5	86.9	1	10.0-145			2.47	30
Dibenz(a,h)anthracene	0.0779	U	0.0611	0.0612	78.3	78.1	1	10.0-132			0.164	31
Fluoranthene	0.0779	U	0.0648	0.0603	83.1	76.9	1	10.0-153			7.19	33
Fluorene	0.0779	U	0.0709	0.0658	90.9	83.9	1	11.0-130			7.46	29
Indeno(1,2,3-cd)pyrene	0.0779	U	0.0624	0.0599	80.0	76.4	1	10.0-137			4.09	32
1-Methylnaphthalene	0.0779	U	0.0638	0.0643	81.8	82.0	1	10.0-142			0.781	28
2-Methylnaphthalene	0.0779	U	0.0672	0.0683	86.2	87.1	1	10.0-137			1.62	28
Naphthalene	0.0779	U	0.0641	0.0648	82.2	82.7	1	10.0-135			1.09	27
Pyrene	0.0779	U	0.0705	0.0676	90.4	86.2	1	10.0-148			4.20	35
(S) p-Terphenyl-d14					*86.3*	*73.8*		*23.0-120*				
(S) Nitrobenzene-d5					*51.4*	*67.4*		*14.0-149*				
(S) 2-Fluorobiphenyl					*76.0*	*75.9*		*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
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
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.

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

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

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

B170

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: P4E Wellhead 10-4B P&A

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

Phone: 303-870-8828
Email: olivia.floyd@confluence-cc.com

Site/Facility ID #: P4E 10-4B

Compliance Monitoring? [ ] Yes [X] No

Collected By (print): Olivia Floyd

Purchase Order #:
Quote #:

DW PWS ID #:
DW Location Code:

Collected By (signature):

Turnaround Date Required: Standard Turnaround

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

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

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

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

Analysis: _____

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

Container Preservative Type **

Lab Project Manager:

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

Analyses

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Table 915-1 VOCs	TPH (ORO, GRO, DRO)	Table 915-1 Metals	Table 915-1 PAHs	pH, EC, SAR	Boron (Hot Water Soluble Soil)	Cr6IC
20230724-P4E-(FC-WH-10-4B)@8	SL	G			7/24/2023	0850		3 3 2	G/P	X	X	X	X	X	X	X

Lab Profile/Line:

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

LAB USE ONLY:
Lab Sample # / Comments:

L1639206
-01

6575 5572 0428

Sample Receipt Checklist

COC Seal Present/Intact: Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
RAD Screen <0.5 mR/hr: Y N

If Applicable
VOA Zero Headspace: Y N
Pres.Correct/Check: Y N

6BAB
4.9+0.2=4.9

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

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

Relinquished by/Company:	Date/Time:	Received by/Company:	Date/Time:
	7/24/2023 1200		7/24/2023 1200
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
	7/25/23 1030		7/25/23 1030
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
	7/25 1500	10	7:26:23 9:00

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

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____