November 2, 2020

Mr. Blair Rollins
Caerus Oil and Gas
143 Diamond Avenue
Parachute, Co 81635

RE: Investigation Report
KE Road – Soil Sampling
COGCC Remediation Number 15310
Mesa County, Colorado

Mr. Rollins,

Entrada Consulting Group (Entrada) has prepared this Investigation Report for Caerus Oil and Gas (Caerus) in response to follow up sampling at the Plateau Pipeline site located in Mesa County, Colorado. The site is located on Caerus's Plateau operating area and near KE road east of the town of Mesa, Colorado. The center location coordinates of the release area are approximately 39.174425, North latitude, and -108.100587, East longitude.

Entrada was contracted to collect soil samples that corresponded with approved sampling plan for Remediation Number 15310.

SOIL ANALYSIS

A reduced analyte suite was approved by the COGCC under remediation number 15310; for all soil samples limiting analysis to Electrical Conductivity (EC) and Sodium Adsorption Ratio (SAR).

Soil samples were collected in sample containers appropriate for the specified analyses, sealed, labeled and placed into an ice filled cooler for preservation. Soil samples were submitted to Pace Analytical in Mt. Juliet, TN following chain of custody procedures and analyzed for the following analyses:

- Electrical Conductivity (EC) by U.S. Department of Agriculture (USDA) Method H60;
- Sodium adsorption ratio (SAR) by USDA Method H6

SOIL ANALYTICAL RESULTS

Soil analytical results were reported for ten (10) soil samples at depths ranging from 0 to 24 inches-below ground surface (in-bgs). Samples were collected from 0 to 6 in-bgs and from 18 to 24 in-bgs from hand auger advancement. Soil sampling locations are presented on **Figure 1** and analytical results are summarized on **Table 1**. Laboratory results identified SAR in four (4) samples and EC in one (1) sample to be over Table 910-1 allowable concentration levels. Exceedances in SAR and EC were identified in the Center, Northeast (NE), and Northwest (NW) areas from the area of concern.

Five (5) soil samples were collected by Caerus personnel in 2018 and are shown on the diagram along with the data summarized and reports attached to this report also. Two (2) samples identified exceedances of SAR in the NW and Center at 0 – 6".

CONCLUSIONS AND RECOMMENDATIONS

Based upon soil sampling activities completed at the site and laboratory analytical data presented herein, SAR impacts are only identified in the north half of the area of concern. EC is only noted in the center sample at 18 to 24 in-bgs. This is consistent with previous samples that were collected by Caerus personnel in 2018.

From the associated events at the Plateau Pipeline release (KE Road), REM 15310 will remain open until elevated SAR and EC constituents are below Table 910-1 allowable concentration levels.

REMEDIATION APPROACH

The area of concern is approximately 52 cubic yards from impacted sampling points in a triangle, shown on **Figure 2**. The proposed remediation approach is to excavate impacted material for off-site disposal and import fill for backfill, recontour, and reclamation seeding. Soil at depths of 0 to 6 in-bgs has shown low SAR concentrations and should be separated and blended with the import fill to be used for backfill. Soil at depths of 6 to 36 in-bgs should be excavated and disposed of at an approved facility. The side walls and blended backfill material should be sampled accordingly to ensure effectiveness and clearance before requesting closure of the remediation. It is recommended that a reduced clearance analyte list be requested form the COGCC on the Form 27 submittal to allow for excavation closure with SAR and EC only. After impacted soil is excavated, the disturbance should be backfilled, reclaimed, re-countoured, and seeded with a mix appropriate for the area (or landowner approval). Stormwater best management practices (BMPs) should be considered during the life of this next phase of this project if excavation begins. The proposed excavation site is depicted on **Figure 2** including a topsoil removal boundary.

We appreciate the opportunity to assist Caerus Oil and Gas. Please contact me (970) 901-9007 if you have any questions.

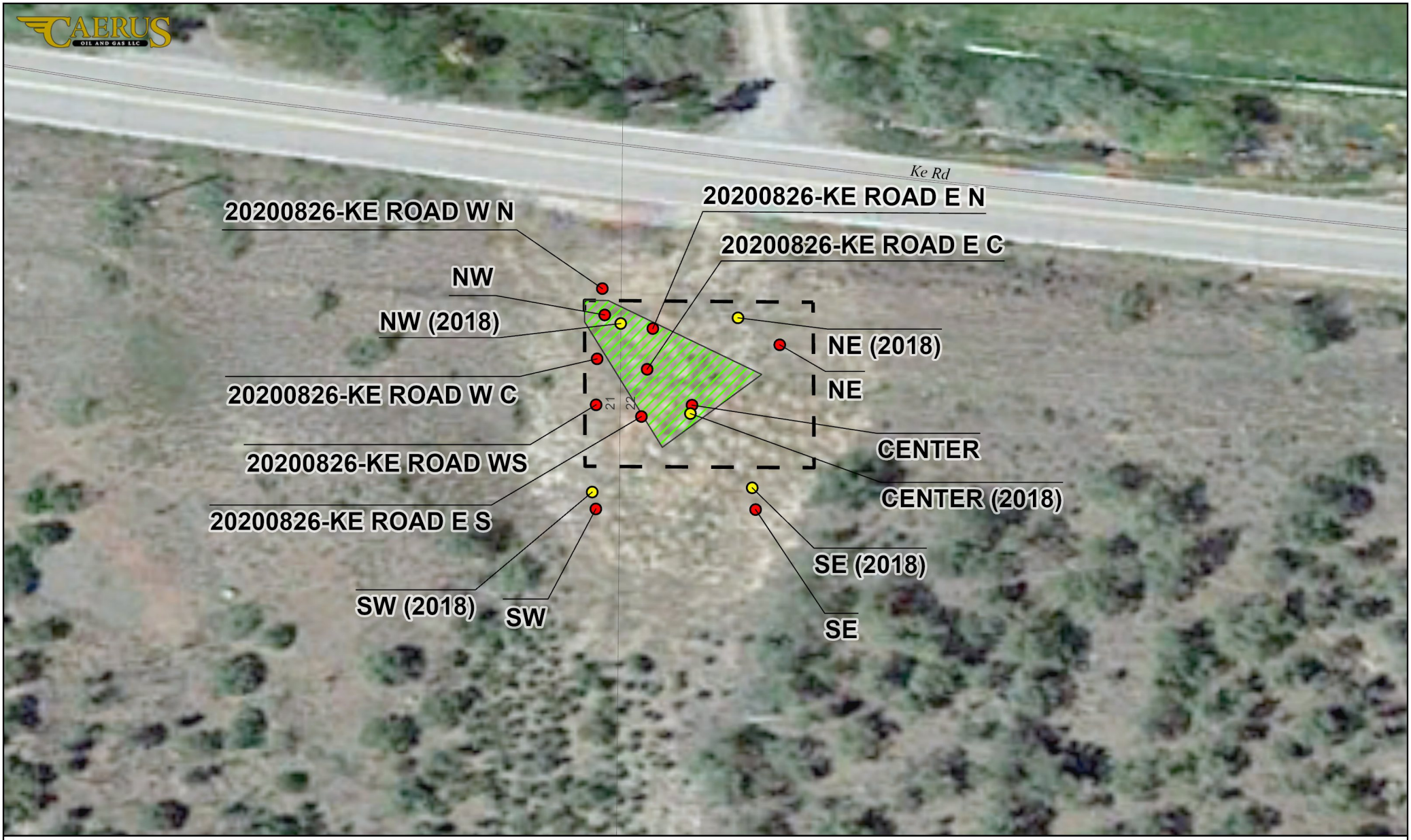
Sincerely,

ENTRADA CONSULTING GROUP

Matt Kasten
Project Scientist

Attachments:

Figure 1 – Sample Location Map
Table 1 – Soil Data Summary
Laboratory Analytical Reports



LEGEND

- 2020 Soil Sample Location
- 2018 Soil Sample Location

0 40 80 Feet

1 inch = 40 ft

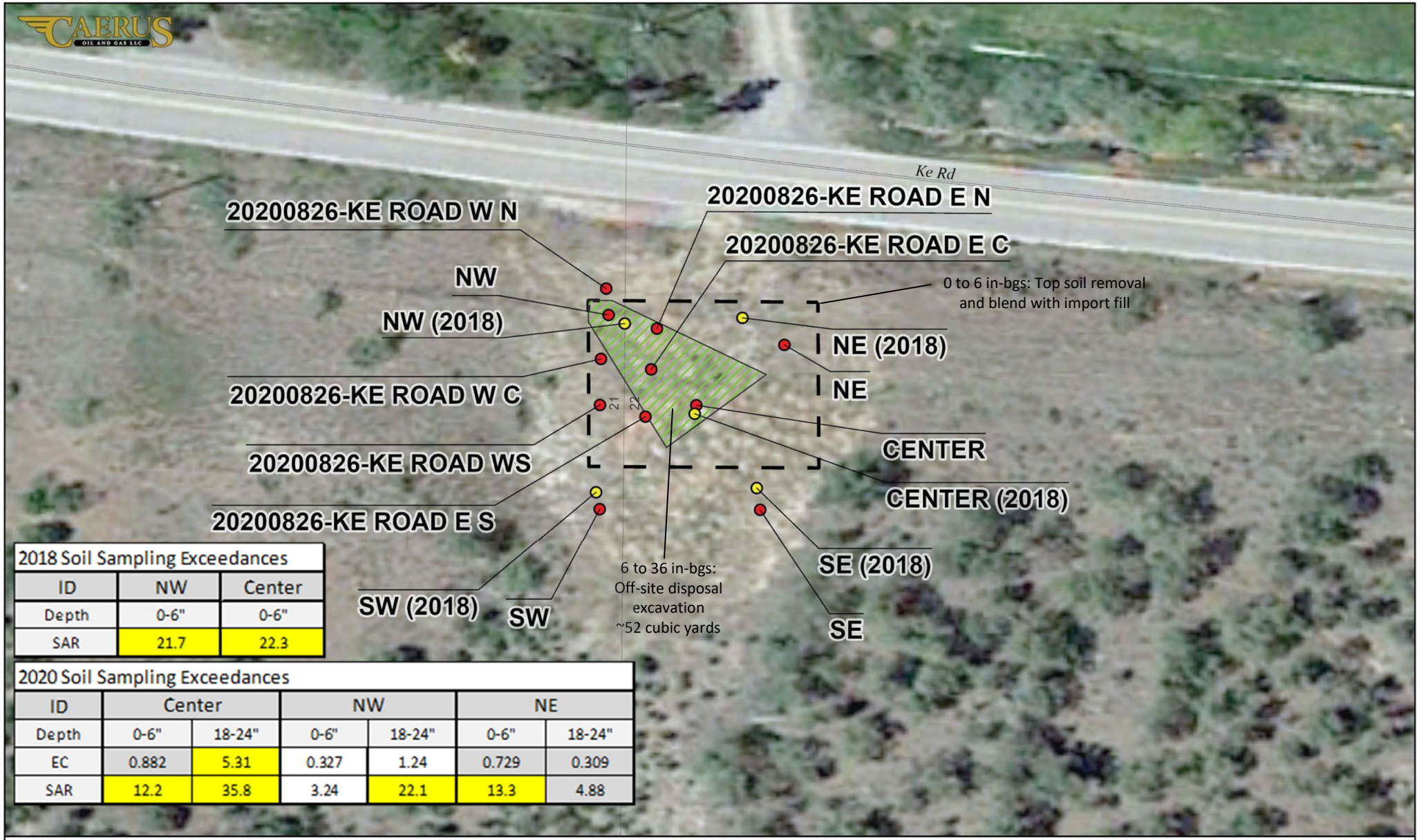
N W E S

Project No:	020-024
Map By:	NDB
Date:	11/10/2020

KE ROAD SITE DIAGRAM
CAERUS OIL AND GAS LLC
SENE SEC 21 T10S R96W 6TH PM
SWNW SEC 22 T10S R96W 6TH PM
MESA COUNTY, COLORADO

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

Figure
1



2018 Soil Sampling Exceedances		
ID	NW	Center
Depth	0-6"	0-6"
SAR	21.7	22.3

2020 Soil Sampling Exceedances						
ID	Center		NW		NE	
Depth	0-6"	18-24"	0-6"	18-24"	0-6"	18-24"
EC	0.882	5.31	0.327	1.24	0.729	0.309
SAR	12.2	35.8	3.24	22.1	13.3	4.88

LEGEND

● 2020 Soil Sample Location ● 2018 Soil Sample Location

0 40 80 Feet

1 inch = 40 ft

Project No: 020-024	**KE ROAD SITE DIAGRAM** CAERUS OIL AND GAS LLC SENE SEC 21 T10S R96W 6TH PM SWNW SEC 22 T10S R96W 6TH PM MESA COUNTY, COLORADO	330 Grand Avenue, Unit C Grand Junction, CO 81501 970-579-1015
Map By: NDB		Figure
Date: 11/10/2020		2

TABLE 1 - KE ROAD SPILL
ASSESSMENT SAMPLING
SOIL ANALYTICAL RESULTS
CAERUS OIL AND GAS LLC
PICEANCE BASIN, COLORADO

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	SW (0-6")	SE (0-6")	NE (0-6")	NW (0-6")	Center (0-6")	KE Road SW 0-6"	KE Road SW 18-24"	KE Road SE 0-6"	KE Road SE 18-24"	KE Road Center 0-6"
Sample Date			5/10/2018	5/10/2018	5/10/2018	5/10/2018	5/10/2018	6/18/2020	6/18/2020	6/18/2020	6/18/2020	6/18/2020
Sample Matix			Spill	Spill	Spill	Spill	Spill	Spill	Spill	Spill	Spill	Spill
Arsenic	0.39	mg/kg	NA	NA	NA	NA	NA	3.33	3.37	3.15	2.91	4.81
Barium	15,000	mg/kg	NA	NA	NA	NA	NA	263	237	249	238	202
Cadmium	70	mg/kg	NA	NA	NA	NA	NA	<0.500	<0.500	<0.500	<0.500	<0.500
Chromium (III)	120,000	mg/kg	NA	NA	NA	NA	NA	15.5	16	18.6	17	15.8
Chromium (VI)	23	mg/kg	NA	NA	NA	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00
Copper	3,100	mg/kg	NA	NA	NA	NA	NA	14	14.4	15.6	14.9	14.5
Lead	400	mg/kg	NA	NA	NA	NA	NA	7.93	7.17	7.23	7.63	14.6
Mercury	23	mg/kg	NA	NA	NA	NA	NA	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400
Nickel	1,600	mg/kg	NA	NA	NA	NA	NA	20.5	23.1	23.5	21.5	23
Selenium	390	mg/kg	NA	NA	NA	NA	NA	<2.00	<2.00	<2.00	<2.00	<2.00
Silver	390	mg/kg	NA	NA	NA	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00
Zinc	23,000	mg/kg	NA	NA	NA	NA	NA	37.7	37	42.9	42	44.5
EC	4 or 2x background	mmhos/cm	NA	NA	NA	NA	NA	0.189	0.168	0.356	0.302	0.882
pH	6-9	SU	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SAR	12	unitless	3.06	2.22	2.46	21.7	22.3	0.518	1.18	3.03	5.04	12.2
TPH-DRO			NA	NA	NA	NA	NA	5.08	<4.00	4.9	6.07	7.38
TPH-GRO			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH	500	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.17	mg/kg	NA	NA	NA	NA	NA	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Toluene	85	mg/kg	NA	NA	NA	NA	NA	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Ethylbenzene	100	mg/kg	NA	NA	NA	NA	NA	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250
Total Xylenes	175	mg/kg	NA	NA	NA	NA	NA	<0.00650	<0.00650	0.00671	<0.00650	0.00693
Acenaphthene	1,000	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Anthracene	1,000	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Benz(a)anthracene	0.22	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Benzo(b)fluoranthene	0.22	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Benzo(k)fluoranthene	2.2	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Benzo(a)pyrene	0.022	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Chrysene	22	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Dibenzo(a,h)anthracene	0.022	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Fluoranthene	1,000	mg/kg	NA	NA	NA	NA	NA	<0.00600	0.00903	<0.00600	<0.00600	<0.00600
Fluorene	1,000	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Indeno(1,2,3,c,d)pyrene	0.22	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Naphthalene	23	mg/kg	NA	NA	NA	NA	NA	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
Pyrene	1,000	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600

Notes:
< - less than the stated reporting limit
Highlight - indicates result exceeds the COGCC concentration level
COGCC - Colorado Oil and Gas Conservation Commission
EC - electrical conductivity
mg/kg - milligrams per kilogram
mmhos/cm - millimhos per centimeter
NA - not analyzed
ND - non detect
SAR - sodium adsorption ratio
SU - standard unit
TPH-GRO - total petroleum hydrocarbons-gasoline range organics
TPH-DRO - total petroleum hydrocarbons-diesel range organics
TPH - combination of TPH-GRO and TPH-DRO

TABLE 2 - KE ROAD SPILL
ASSESSMENT SAMPLING
SOIL ANALYTICAL RESULTS
CAERUS OIL AND GAS LLC
PICEANCE BASIN, COLORADO

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	KE Road Center 18-24"	KE Road NW 0-6"	KE Road NW 18-24"	20200826-KE Road WN 8-12"	20200826-KE Road WNN 18-24"	20200826-KE Road WC 8-12"	20200826-KE Road WC 18-24"	20200826-KE Road WS 8-12"	20200826-KE Road WS 18-24"	20200826-KE Road EN 8-12"
Sample Date			6/18/2020	6/18/2020	6/18/2020	8/26/2020	8/26/2020	8/26/2020	8/26/2020	8/26/2020	8/26/2020	8/26/2020
Sample Matix			Spill	Spill	Spill	Spill	Spill	Spill	Spill	Spill	Spill	Spill
Arsenic	0.39	mg/kg	2.99	3	4.42	NA	NA	NA	NA	NA	NA	NA
Barium	15,000	mg/kg	185	187	359	NA	NA	NA	NA	NA	NA	NA
Cadmium	70	mg/kg	<0.500	<0.500	<0.500	NA	NA	NA	NA	NA	NA	NA
Chromium (III)	120,000	mg/kg	16.5	19.6	18.8	NA	NA	NA	NA	NA	NA	NA
Chromium (VI)	23	mg/kg	<2.00	<2.00	<2.00	NA	NA	NA	NA	NA	NA	NA
Copper	3,100	mg/kg	13.8	12.2	14.8	NA	NA	NA	NA	NA	NA	NA
Lead	400	mg/kg	7.41	9.01	6.76	NA	NA	NA	NA	NA	NA	NA
Mercury	23	mg/kg	<0.0400	<0.0400	<0.0400	NA	NA	NA	NA	NA	NA	NA
Nickel	1,600	mg/kg	22.9	23.4	21.2	NA	NA	NA	NA	NA	NA	NA
Selenium	390	mg/kg	<2.00	<2.00	<2.00	NA	NA	NA	NA	NA	NA	NA
Silver	390	mg/kg	<1.00	<1.00	<1.00	NA	NA	NA	NA	NA	NA	NA
Zinc	23,000	mg/kg	37.2	41.6	37.8	NA	NA	NA	NA	NA	NA	NA
EC	4 or 2x background	mmhos/cm	5.31	0.327	1.24	0.193	0.195	0.288	0.316	0.377	0.301	0.217
pH	6-9	SU	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SAR	12	unitless	35.8	3.24	22.1	2.78	3.66	5.43	5.45	6.39	7.99	4.41
TPH-DRO			<4.00	<4.00	<4.00	NA	NA	NA	NA	NA	NA	NA
TPH-GRO			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH	500	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.17	mg/kg	<0.00100	<0.00100	<0.00100	NA	NA	NA	NA	NA	NA	NA
Toluene	85	mg/kg	<0.00500	<0.00500	<0.00500	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100	mg/kg	<0.00250	<0.00250	<0.00250	NA	NA	NA	NA	NA	NA	NA
Total Xylenes	175	mg/kg	<0.00650	<0.00650	<0.00650	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	1,000	mg/kg	<0.00600	<0.00600	<0.00600	NA	NA	NA	NA	NA	NA	NA
Anthracene	1,000	mg/kg	<0.00600	<0.00600	<0.00600	NA	NA	NA	NA	NA	NA	NA
Benz(a)anthracene	0.22	mg/kg	<0.00600	<0.00600	<0.00600	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	0.22	mg/kg	<0.00600	<0.00600	<0.00600	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	2.2	mg/kg	<0.00600	<0.00600	<0.00600	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.022	mg/kg	<0.00600	<0.00600	<0.00600	NA	NA	NA	NA	NA	NA	NA
Chrysene	22	mg/kg	<0.00600	<0.00600	<0.00600	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	0.022	mg/kg	<0.00600	<0.00600	<0.00600	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	1,000	mg/kg	0.0107	<0.00600	<0.00600	NA	NA	NA	NA	NA	NA	NA
Fluorene	1,000	mg/kg	<0.00600	<0.00600	<0.00600	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3,c,d)pyrene	0.22	mg/kg	<0.00600	<0.00600	<0.00600	NA	NA	NA	NA	NA	NA	NA
Naphthalene	23	mg/kg	<0.0200	<0.0200	<0.0200	NA	NA	NA	NA	NA	NA	NA
Pyrene	1,000	mg/kg	0.00703	<0.00600	<0.00600	NA	NA	NA	NA	NA	NA	NA

Notes:
< - less than the stated reporting limit
Highlight - indicates result exceeds the COGCC concentration level
COGCC - Colorado Oil and Gas Conservation Commission
EC - electrical conductivity
mg/kg - milligrams per kilogram
mmhos/cm - millimhos per centimeter
NA - not analyzed
ND - non detect
SAR - sodium adsorption ratio
SU - standard unit
TPH-GRO - total petroleum hydrocarbons-gasoline range organics
TPH-DRO - total petroleum hydrocarbons-diesel range organics
TPH - combination of TPH-GRO and TPH-DRO

TABLE 3 - KE ROAD SPILL
ASSESSMENT SAMPLING
SOIL ANALYTICAL RESULTS
CAERUS OIL AND GAS LLC
PICEANCE BASIN, COLORADO

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	20200826-KE Road EN 18-24"	20200826-KE Road EX 8-12"	20200826-KE Road EX 18-24"	20200826-KE Road ES 8-12"	20200826-KE Road ES 18-24"	KE Road NE 0-6"	KE Road NE 18-24"
Sample Date			8/26/2020	8/26/2020	8/26/2020	8/26/2020	8/26/2020	6/18/2020	6/18/2020
Sample Matix			Spill	Spill	Spill	Spill	Spill	Spill	Spill
Arsenic	0.39	mg/kg	NA	NA	NA	NA	NA	2.73	3.73
Barium	15,000	mg/kg	NA	NA	NA	NA	NA	202	186
Cadmium	70	mg/kg	NA	NA	NA	NA	NA	<0.500	<0.500
Chromium (III)	120,000	mg/kg	NA	NA	NA	NA	NA	17.2	15.4
Chromium (VI)	23	mg/kg	NA	NA	NA	NA	NA	<2.00	<2.00
Copper	3,100	mg/kg	NA	NA	NA	NA	NA	12.9	13
Lead	400	mg/kg	NA	NA	NA	NA	NA	8.63	9.95
Mercury	23	mg/kg	NA	NA	NA	NA	NA	<0.0400	<0.0400
Nickel	1,600	mg/kg	NA	NA	NA	NA	NA	19.3	19.4
Selenium	390	mg/kg	NA	NA	NA	NA	NA	<2.00	<2.00
Silver	390	mg/kg	NA	NA	NA	NA	NA	<1.00	<1.00
Zinc	23,000	mg/kg	NA	NA	NA	NA	NA	43.3	37.8
EC	4 or 2x background	mmhos/cm	0.29	0.234	0.266	0.396	0.457	0.729	0.309
pH	6-9	SU	NA	NA	NA	NA	NA	NA	NA
SAR	12	unitless	6.02	4.08	5.52	8.06	8.55	13.3	4.88
TPH-DRO			NA	NA	NA	NA	NA	<4.00	8.9
TPH-GRO			NA	NA	NA	NA	NA	NA	NA
TPH	500	mg/kg	NA	NA	NA	NA	NA	NA	NA
Benzene	0.17	mg/kg	NA	NA	NA	NA	NA	<0.00100	<0.00100
Toluene	85	mg/kg	NA	NA	NA	NA	NA	<0.00500	<0.00500
Ethylbenzene	100	mg/kg	NA	NA	NA	NA	NA	<0.00250	<0.00250
Total Xylenes	175	mg/kg	NA	NA	NA	NA	NA	<0.00650	<0.00650
Acenaphthene	1,000	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600
Anthracene	1,000	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600
Benz(a)anthracene	0.22	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600
Benzo(b)fluoranthene	0.22	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600
Benzo(k)fluoranthene	2.2	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600
Benzo(a)pyrene	0.022	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600
Chrysene	22	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600
Dibenzo(a,h)anthracene	0.022	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600
Fluoranthene	1,000	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600
Fluorene	1,000	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600
Indeno(1,2,3,c,d)pyrene	0.22	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600
Naphthalene	23	mg/kg	NA	NA	NA	NA	NA	<0.0200	<0.0200
Pyrene	1,000	mg/kg	NA	NA	NA	NA	NA	<0.00600	<0.00600

Notes:
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TPH-GRO - total petroleum hydrocarbons-gasoline range organics
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TPH - combination of TPH-GRO and TPH-DRO

ANALYTICAL REPORT

May 18, 2018

Caerus Oil and Gas

Sample Delivery Group:	L993074
Samples Received:	05/11/2018
Project Number:	
Description:	KE Rd

Report To: Brett Middleton
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:

Shane Gambill
Technical Service Representative

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 ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

20180510-KE RD-SW L993074-01 Solid

Collected by: Blair Rollins
Collected date/time: 05/10/18 10:00
Received date/time: 05/11/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1111505	1	05/15/18 13:50	05/18/18 10:40	CCE

20180510-KE RD-SE L993074-02 Solid

Collected by: Blair Rollins
Collected date/time: 05/10/18 10:15
Received date/time: 05/11/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1111505	1	05/15/18 13:50	05/18/18 10:44	CCE

20180510-KE RD-NE L993074-03 Solid

Collected by: Blair Rollins
Collected date/time: 05/10/18 10:30
Received date/time: 05/11/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1111505	1	05/15/18 13:50	05/18/18 11:34	CCE

20180510-KE RD-NW L993074-04 Solid

Collected by: Blair Rollins
Collected date/time: 05/10/18 10:45
Received date/time: 05/11/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1111505	1	05/15/18 13:50	05/18/18 10:47	CCE

20180510-KE RD-CENTER L993074-05 Solid

Collected by: Blair Rollins
Collected date/time: 05/10/18 11:00
Received date/time: 05/11/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1111505	1	05/15/18 13:50	05/18/18 10:51	CCE

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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.

Shane Gambill
Technical Service Representative

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.06		1	05/18/2018 10:40	WG1111505

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.22		1	05/18/2018 10:44	WG1111505

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.46		1	05/18/2018 11:34	WG1111505

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	21.7		1	05/18/2018 10:47	WG1111505

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	22.3		1	05/18/2018 10:51	WG1111505

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.

Abbreviations and Definitions

SDG	Sample Delivery Group.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
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.
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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 GI
7 AI
8 Sc

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* 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 ESC Lab Sciences.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
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	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

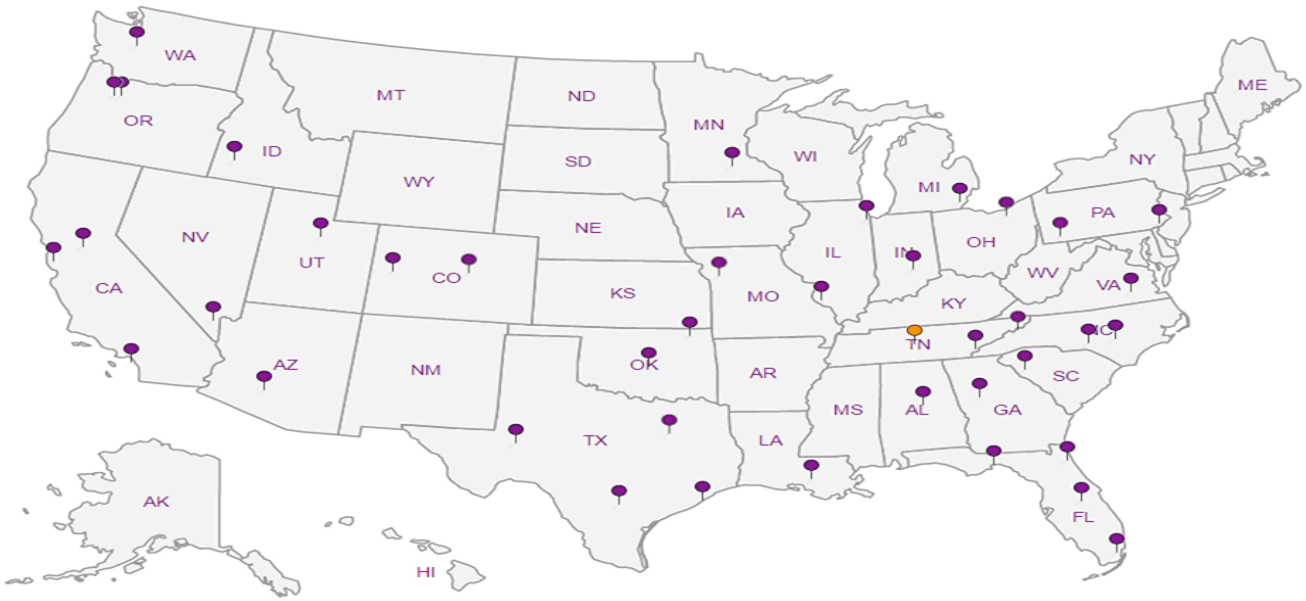
Third Party Federal Accreditations

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

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



Company Name/Address: Caerus Oil + Gas, Parachute, CO

Billing Information:

Report to: Brett Middleton

Email To: bmiddleton@caerusoilandgas.com

Project Description: KE Road

City/State Collected:

Phone:

Fax:

Client Project #

Lab Project #

Collected by (print): Blair K Rollins

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ✓No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SAR									
20180510-KE Rd-SW	Grab	soil		5/10/18	1000	1	X									01
20180510-KE Rd-SE	↓	↓		↓	1015	1	X									02
20180510-KE Rd-NE					1030	1	X									03
20180510-KE Rd-NW					1045	1	X									04
20180510-KE Rd-Center	↓	↓		↓	1100	1	X									05

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 993074

D146

Acctnum:

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Rem./Contaminant	Sample # (lab only)
	01
	02
	03
	04
	05

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

Remarks: 6777 0003 4623

pH ___ Temp ___

Flow ___ Other ___

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/10/18	1430	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/11/18	700	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			861

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

Temp: 0.1°C Bottles Received: 5

Condition: (lab use only) 62

COC Seal Intact: ___Y ___N ___NA

Date:	Time:	pH Checked:	NCF:
5/11/18	8:45		

ESC LAB SCIENCES
Cooler Receipt Form

Client:	Caerulco	SDG#	993074
Cooler Received/Opened On: 5/11 /18		Temperature:	0.7
Received By: Kevin Turner			
Signature:			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 06, 2020

Caerus Oil and Gas

Sample Delivery Group:	L1230982
Samples Received:	06/19/2020
Project Number:	KE ROAD
Description:	KE ROAD
Site:	KE ROAD
Report To:	Blair Rollins 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager

TABLE OF CONTENTS

20200618-KE ROAD SW 0-6" L1230982-01 Solid

Collected by: Jessica Dilka | Collected date/time: 06/18/20 10:40 | Received date/time: 06/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1496588	1	06/25/20 13:31	06/25/20 13:31	CCE	Mt. Juliet, TN
Calculated Results	WG1497990	1	06/24/20 13:56	06/25/20 09:17	TRB	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1497811	1	06/24/20 11:21	06/24/20 22:21	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1499219	1	06/26/20 11:38	06/26/20 14:05	SL	Mt. Juliet, TN
Mercury by Method 7471A	WG1497920	1	06/23/20 21:52	06/24/20 10:50	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1497990	1	06/24/20 13:56	06/25/20 09:17	TRB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1496345	1	06/19/20 15:14	06/21/20 00:53	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1497510	1	06/19/20 15:14	06/23/20 18:38	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1497862	1	06/24/20 06:43	06/25/20 05:33	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1497869	1	06/24/20 07:24	06/24/20 12:03	AAT	Mt. Juliet, TN

20200618-KE ROAD SW 18-24" L1230982-02 Solid

Collected by: Jessica Dilka | Collected date/time: 06/18/20 10:45 | Received date/time: 06/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1496588	1	06/25/20 12:53	06/25/20 12:53	CCE	Mt. Juliet, TN
Calculated Results	WG1497990	1	06/24/20 13:56	06/25/20 09:20	TRB	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1497811	1	06/24/20 11:21	06/24/20 22:21	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1499219	1	06/26/20 11:38	06/26/20 14:05	SL	Mt. Juliet, TN
Mercury by Method 7471A	WG1497920	1	06/23/20 21:52	06/24/20 10:58	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1497990	1	06/24/20 13:56	06/25/20 09:20	TRB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1496345	1	06/19/20 15:14	06/21/20 01:12	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1497510	1	06/19/20 15:14	06/23/20 18:57	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1497863	1	06/24/20 01:27	06/25/20 13:49	FM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1497869	1	06/24/20 07:24	06/24/20 12:26	AAT	Mt. Juliet, TN

20200618-KE ROAD SE 0-6" L1230982-03 Solid

Collected by: Jessica Dilka | Collected date/time: 06/18/20 10:00 | Received date/time: 06/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1496588	1	06/25/20 12:56	06/25/20 12:56	CCE	Mt. Juliet, TN
Calculated Results	WG1497990	1	06/24/20 13:56	06/25/20 09:04	TRB	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1497811	1	06/24/20 11:21	06/24/20 22:21	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1499219	1	06/26/20 11:38	06/26/20 14:05	SL	Mt. Juliet, TN
Mercury by Method 7471A	WG1497920	1	06/23/20 21:52	06/24/20 10:43	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1497990	1	06/24/20 13:56	06/25/20 09:04	TRB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1496345	1	06/19/20 15:14	06/21/20 01:31	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1497510	1	06/19/20 15:14	06/23/20 19:16	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1497863	1	06/24/20 01:27	06/25/20 13:35	FM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1497869	1	06/24/20 07:24	06/24/20 13:36	AAT	Mt. Juliet, TN

20200618-KE ROAD SE 18-24" L1230982-04 Solid

Collected by: Jessica Dilka | Collected date/time: 06/18/20 10:05 | Received date/time: 06/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1496588	1	06/25/20 12:59	06/25/20 12:59	CCE	Mt. Juliet, TN
Calculated Results	WG1497990	1	06/24/20 13:56	06/25/20 09:23	TRB	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1497811	1	06/24/20 11:21	06/24/20 22:21	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1499219	1	06/26/20 11:38	06/26/20 14:05	SL	Mt. Juliet, TN
Mercury by Method 7471A	WG1497920	1	06/23/20 21:52	06/24/20 11:01	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1497990	1	06/24/20 13:56	06/25/20 09:23	TRB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1496345	1	06/20/20 17:51	06/21/20 01:49	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1497510	1	06/19/20 15:14	06/23/20 19:35	ACG	Mt. Juliet, TN

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

20200618-KE ROAD SE 18-24" L1230982-04 Solid

Collected by: Jessica Dilka | Collected date/time: 06/18/20 10:05 | Received date/time: 06/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1497863	1	06/24/20 01:27	06/25/20 09:54	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1497869	1	06/24/20 07:24	06/24/20 14:00	AAT	Mt. Juliet, TN

20200618-KE ROAD CENTER 0-6" L1230982-05 Solid

Collected by: Jessica Dilka | Collected date/time: 06/18/20 10:15 | Received date/time: 06/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1496590	1	06/26/20 08:53	06/26/20 08:53	TRB	Mt. Juliet, TN
Calculated Results	WG1497990	1	06/24/20 13:56	06/25/20 09:31	TRB	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1497811	1	06/24/20 11:21	06/24/20 22:23	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1499219	1	06/26/20 11:38	06/26/20 14:05	SL	Mt. Juliet, TN
Mercury by Method 7471A	WG1497920	1	06/23/20 21:52	06/24/20 11:03	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1497990	1	06/24/20 13:56	06/25/20 09:31	TRB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1496345	1	06/20/20 17:51	06/21/20 02:08	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1497510	1	06/19/20 15:14	06/23/20 19:53	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1497863	1	06/24/20 01:27	06/25/20 20:34	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1497869	1	06/24/20 07:24	06/24/20 14:23	AAT	Mt. Juliet, TN

20200618-KE ROAD CENTER 18-24" L1230982-06 Solid

Collected by: Jessica Dilka | Collected date/time: 06/18/20 10:20 | Received date/time: 06/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1496590	1	06/26/20 08:56	06/26/20 08:56	TRB	Mt. Juliet, TN
Calculated Results	WG1497990	1	06/24/20 13:56	06/25/20 09:33	TRB	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1497811	1	06/24/20 11:21	06/24/20 22:24	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1499219	1	06/26/20 11:38	06/26/20 14:05	SL	Mt. Juliet, TN
Mercury by Method 7471A	WG1497920	1	06/23/20 21:52	06/24/20 11:06	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1497990	1	06/24/20 13:56	06/25/20 09:33	TRB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1496345	1	06/20/20 17:51	06/21/20 02:27	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1497510	1	06/19/20 15:14	06/23/20 20:12	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1497863	1	06/24/20 01:27	06/25/20 13:12	FM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1497869	1	06/24/20 07:24	06/24/20 14:46	AAT	Mt. Juliet, TN

20200618-KE ROAD NW 0-6" L1230982-07 Solid

Collected by: Jessica Dilka | Collected date/time: 06/18/20 11:00 | Received date/time: 06/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1496590	1	06/26/20 08:59	06/26/20 08:59	TRB	Mt. Juliet, TN
Calculated Results	WG1497990	1	06/24/20 13:56	06/25/20 09:36	TRB	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1497811	1	06/24/20 11:21	06/24/20 22:25	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1499219	1	06/26/20 11:38	06/26/20 14:05	SL	Mt. Juliet, TN
Mercury by Method 7471A	WG1497920	1	06/23/20 21:52	06/24/20 11:08	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1497990	1	06/24/20 13:56	06/25/20 09:36	TRB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1496345	1	06/20/20 17:51	06/21/20 02:46	AV	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1497863	1	06/24/20 01:27	06/25/20 09:27	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1497869	1	06/24/20 07:24	06/24/20 15:10	AAT	Mt. Juliet, TN

20200618-KE ROAD NW 18-24" L1230982-08 Solid

Collected by: Jessica Dilka
Collected date/time: 06/18/20 11:10
Received date/time: 06/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1496590	1	06/26/20 09:01	06/26/20 09:01	TRB	Mt. Juliet, TN
Calculated Results	WG1497990	1	06/24/20 13:56	06/25/20 09:39	TRB	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1497811	1	06/24/20 11:21	06/24/20 22:28	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1499219	1	06/26/20 11:38	06/26/20 14:05	SL	Mt. Juliet, TN
Mercury by Method 7471A	WG1497920	1	06/23/20 21:52	06/24/20 11:11	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1497990	1	06/24/20 13:56	06/25/20 09:39	TRB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1496345	1	06/19/20 15:14	06/21/20 03:05	AV	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1497863	1	06/24/20 01:27	06/25/20 09:41	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1497869	1	06/24/20 07:24	06/24/20 15:33	AAT	Mt. Juliet, TN

20200618-KE ROAD NE 0-6" L1230982-09 Solid

Collected by: Jessica Dilka
Collected date/time: 06/18/20 11:35
Received date/time: 06/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1496590	1	06/26/20 09:04	06/26/20 09:04	TRB	Mt. Juliet, TN
Calculated Results	WG1497990	1	06/24/20 13:56	06/26/20 16:47	KEG	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1499053	1	06/25/20 16:00	06/26/20 16:47	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1499219	1	06/26/20 11:38	06/26/20 14:05	SL	Mt. Juliet, TN
Mercury by Method 7471A	WG1497920	1	06/23/20 21:52	06/24/20 11:13	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1497990	1	06/24/20 13:56	06/25/20 09:42	TRB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1496345	1	06/19/20 15:14	06/21/20 03:24	AV	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1497863	1	06/24/20 01:27	06/25/20 12:59	FM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1497869	1	06/24/20 07:24	06/25/20 09:26	AAT	Mt. Juliet, TN

20200618-KE ROAD NE 18-24" L1230982-10 Solid

Collected by: Jessica Dilka
Collected date/time: 06/18/20 11:45
Received date/time: 06/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1496590	1	06/26/20 09:07	06/26/20 09:07	TRB	Mt. Juliet, TN
Calculated Results	WG1497990	1	06/24/20 13:56	06/26/20 16:48	KEG	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1499053	1	06/25/20 16:00	06/26/20 16:48	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1499219	1	06/26/20 11:38	06/26/20 14:05	SL	Mt. Juliet, TN
Mercury by Method 7471A	WG1497920	1	06/23/20 21:52	06/24/20 11:16	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1497990	1	06/24/20 13:56	06/25/20 09:44	TRB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1496345	1	06/19/20 15:14	06/21/20 03:43	AV	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1497863	1	06/24/20 01:27	06/25/20 14:29	FM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1497869	1	06/24/20 07:24	06/24/20 16:20	AAT	Mt. Juliet, TN

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

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	0.518		1	06/25/2020 13:31	WG1496588

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	15.5		1.00	1	06/25/2020 09:17	WG1497990

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.00	1	06/24/2020 22:21	WG1497811

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	189		10.0	1	06/26/2020 14:05	WG1499219

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	06/24/2020 10:50	WG1497920

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.33		2.00	1	06/25/2020 09:17	WG1497990
Barium	263		0.500	1	06/25/2020 09:17	WG1497990
Cadmium	ND		0.500	1	06/25/2020 09:17	WG1497990
Chromium	15.5		1.00	1	06/25/2020 09:17	WG1497990
Copper	14.0		2.00	1	06/25/2020 09:17	WG1497990
Lead	7.93		0.500	1	06/25/2020 09:17	WG1497990
Nickel	20.5		2.00	1	06/25/2020 09:17	WG1497990
Selenium	ND		2.00	1	06/25/2020 09:17	WG1497990
Silver	ND		1.00	1	06/25/2020 09:17	WG1497990
Zinc	37.7		5.00	1	06/25/2020 09:17	WG1497990

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	06/21/2020 00:53	WG1496345
Toluene	ND		0.00500	1	06/21/2020 00:53	WG1496345
Ethylbenzene	ND		0.00250	1	06/21/2020 00:53	WG1496345
Total Xylenes	ND		0.00650	1	06/23/2020 18:38	WG1497510
(S) Toluene-d8	*111*		*75.0-131*		*06/21/2020 00:53*	WG1496345
(S) Toluene-d8	*106*		*75.0-131*		*06/23/2020 18:38*	WG1497510
(S) 4-Bromofluorobenzene	*91.8*		*67.0-138*		*06/21/2020 00:53*	WG1496345
(S) 4-Bromofluorobenzene	*93.9*		*67.0-138*		*06/23/2020 18:38*	WG1497510
(S) 1,2-Dichloroethane-d4	*80.2*		*70.0-130*		*06/21/2020 00:53*	WG1496345
(S) 1,2-Dichloroethane-d4	*97.1*		*70.0-130*		*06/23/2020 18:38*	WG1497510

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	5.08		4.00	1	06/25/2020 05:33	WG1497862
(S) o-Terphenyl	*77.1*		*18.0-148*		*06/25/2020 05:33*	WG1497862

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	06/24/2020 12:03	WG1497869
Acenaphthene	ND		0.00600	1	06/24/2020 12:03	WG1497869
Acenaphthylene	ND		0.00600	1	06/24/2020 12:03	WG1497869
Benzo(a)anthracene	ND		0.00600	1	06/24/2020 12:03	WG1497869
Benzo(a)pyrene	ND		0.00600	1	06/24/2020 12:03	WG1497869
Benzo(b)fluoranthene	ND		0.00600	1	06/24/2020 12:03	WG1497869
Benzo(g,h,i)perylene	ND		0.00600	1	06/24/2020 12:03	WG1497869
Benzo(k)fluoranthene	ND		0.00600	1	06/24/2020 12:03	WG1497869
Chrysene	ND		0.00600	1	06/24/2020 12:03	WG1497869
Dibenz(a,h)anthracene	ND		0.00600	1	06/24/2020 12:03	WG1497869
Fluoranthene	ND		0.00600	1	06/24/2020 12:03	WG1497869
Fluorene	ND		0.00600	1	06/24/2020 12:03	WG1497869
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	06/24/2020 12:03	WG1497869
Naphthalene	ND		0.0200	1	06/24/2020 12:03	WG1497869
Phenanthrene	ND		0.00600	1	06/24/2020 12:03	WG1497869
Pyrene	ND		0.00600	1	06/24/2020 12:03	WG1497869
1-Methylnaphthalene	ND		0.0200	1	06/24/2020 12:03	WG1497869
2-Methylnaphthalene	ND		0.0200	1	06/24/2020 12:03	WG1497869
2-Chloronaphthalene	ND		0.0200	1	06/24/2020 12:03	WG1497869
(S) p-Terphenyl-d14	*68.5*		*23.0-120*		*06/24/2020 12:03*	WG1497869
(S) Nitrobenzene-d5	*87.0*		*14.0-149*		*06/24/2020 12:03*	WG1497869
(S) 2-Fluorobiphenyl	*73.9*		*34.0-125*		*06/24/2020 12:03*	WG1497869

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.18		1	06/25/2020 12:53	WG1496588

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	16.0		1.00	1	06/25/2020 09:20	WG1497990

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.00	1	06/24/2020 22:21	WG1497811

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	168		10.0	1	06/26/2020 14:05	WG1499219

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	06/24/2020 10:58	WG1497920

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.37		2.00	1	06/25/2020 09:20	WG1497990
Barium	237		0.500	1	06/25/2020 09:20	WG1497990
Cadmium	ND		0.500	1	06/25/2020 09:20	WG1497990
Chromium	16.0		1.00	1	06/25/2020 09:20	WG1497990
Copper	14.4		2.00	1	06/25/2020 09:20	WG1497990
Lead	7.17		0.500	1	06/25/2020 09:20	WG1497990
Nickel	23.1		2.00	1	06/25/2020 09:20	WG1497990
Selenium	ND		2.00	1	06/25/2020 09:20	WG1497990
Silver	ND		1.00	1	06/25/2020 09:20	WG1497990
Zinc	37.0		5.00	1	06/25/2020 09:20	WG1497990

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	06/21/2020 01:12	WG1496345
Toluene	ND		0.00500	1	06/21/2020 01:12	WG1496345
Ethylbenzene	ND		0.00250	1	06/21/2020 01:12	WG1496345
Total Xylenes	ND		0.00650	1	06/23/2020 18:57	WG1497510
(S) Toluene-d8	*110*		*75.0-131*		*06/21/2020 01:12*	WG1496345
(S) Toluene-d8	*109*		*75.0-131*		*06/23/2020 18:57*	WG1497510
(S) 4-Bromofluorobenzene	*91.9*		*67.0-138*		*06/21/2020 01:12*	WG1496345
(S) 4-Bromofluorobenzene	*91.3*		*67.0-138*		*06/23/2020 18:57*	WG1497510
(S) 1,2-Dichloroethane-d4	*87.7*		*70.0-130*		*06/21/2020 01:12*	WG1496345
(S) 1,2-Dichloroethane-d4	*90.0*		*70.0-130*		*06/23/2020 18:57*	WG1497510

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	ND		4.00	1	06/25/2020 13:49	WG1497863
(S) o-Terphenyl	*53.3*		*18.0-148*		*06/25/2020 13:49*	WG1497863

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	06/24/2020 12:26	WG1497869
Acenaphthene	ND		0.00600	1	06/24/2020 12:26	WG1497869
Acenaphthylene	ND		0.00600	1	06/24/2020 12:26	WG1497869
Benzo(a)anthracene	ND		0.00600	1	06/24/2020 12:26	WG1497869
Benzo(a)pyrene	ND		0.00600	1	06/24/2020 12:26	WG1497869
Benzo(b)fluoranthene	ND		0.00600	1	06/24/2020 12:26	WG1497869
Benzo(g,h,i)perylene	ND		0.00600	1	06/24/2020 12:26	WG1497869
Benzo(k)fluoranthene	ND		0.00600	1	06/24/2020 12:26	WG1497869
Chrysene	ND		0.00600	1	06/24/2020 12:26	WG1497869
Dibenz(a,h)anthracene	ND		0.00600	1	06/24/2020 12:26	WG1497869
Fluoranthene	0.00903		0.00600	1	06/24/2020 12:26	WG1497869
Fluorene	ND		0.00600	1	06/24/2020 12:26	WG1497869
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	06/24/2020 12:26	WG1497869
Naphthalene	ND		0.0200	1	06/24/2020 12:26	WG1497869
Phenanthrene	ND		0.00600	1	06/24/2020 12:26	WG1497869
Pyrene	ND		0.00600	1	06/24/2020 12:26	WG1497869
1-Methylnaphthalene	ND		0.0200	1	06/24/2020 12:26	WG1497869
2-Methylnaphthalene	ND		0.0200	1	06/24/2020 12:26	WG1497869
2-Chloronaphthalene	ND		0.0200	1	06/24/2020 12:26	WG1497869
(S) p-Terphenyl-d14	*73.2*		*23.0-120*		*06/24/2020 12:26*	WG1497869
(S) Nitrobenzene-d5	*93.0*		*14.0-149*		*06/24/2020 12:26*	WG1497869
(S) 2-Fluorobiphenyl	*78.2*		*34.0-125*		*06/24/2020 12:26*	WG1497869

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.03		1	06/25/2020 12:56	WG1496588

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	18.6		1.00	1	06/25/2020 09:04	WG1497990

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.00	1	06/24/2020 22:21	WG1497811

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	356		10.0	1	06/26/2020 14:05	WG1499219

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	06/24/2020 10:43	WG1497920

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.15		2.00	1	06/25/2020 09:04	WG1497990
Barium	249		0.500	1	06/25/2020 09:04	WG1497990
Cadmium	ND		0.500	1	06/25/2020 09:04	WG1497990
Chromium	18.6		1.00	1	06/25/2020 09:04	WG1497990
Copper	15.6		2.00	1	06/25/2020 09:04	WG1497990
Lead	7.23		0.500	1	06/25/2020 09:04	WG1497990
Nickel	23.5		2.00	1	06/25/2020 09:04	WG1497990
Selenium	ND		2.00	1	06/25/2020 09:04	WG1497990
Silver	ND		1.00	1	06/25/2020 09:04	WG1497990
Zinc	42.9		5.00	1	06/25/2020 09:04	WG1497990

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	06/21/2020 01:31	WG1496345
Toluene	ND		0.00500	1	06/21/2020 01:31	WG1496345
Ethylbenzene	ND		0.00250	1	06/21/2020 01:31	WG1496345
Total Xylenes	0.00671		0.00650	1	06/23/2020 19:16	WG1497510
(S) Toluene-d8	*111*		*75.0-131*		*06/21/2020 01:31*	WG1496345
(S) Toluene-d8	*108*		*75.0-131*		*06/23/2020 19:16*	WG1497510
(S) 4-Bromofluorobenzene	*91.4*		*67.0-138*		*06/21/2020 01:31*	WG1496345
(S) 4-Bromofluorobenzene	*89.8*		*67.0-138*		*06/23/2020 19:16*	WG1497510
(S) 1,2-Dichloroethane-d4	*86.4*		*70.0-130*		*06/21/2020 01:31*	WG1496345
(S) 1,2-Dichloroethane-d4	*92.8*		*70.0-130*		*06/23/2020 19:16*	WG1497510

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	4.90		4.00	1	06/25/2020 13:35	WG1497863
(S) o-Terphenyl	*58.8*		*18.0-148*		*06/25/2020 13:35*	WG1497863

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	06/24/2020 13:36	WG1497869
Acenaphthene	ND		0.00600	1	06/24/2020 13:36	WG1497869
Acenaphthylene	ND		0.00600	1	06/24/2020 13:36	WG1497869
Benzo(a)anthracene	ND		0.00600	1	06/24/2020 13:36	WG1497869
Benzo(a)pyrene	ND		0.00600	1	06/24/2020 13:36	WG1497869
Benzo(b)fluoranthene	ND		0.00600	1	06/24/2020 13:36	WG1497869
Benzo(g,h,i)perylene	ND		0.00600	1	06/24/2020 13:36	WG1497869
Benzo(k)fluoranthene	ND		0.00600	1	06/24/2020 13:36	WG1497869
Chrysene	ND		0.00600	1	06/24/2020 13:36	WG1497869
Dibenz(a,h)anthracene	ND		0.00600	1	06/24/2020 13:36	WG1497869
Fluoranthene	ND		0.00600	1	06/24/2020 13:36	WG1497869
Fluorene	ND		0.00600	1	06/24/2020 13:36	WG1497869
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	06/24/2020 13:36	WG1497869
Naphthalene	ND		0.0200	1	06/24/2020 13:36	WG1497869
Phenanthrene	ND		0.00600	1	06/24/2020 13:36	WG1497869
Pyrene	ND		0.00600	1	06/24/2020 13:36	WG1497869
1-Methylnaphthalene	ND		0.0200	1	06/24/2020 13:36	WG1497869
2-Methylnaphthalene	ND		0.0200	1	06/24/2020 13:36	WG1497869
2-Chloronaphthalene	ND		0.0200	1	06/24/2020 13:36	WG1497869
(S) p-Terphenyl-d14	*72.0*		*23.0-120*		*06/24/2020 13:36*	WG1497869
(S) Nitrobenzene-d5	*91.4*		*14.0-149*		*06/24/2020 13:36*	WG1497869
(S) 2-Fluorobiphenyl	*76.5*		*34.0-125*		*06/24/2020 13:36*	WG1497869

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.04		1	06/25/2020 12:59	WG1496588

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	17.0		1.00	1	06/25/2020 09:23	WG1497990

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.00	1	06/24/2020 22:21	WG1497811

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	302		10.0	1	06/26/2020 14:05	WG1499219

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	06/24/2020 11:01	WG1497920

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.91		2.00	1	06/25/2020 09:23	WG1497990
Barium	238		0.500	1	06/25/2020 09:23	WG1497990
Cadmium	ND		0.500	1	06/25/2020 09:23	WG1497990
Chromium	17.0		1.00	1	06/25/2020 09:23	WG1497990
Copper	14.9		2.00	1	06/25/2020 09:23	WG1497990
Lead	7.63		0.500	1	06/25/2020 09:23	WG1497990
Nickel	21.5		2.00	1	06/25/2020 09:23	WG1497990
Selenium	ND		2.00	1	06/25/2020 09:23	WG1497990
Silver	ND		1.00	1	06/25/2020 09:23	WG1497990
Zinc	42.0		5.00	1	06/25/2020 09:23	WG1497990

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	06/21/2020 01:49	WG1496345
Toluene	ND		0.00500	1	06/21/2020 01:49	WG1496345
Ethylbenzene	ND		0.00250	1	06/21/2020 01:49	WG1496345
Total Xylenes	ND		0.00650	1	06/23/2020 19:35	WG1497510
(S) Toluene-d8	*111*		*75.0-131*		*06/21/2020 01:49*	WG1496345
(S) Toluene-d8	*108*		*75.0-131*		*06/23/2020 19:35*	WG1497510
(S) 4-Bromofluorobenzene	*94.4*		*67.0-138*		*06/21/2020 01:49*	WG1496345
(S) 4-Bromofluorobenzene	*90.5*		*67.0-138*		*06/23/2020 19:35*	WG1497510
(S) 1,2-Dichloroethane-d4	*86.2*		*70.0-130*		*06/21/2020 01:49*	WG1496345
(S) 1,2-Dichloroethane-d4	*92.5*		*70.0-130*		*06/23/2020 19:35*	WG1497510

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	6.07		4.00	1	06/25/2020 09:54	WG1497863
(S) o-Terphenyl	*57.1*		*18.0-148*		*06/25/2020 09:54*	WG1497863

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	06/24/2020 14:00	WG1497869
Acenaphthene	ND		0.00600	1	06/24/2020 14:00	WG1497869
Acenaphthylene	ND		0.00600	1	06/24/2020 14:00	WG1497869
Benzo(a)anthracene	ND		0.00600	1	06/24/2020 14:00	WG1497869
Benzo(a)pyrene	ND		0.00600	1	06/24/2020 14:00	WG1497869
Benzo(b)fluoranthene	ND		0.00600	1	06/24/2020 14:00	WG1497869
Benzo(g,h,i)perylene	ND		0.00600	1	06/24/2020 14:00	WG1497869
Benzo(k)fluoranthene	ND		0.00600	1	06/24/2020 14:00	WG1497869
Chrysene	ND		0.00600	1	06/24/2020 14:00	WG1497869
Dibenz(a,h)anthracene	ND		0.00600	1	06/24/2020 14:00	WG1497869
Fluoranthene	ND		0.00600	1	06/24/2020 14:00	WG1497869
Fluorene	ND		0.00600	1	06/24/2020 14:00	WG1497869
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	06/24/2020 14:00	WG1497869
Naphthalene	ND		0.0200	1	06/24/2020 14:00	WG1497869
Phenanthrene	ND		0.00600	1	06/24/2020 14:00	WG1497869
Pyrene	ND		0.00600	1	06/24/2020 14:00	WG1497869
1-Methylnaphthalene	ND		0.0200	1	06/24/2020 14:00	WG1497869
2-Methylnaphthalene	ND		0.0200	1	06/24/2020 14:00	WG1497869
2-Chloronaphthalene	ND		0.0200	1	06/24/2020 14:00	WG1497869
(S) p-Terphenyl-d14	*73.7*		*23.0-120*		*06/24/2020 14:00*	WG1497869
(S) Nitrobenzene-d5	*93.6*		*14.0-149*		*06/24/2020 14:00*	WG1497869
(S) 2-Fluorobiphenyl	*77.8*		*34.0-125*		*06/24/2020 14:00*	WG1497869

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.2		1	06/26/2020 08:53	WG1496590

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	15.8		1.00	1	06/25/2020 09:31	WG1497990

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.00	1	06/24/2020 22:23	WG1497811

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	882		10.0	1	06/26/2020 14:05	WG1499219

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	06/24/2020 11:03	WG1497920

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.81		2.00	1	06/25/2020 09:31	WG1497990
Barium	202		0.500	1	06/25/2020 09:31	WG1497990
Cadmium	ND		0.500	1	06/25/2020 09:31	WG1497990
Chromium	15.8		1.00	1	06/25/2020 09:31	WG1497990
Copper	14.5		2.00	1	06/25/2020 09:31	WG1497990
Lead	14.6		0.500	1	06/25/2020 09:31	WG1497990
Nickel	23.0		2.00	1	06/25/2020 09:31	WG1497990
Selenium	ND		2.00	1	06/25/2020 09:31	WG1497990
Silver	ND		1.00	1	06/25/2020 09:31	WG1497990
Zinc	44.5		5.00	1	06/25/2020 09:31	WG1497990

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	06/21/2020 02:08	WG1496345
Toluene	ND		0.00500	1	06/21/2020 02:08	WG1496345
Ethylbenzene	ND		0.00250	1	06/21/2020 02:08	WG1496345
Total Xylenes	0.00693		0.00650	1	06/23/2020 19:53	WG1497510
(S) Toluene-d8	*108*		*75.0-131*		*06/21/2020 02:08*	WG1496345
(S) Toluene-d8	*106*		*75.0-131*		*06/23/2020 19:53*	WG1497510
(S) 4-Bromofluorobenzene	*90.7*		*67.0-138*		*06/21/2020 02:08*	WG1496345
(S) 4-Bromofluorobenzene	*92.3*		*67.0-138*		*06/23/2020 19:53*	WG1497510
(S) 1,2-Dichloroethane-d4	*87.9*		*70.0-130*		*06/21/2020 02:08*	WG1496345
(S) 1,2-Dichloroethane-d4	*98.1*		*70.0-130*		*06/23/2020 19:53*	WG1497510

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	7.38		4.00	1	06/25/2020 20:34	WG1497863
(S) o-Terphenyl	*36.7*		*18.0-148*		*06/25/2020 20:34*	WG1497863

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	06/24/2020 14:23	WG1497869
Acenaphthene	ND		0.00600	1	06/24/2020 14:23	WG1497869
Acenaphthylene	ND		0.00600	1	06/24/2020 14:23	WG1497869
Benzo(a)anthracene	ND		0.00600	1	06/24/2020 14:23	WG1497869
Benzo(a)pyrene	ND		0.00600	1	06/24/2020 14:23	WG1497869
Benzo(b)fluoranthene	ND		0.00600	1	06/24/2020 14:23	WG1497869
Benzo(g,h,i)perylene	ND		0.00600	1	06/24/2020 14:23	WG1497869
Benzo(k)fluoranthene	ND		0.00600	1	06/24/2020 14:23	WG1497869
Chrysene	ND		0.00600	1	06/24/2020 14:23	WG1497869
Dibenz(a,h)anthracene	ND		0.00600	1	06/24/2020 14:23	WG1497869
Fluoranthene	ND		0.00600	1	06/24/2020 14:23	WG1497869
Fluorene	ND		0.00600	1	06/24/2020 14:23	WG1497869
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	06/24/2020 14:23	WG1497869
Naphthalene	ND		0.0200	1	06/24/2020 14:23	WG1497869
Phenanthrene	ND		0.00600	1	06/24/2020 14:23	WG1497869
Pyrene	ND		0.00600	1	06/24/2020 14:23	WG1497869
1-Methylnaphthalene	ND		0.0200	1	06/24/2020 14:23	WG1497869
2-Methylnaphthalene	ND		0.0200	1	06/24/2020 14:23	WG1497869
2-Chloronaphthalene	ND		0.0200	1	06/24/2020 14:23	WG1497869
(S) p-Terphenyl-d14	*63.1*		*23.0-120*		*06/24/2020 14:23*	WG1497869
(S) Nitrobenzene-d5	*82.5*		*14.0-149*		*06/24/2020 14:23*	WG1497869
(S) 2-Fluorobiphenyl	*69.0*		*34.0-125*		*06/24/2020 14:23*	WG1497869

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	35.8		1	06/26/2020 08:56	WG1496590

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	16.5		1.00	1	06/25/2020 09:33	WG1497990

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.00	1	06/24/2020 22:24	WG1497811

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	5310		10.0	1	06/26/2020 14:05	WG1499219

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	06/24/2020 11:06	WG1497920

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.99		2.00	1	06/25/2020 09:33	WG1497990
Barium	185		0.500	1	06/25/2020 09:33	WG1497990
Cadmium	ND		0.500	1	06/25/2020 09:33	WG1497990
Chromium	16.5		1.00	1	06/25/2020 09:33	WG1497990
Copper	13.8		2.00	1	06/25/2020 09:33	WG1497990
Lead	7.41		0.500	1	06/25/2020 09:33	WG1497990
Nickel	22.9		2.00	1	06/25/2020 09:33	WG1497990
Selenium	ND		2.00	1	06/25/2020 09:33	WG1497990
Silver	ND		1.00	1	06/25/2020 09:33	WG1497990
Zinc	37.2		5.00	1	06/25/2020 09:33	WG1497990

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	06/21/2020 02:27	WG1496345
Toluene	ND		0.00500	1	06/21/2020 02:27	WG1496345
Ethylbenzene	ND		0.00250	1	06/21/2020 02:27	WG1496345
Total Xylenes	ND		0.00650	1	06/23/2020 20:12	WG1497510
(S) Toluene-d8	*108*		*75.0-131*		*06/21/2020 02:27*	WG1496345
(S) Toluene-d8	*108*		*75.0-131*		*06/23/2020 20:12*	WG1497510
(S) 4-Bromofluorobenzene	*91.3*		*67.0-138*		*06/21/2020 02:27*	WG1496345
(S) 4-Bromofluorobenzene	*90.7*		*67.0-138*		*06/23/2020 20:12*	WG1497510
(S) 1,2-Dichloroethane-d4	*86.0*		*70.0-130*		*06/21/2020 02:27*	WG1496345
(S) 1,2-Dichloroethane-d4	*94.9*		*70.0-130*		*06/23/2020 20:12*	WG1497510

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	ND		4.00	1	06/25/2020 13:12	WG1497863
(S) o-Terphenyl	*44.4*		*18.0-148*		*06/25/2020 13:12*	WG1497863

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	06/24/2020 14:46	WG1497869
Acenaphthene	ND		0.00600	1	06/24/2020 14:46	WG1497869
Acenaphthylene	ND		0.00600	1	06/24/2020 14:46	WG1497869
Benzo(a)anthracene	ND		0.00600	1	06/24/2020 14:46	WG1497869
Benzo(a)pyrene	ND		0.00600	1	06/24/2020 14:46	WG1497869
Benzo(b)fluoranthene	ND		0.00600	1	06/24/2020 14:46	WG1497869
Benzo(g,h,i)perylene	ND		0.00600	1	06/24/2020 14:46	WG1497869
Benzo(k)fluoranthene	ND		0.00600	1	06/24/2020 14:46	WG1497869
Chrysene	ND		0.00600	1	06/24/2020 14:46	WG1497869
Dibenz(a,h)anthracene	ND		0.00600	1	06/24/2020 14:46	WG1497869
Fluoranthene	0.0107		0.00600	1	06/24/2020 14:46	WG1497869
Fluorene	ND		0.00600	1	06/24/2020 14:46	WG1497869
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	06/24/2020 14:46	WG1497869
Naphthalene	ND		0.0200	1	06/24/2020 14:46	WG1497869
Phenanthrene	ND		0.00600	1	06/24/2020 14:46	WG1497869
Pyrene	0.00703		0.00600	1	06/24/2020 14:46	WG1497869
1-Methylnaphthalene	ND		0.0200	1	06/24/2020 14:46	WG1497869
2-Methylnaphthalene	ND		0.0200	1	06/24/2020 14:46	WG1497869
2-Chloronaphthalene	ND		0.0200	1	06/24/2020 14:46	WG1497869
(S) p-Terphenyl-d14	*76.9*		*23.0-120*		*06/24/2020 14:46*	WG1497869
(S) Nitrobenzene-d5	*97.7*		*14.0-149*		*06/24/2020 14:46*	WG1497869
(S) 2-Fluorobiphenyl	*80.5*		*34.0-125*		*06/24/2020 14:46*	WG1497869

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.24		1	06/26/2020 08:59	WG1496590

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	19.6		1.00	1	06/25/2020 09:36	WG1497990

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.00	1	06/24/2020 22:25	WG1497811

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	327		10.0	1	06/26/2020 14:05	WG1499219

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	06/24/2020 11:08	WG1497920

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.00		2.00	1	06/25/2020 09:36	WG1497990
Barium	187		0.500	1	06/25/2020 09:36	WG1497990
Cadmium	ND		0.500	1	06/25/2020 09:36	WG1497990
Chromium	19.6		1.00	1	06/25/2020 09:36	WG1497990
Copper	12.2		2.00	1	06/25/2020 09:36	WG1497990
Lead	9.01		0.500	1	06/25/2020 09:36	WG1497990
Nickel	23.4		2.00	1	06/25/2020 09:36	WG1497990
Selenium	ND		2.00	1	06/25/2020 09:36	WG1497990
Silver	ND		1.00	1	06/25/2020 09:36	WG1497990
Zinc	41.6		5.00	1	06/25/2020 09:36	WG1497990

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	06/21/2020 02:46	WG1496345
Toluene	ND		0.00500	1	06/21/2020 02:46	WG1496345
Ethylbenzene	ND		0.00250	1	06/21/2020 02:46	WG1496345
Total Xylenes	ND		0.00650	1	06/21/2020 02:46	WG1496345
(S) Toluene-d8	*109*		*75.0-131*		*06/21/2020 02:46*	WG1496345
(S) 4-Bromofluorobenzene	*91.6*		*67.0-138*		*06/21/2020 02:46*	WG1496345
(S) 1,2-Dichloroethane-d4	*86.9*		*70.0-130*		*06/21/2020 02:46*	WG1496345

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	ND		4.00	1	06/25/2020 09:27	WG1497863
(S) o-Terphenyl	*52.9*		*18.0-148*		*06/25/2020 09:27*	WG1497863

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	06/24/2020 15:10	WG1497869
Acenaphthene	ND		0.00600	1	06/24/2020 15:10	WG1497869
Acenaphthylene	ND		0.00600	1	06/24/2020 15:10	WG1497869
Benzo(a)anthracene	ND		0.00600	1	06/24/2020 15:10	WG1497869
Benzo(a)pyrene	ND		0.00600	1	06/24/2020 15:10	WG1497869
Benzo(b)fluoranthene	ND		0.00600	1	06/24/2020 15:10	WG1497869
Benzo(g,h,i)perylene	ND		0.00600	1	06/24/2020 15:10	WG1497869
Benzo(k)fluoranthene	ND		0.00600	1	06/24/2020 15:10	WG1497869
Chrysene	ND		0.00600	1	06/24/2020 15:10	WG1497869
Dibenz(a,h)anthracene	ND		0.00600	1	06/24/2020 15:10	WG1497869
Fluoranthene	ND		0.00600	1	06/24/2020 15:10	WG1497869
Fluorene	ND		0.00600	1	06/24/2020 15:10	WG1497869
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	06/24/2020 15:10	WG1497869
Naphthalene	ND		0.0200	1	06/24/2020 15:10	WG1497869
Phenanthrene	ND		0.00600	1	06/24/2020 15:10	WG1497869
Pyrene	ND		0.00600	1	06/24/2020 15:10	WG1497869
1-Methylnaphthalene	ND		0.0200	1	06/24/2020 15:10	WG1497869
2-Methylnaphthalene	ND		0.0200	1	06/24/2020 15:10	WG1497869
2-Chloronaphthalene	ND		0.0200	1	06/24/2020 15:10	WG1497869
(S) p-Terphenyl-d14	*72.5*		*23.0-120*		*06/24/2020 15:10*	WG1497869
(S) Nitrobenzene-d5	*93.4*		*14.0-149*		*06/24/2020 15:10*	WG1497869
(S) 2-Fluorobiphenyl	*76.4*		*34.0-125*		*06/24/2020 15:10*	WG1497869

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	22.1		1	06/26/2020 09:01	WG1496590

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	18.8		1.00	1	06/25/2020 09:39	WG1497990

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.00	1	06/24/2020 22:28	WG1497811

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1240		10.0	1	06/26/2020 14:05	WG1499219

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	06/24/2020 11:11	WG1497920

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.42		2.00	1	06/25/2020 09:39	WG1497990
Barium	359		0.500	1	06/25/2020 09:39	WG1497990
Cadmium	ND		0.500	1	06/25/2020 09:39	WG1497990
Chromium	18.8		1.00	1	06/25/2020 09:39	WG1497990
Copper	14.8		2.00	1	06/25/2020 09:39	WG1497990
Lead	6.76		0.500	1	06/25/2020 09:39	WG1497990
Nickel	21.2		2.00	1	06/25/2020 09:39	WG1497990
Selenium	ND		2.00	1	06/25/2020 09:39	WG1497990
Silver	ND		1.00	1	06/25/2020 09:39	WG1497990
Zinc	37.8		5.00	1	06/25/2020 09:39	WG1497990

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	06/21/2020 03:05	WG1496345
Toluene	ND		0.00500	1	06/21/2020 03:05	WG1496345
Ethylbenzene	ND		0.00250	1	06/21/2020 03:05	WG1496345
Total Xylenes	ND		0.00650	1	06/21/2020 03:05	WG1496345
(S) Toluene-d8	*111*		*75.0-131*		*06/21/2020 03:05*	WG1496345
(S) 4-Bromofluorobenzene	*92.4*		*67.0-138*		*06/21/2020 03:05*	WG1496345
(S) 1,2-Dichloroethane-d4	*86.5*		*70.0-130*		*06/21/2020 03:05*	WG1496345

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	ND		4.00	1	06/25/2020 09:41	WG1497863
(S) o-Terphenyl	*48.5*		*18.0-148*		*06/25/2020 09:41*	WG1497863

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	06/24/2020 15:33	WG1497869
Acenaphthene	ND		0.00600	1	06/24/2020 15:33	WG1497869
Acenaphthylene	ND		0.00600	1	06/24/2020 15:33	WG1497869
Benzo(a)anthracene	ND		0.00600	1	06/24/2020 15:33	WG1497869
Benzo(a)pyrene	ND		0.00600	1	06/24/2020 15:33	WG1497869
Benzo(b)fluoranthene	ND		0.00600	1	06/24/2020 15:33	WG1497869
Benzo(g,h,i)perylene	ND		0.00600	1	06/24/2020 15:33	WG1497869
Benzo(k)fluoranthene	ND		0.00600	1	06/24/2020 15:33	WG1497869
Chrysene	ND		0.00600	1	06/24/2020 15:33	WG1497869
Dibenz(a,h)anthracene	ND		0.00600	1	06/24/2020 15:33	WG1497869
Fluoranthene	ND		0.00600	1	06/24/2020 15:33	WG1497869
Fluorene	ND		0.00600	1	06/24/2020 15:33	WG1497869
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	06/24/2020 15:33	WG1497869
Naphthalene	ND		0.0200	1	06/24/2020 15:33	WG1497869
Phenanthrene	ND		0.00600	1	06/24/2020 15:33	WG1497869
Pyrene	ND		0.00600	1	06/24/2020 15:33	WG1497869
1-Methylnaphthalene	ND		0.0200	1	06/24/2020 15:33	WG1497869
2-Methylnaphthalene	ND		0.0200	1	06/24/2020 15:33	WG1497869
2-Chloronaphthalene	ND		0.0200	1	06/24/2020 15:33	WG1497869
(S) p-Terphenyl-d14	*68.8*		*23.0-120*		*06/24/2020 15:33*	WG1497869
(S) Nitrobenzene-d5	*87.2*		*14.0-149*		*06/24/2020 15:33*	WG1497869
(S) 2-Fluorobiphenyl	*72.7*		*34.0-125*		*06/24/2020 15:33*	WG1497869

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	13.3		1	06/26/2020 09:04	WG1496590

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	17.2		1.00	1	06/26/2020 16:47	WG1497990

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.00	1	06/26/2020 16:47	WG1499053

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	729		10.0	1	06/26/2020 14:05	WG1499219

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	06/24/2020 11:13	WG1497920

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.73		2.00	1	06/25/2020 09:42	WG1497990
Barium	202		0.500	1	06/25/2020 09:42	WG1497990
Cadmium	ND		0.500	1	06/25/2020 09:42	WG1497990
Chromium	17.2		1.00	1	06/25/2020 09:42	WG1497990
Copper	12.9		2.00	1	06/25/2020 09:42	WG1497990
Lead	8.63		0.500	1	06/25/2020 09:42	WG1497990
Nickel	19.3		2.00	1	06/25/2020 09:42	WG1497990
Selenium	ND		2.00	1	06/25/2020 09:42	WG1497990
Silver	ND		1.00	1	06/25/2020 09:42	WG1497990
Zinc	43.3		5.00	1	06/25/2020 09:42	WG1497990

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	06/21/2020 03:24	WG1496345
Toluene	ND		0.00500	1	06/21/2020 03:24	WG1496345
Ethylbenzene	ND		0.00250	1	06/21/2020 03:24	WG1496345
Total Xylenes	ND		0.00650	1	06/21/2020 03:24	WG1496345
(S) Toluene-d8	*109*		*75.0-131*		*06/21/2020 03:24*	WG1496345
(S) 4-Bromofluorobenzene	*90.3*		*67.0-138*		*06/21/2020 03:24*	WG1496345
(S) 1,2-Dichloroethane-d4	*86.8*		*70.0-130*		*06/21/2020 03:24*	WG1496345

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	ND		4.00	1	06/25/2020 12:59	WG1497863
(S) o-Terphenyl	*64.1*		*18.0-148*		*06/25/2020 12:59*	WG1497863

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	06/25/2020 09:26	WG1497869
Acenaphthene	ND		0.00600	1	06/25/2020 09:26	WG1497869
Acenaphthylene	ND		0.00600	1	06/25/2020 09:26	WG1497869
Benzo(a)anthracene	ND		0.00600	1	06/25/2020 09:26	WG1497869
Benzo(a)pyrene	ND		0.00600	1	06/25/2020 09:26	WG1497869
Benzo(b)fluoranthene	ND		0.00600	1	06/25/2020 09:26	WG1497869
Benzo(g,h,i)perylene	ND		0.00600	1	06/25/2020 09:26	WG1497869
Benzo(k)fluoranthene	ND		0.00600	1	06/25/2020 09:26	WG1497869
Chrysene	ND		0.00600	1	06/25/2020 09:26	WG1497869
Dibenz(a,h)anthracene	ND		0.00600	1	06/25/2020 09:26	WG1497869
Fluoranthene	ND		0.00600	1	06/25/2020 09:26	WG1497869
Fluorene	ND		0.00600	1	06/25/2020 09:26	WG1497869
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	06/25/2020 09:26	WG1497869
Naphthalene	ND		0.0200	1	06/25/2020 09:26	WG1497869
Phenanthrene	ND		0.00600	1	06/25/2020 09:26	WG1497869
Pyrene	ND		0.00600	1	06/25/2020 09:26	WG1497869
1-Methylnaphthalene	ND		0.0200	1	06/25/2020 09:26	WG1497869
2-Methylnaphthalene	ND		0.0200	1	06/25/2020 09:26	WG1497869
2-Chloronaphthalene	ND		0.0200	1	06/25/2020 09:26	WG1497869
(S) p-Terphenyl-d14	*63.6*		*23.0-120*		*06/25/2020 09:26*	WG1497869
(S) Nitrobenzene-d5	*49.4*		*14.0-149*		*06/25/2020 09:26*	WG1497869
(S) 2-Fluorobiphenyl	*64.5*		*34.0-125*		*06/25/2020 09:26*	WG1497869

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

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.88		1	06/26/2020 09:07	WG1496590

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	15.4		1.00	1	06/26/2020 16:48	WG1497990

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND	J6 O1	2.00	1	06/26/2020 16:48	WG1499053

Sample Narrative:

L1230982-10 WG1499053: Sample is a reducer

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	309		10.0	1	06/26/2020 14:05	WG1499219

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	06/24/2020 11:16	WG1497920

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.73		2.00	1	06/25/2020 09:44	WG1497990
Barium	186		0.500	1	06/25/2020 09:44	WG1497990
Cadmium	ND		0.500	1	06/25/2020 09:44	WG1497990
Chromium	15.4		1.00	1	06/25/2020 09:44	WG1497990
Copper	13.0		2.00	1	06/25/2020 09:44	WG1497990
Lead	9.95		0.500	1	06/25/2020 09:44	WG1497990
Nickel	19.4		2.00	1	06/25/2020 09:44	WG1497990
Selenium	ND		2.00	1	06/25/2020 09:44	WG1497990
Silver	ND		1.00	1	06/25/2020 09:44	WG1497990
Zinc	37.8		5.00	1	06/25/2020 09:44	WG1497990

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	06/21/2020 03:43	WG1496345
Toluene	ND		0.00500	1	06/21/2020 03:43	WG1496345
Ethylbenzene	ND		0.00250	1	06/21/2020 03:43	WG1496345
Total Xylenes	ND		0.00650	1	06/21/2020 03:43	WG1496345
(S) Toluene-d8	*108*		*75.0-131*		*06/21/2020 03:43*	WG1496345
(S) 4-Bromofluorobenzene	*90.1*		*67.0-138*		*06/21/2020 03:43*	WG1496345
(S) 1,2-Dichloroethane-d4	*88.3*		*70.0-130*		*06/21/2020 03:43*	WG1496345

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	8.90		4.00	1	06/25/2020 14:29	WG1497863
(S) o-Terphenyl	*64.4*		*18.0-148*		*06/25/2020 14:29*	WG1497863

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	06/24/2020 16:20	WG1497869
Acenaphthene	ND		0.00600	1	06/24/2020 16:20	WG1497869
Acenaphthylene	ND		0.00600	1	06/24/2020 16:20	WG1497869
Benzo(a)anthracene	ND		0.00600	1	06/24/2020 16:20	WG1497869
Benzo(a)pyrene	ND		0.00600	1	06/24/2020 16:20	WG1497869
Benzo(b)fluoranthene	ND		0.00600	1	06/24/2020 16:20	WG1497869
Benzo(g,h,i)perylene	ND		0.00600	1	06/24/2020 16:20	WG1497869
Benzo(k)fluoranthene	ND		0.00600	1	06/24/2020 16:20	WG1497869
Chrysene	ND		0.00600	1	06/24/2020 16:20	WG1497869
Dibenz(a,h)anthracene	ND		0.00600	1	06/24/2020 16:20	WG1497869
Fluoranthene	ND		0.00600	1	06/24/2020 16:20	WG1497869
Fluorene	ND		0.00600	1	06/24/2020 16:20	WG1497869
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	06/24/2020 16:20	WG1497869
Naphthalene	ND		0.0200	1	06/24/2020 16:20	WG1497869
Phenanthrene	ND		0.00600	1	06/24/2020 16:20	WG1497869
Pyrene	ND		0.00600	1	06/24/2020 16:20	WG1497869
1-Methylnaphthalene	ND		0.0200	1	06/24/2020 16:20	WG1497869
2-Methylnaphthalene	ND		0.0200	1	06/24/2020 16:20	WG1497869
2-Chloronaphthalene	ND		0.0200	1	06/24/2020 16:20	WG1497869
(S) p-Terphenyl-d14	*60.9*		*23.0-120*		*06/24/2020 16:20*	WG1497869
(S) Nitrobenzene-d5	*79.5*		*14.0-149*		*06/24/2020 16:20*	WG1497869
(S) 2-Fluorobiphenyl	*64.8*		*34.0-125*		*06/24/2020 16:20*	WG1497869

Method Blank (MB)

(MB) R3542637-1 06/24/20 22:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1230982-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1230982-02 06/24/20 22:21 • (DUP) R3542637-3 06/24/20 22:21

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

L1231518-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1231518-04 06/24/20 22:33 • (DUP) R3542637-8 06/24/20 22:33

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

Laboratory Control Sample (LCS)

(LCS) R3542637-2 06/24/20 22:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	22.6	94.3	80.0-120	

L1230982-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1230982-07 06/24/20 22:25 • (MS) R3542637-4 06/24/20 22:25 • (MSD) R3542637-5 06/24/20 22:25

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	20.0	ND	15.5	16.0	77.4	79.8	1	75.0-125			3.05	20

L1230982-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1230982-07 06/24/20 22:25 • (MS) R3542637-6 06/24/20 22:26

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chromium,Hexavalent	669	ND	689	103	50	75.0-125	

Method Blank (MB)

(MB) R3543555-1 06/26/20 16:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1231274-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1231274-01 06/26/20 16:53 • (DUP) R3543555-7 06/26/20 16:54

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

L1231694-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1231694-02 06/26/20 17:02 • (DUP) R3543555-8 06/26/20 17:04

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

Laboratory Control Sample (LCS)

(LCS) R3543555-2 06/26/20 16:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	24.6	102	80.0-120	

L1230982-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1230982-10 06/26/20 16:48 • (MS) R3543555-3 06/26/20 16:49 • (MSD) R3543555-4 06/26/20 16:50

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 %
Chromium,Hexavalent	20.0	ND	9.18	9.06	45.9	45.3	1	75.0-125	J6	J6	1.32	20

Sample Narrative:

OS: Sample is a reducer

L1230982-10 Original Sample (OS) • Matrix Spike (MS)

(OS) L1230982-10 06/26/20 16:48 • (MS) R3543555-5 06/26/20 16:50

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chromium,Hexavalent	669	ND	519	77.5	50	75.0-125	

Sample Narrative:

OS: Sample is a reducer

Method Blank (MB)

(MB) R3543429-1 06/26/20 14:05

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

L1231274-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1231274-01 06/26/20 14:05 • (DUP) R3543429-3 06/26/20 14:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	umhos/cm	umhos/cm		%		%
Specific Conductance	3970	3990	1	0.503		20

Laboratory Control Sample (LCS)

(LCS) R3543429-2 06/26/20 14:05

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	umhos/cm	umhos/cm	%	%	
Specific Conductance	445	444	99.8	85.0-115	

Method Blank (MB)

(MB) R3542319-1 06/24/20 10:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3542319-2 06/24/20 10:40

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
Mercury	0.500	0.401	80.3	80.0-120	

L1230982-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1230982-03 06/24/20 10:43 • (MS) R3542319-3 06/24/20 10:45 • (MSD) R3542319-4 06/24/20 10:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Mercury	0.500	ND	0.490	0.469	93.1	88.9	1	75.0-125			4.35	20

Method Blank (MB)

(MB) R3542919-1 06/25/20 08:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.460	2.00
Barium	U		0.240	0.500
Cadmium	U		0.0810	0.500
Chromium	U		0.250	1.00
Copper	U		0.506	2.00
Lead	U		0.208	0.500
Nickel	U		0.490	2.00
Selenium	U		0.617	2.00
Silver	U		0.228	1.00
Zinc	2.14	J	0.939	5.00

Laboratory Control Sample (LCS)

(LCS) R3542919-2 06/25/20 09:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	102	102	80.0-120	
Barium	100	106	106	80.0-120	
Cadmium	100	103	103	80.0-120	
Chromium	100	104	104	80.0-120	
Copper	100	106	106	80.0-120	
Lead	100	105	105	80.0-120	
Nickel	100	106	106	80.0-120	
Selenium	100	103	103	80.0-120	
Silver	20.0	18.5	92.6	80.0-120	
Zinc	100	106	106	80.0-120	

L1230982-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1230982-03 06/25/20 09:04 • (MS) R3542919-5 06/25/20 09:12 • (MSD) R3542919-6 06/25/20 09:14

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 %
Arsenic	100	3.15	107	98.1	104	95.0	1	75.0-125			8.98	20
Barium	100	249	346	343	96.4	93.8	1	75.0-125			0.740	20
Cadmium	100	ND	105	96.7	105	96.6	1	75.0-125			7.90	20
Chromium	100	18.6	121	109	102	90.9	1	75.0-125			9.94	20
Copper	100	15.6	125	115	109	99.9	1	75.0-125			7.54	20
Lead	100	7.23	112	104	105	96.9	1	75.0-125			7.47	20
Nickel	100	23.5	129	121	106	97.7	1	75.0-125			6.55	20

L1230982-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1230982-03 06/25/20 09:04 • (MS) R3542919-5 06/25/20 09:12 • (MSD) R3542919-6 06/25/20 09:14

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 %
Selenium	100	ND	104	94.9	104	94.9	1	75.0-125			9.26	20
Silver	20.0	ND	18.9	17.3	94.6	86.7	1	75.0-125			8.73	20
Zinc	100	42.9	140	131	97.3	88.3	1	75.0-125			6.61	20

Method Blank (MB)

(MB) R3541742-3 06/20/20 22:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*108*			*75.0-131*
(S) 4-Bromofluorobenzene	*89.7*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*89.7*			*70.0-130*

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

(LCS) R3541742-1 06/20/20 21:40 • (LCSD) R3541742-2 06/20/20 21:58

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	0.0976	0.0968	78.1	77.4	70.0-123			0.823	20
Ethylbenzene	0.125	0.105	0.106	84.0	84.8	74.0-126			0.948	20
Toluene	0.125	0.107	0.109	85.6	87.2	75.0-121			1.85	20
Xylenes, Total	0.375	0.337	0.337	89.9	89.9	72.0-127			0.000	20
(S) Toluene-d8				*102*	*103*	*75.0-131*				
(S) 4-Bromofluorobenzene				*97.1*	*97.9*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*99.6*	*94.6*	*70.0-130*				

L1230982-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1230982-10 06/21/20 03:43 • (MS) R3541742-4 06/21/20 05:55 • (MSD) R3541742-5 06/21/20 06:14

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	ND	0.122	0.119	97.6	95.2	1	10.0-149			2.49	37
Ethylbenzene	0.125	ND	0.129	0.131	103	105	1	10.0-160			1.54	38
Toluene	0.125	ND	0.148	0.150	118	120	1	10.0-156			1.34	38
Xylenes, Total	0.375	ND	0.415	0.419	110	111	1	10.0-160			0.959	38
(S) Toluene-d8					*109*	*108*		*75.0-131*				
(S) 4-Bromofluorobenzene					*91.9*	*91.1*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*89.1*	*86.8*		*70.0-130*				

Method Blank (MB)

(MB) R3542208-3 06/23/20 16:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*109*			*75.0-131*
(S) 4-Bromofluorobenzene	*90.6*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*90.4*			*70.0-130*

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

(LCS) R3542208-1 06/23/20 14:46 • (LCSD) R3542208-2 06/23/20 15:05

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 %
Xylenes, Total	0.375	0.358	0.356	95.5	94.9	72.0-127			0.560	20
(S) Toluene-d8				*104*	*103*	*75.0-131*				
(S) 4-Bromofluorobenzene				*94.8*	*93.7*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*92.9*	*94.9*	*70.0-130*				

Method Blank (MB)

(MB) R3542778-1 06/24/20 22:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) High Fraction	U		0.769	4.00
(S) o-Terphenyl	*81.2*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3542778-2 06/24/20 22:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) High Fraction	50.0	42.3	84.6	50.0-150	
(S) o-Terphenyl			*95.3*	*18.0-148*	

L1230849-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1230849-11 06/24/20 23:12 • (MS) R3542778-3 06/24/20 23:25 • (MSD) R3542778-4 06/24/20 23:38

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) High Fraction	49.5	ND	40.7	41.5	82.2	83.8	1	50.0-150			1.95	20
(S) o-Terphenyl					*94.2*	*93.0*		*18.0-148*				

Method Blank (MB)

(MB) R3542736-1 06/24/20 23:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) High Fraction	U		0.769	4.00
(S) o-Terphenyl	*61.9*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3542736-2 06/24/20 23:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) High Fraction	50.0	34.3	68.6	50.0-150	
(S) o-Terphenyl			*68.5*	*18.0-148*	

Method Blank (MB)

(MB) R3542476-2 06/24/20 11:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	*106*			*14.0-149*
(S) 2-Fluorobiphenyl	*91.2*			*34.0-125*
(S) p-Terphenyl-d14	*88.2*			*23.0-120*

Laboratory Control Sample (LCS)

(LCS) R3542476-1 06/24/20 11:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0736	92.0	50.0-126	
Acenaphthene	0.0800	0.0669	83.6	50.0-120	
Acenaphthylene	0.0800	0.0739	92.4	50.0-120	
Benzo(a)anthracene	0.0800	0.0745	93.1	45.0-120	
Benzo(a)pyrene	0.0800	0.0581	72.6	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0674	84.3	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0693	86.6	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0697	87.1	49.0-125	
Chrysene	0.0800	0.0685	85.6	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0699	87.4	47.0-125	
Fluoranthene	0.0800	0.0765	95.6	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3542476-1 06/24/20 11:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0701	87.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0709	88.6	46.0-125	
Naphthalene	0.0800	0.0641	80.1	50.0-120	
Phenanthrene	0.0800	0.0689	86.1	47.0-120	
Pyrene	0.0800	0.0709	88.6	43.0-123	
1-Methylnaphthalene	0.0800	0.0702	87.8	51.0-121	
2-Methylnaphthalene	0.0800	0.0668	83.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0674	84.3	50.0-120	
(S) Nitrobenzene-d5			*101*	*14.0-149*	
(S) 2-Fluorobiphenyl			*86.8*	*34.0-125*	
(S) p-Terphenyl-d14			*82.7*	*23.0-120*	

L1230982-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1230982-02 06/24/20 12:26 • (MS) R3542476-3 06/24/20 12:49 • (MSD) R3542476-4 06/24/20 13:13

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	ND	0.0675	0.0634	84.4	79.3	1	10.0-145			6.26	30
Acenaphthene	0.0800	ND	0.0572	0.0560	71.5	70.0	1	14.0-127			2.12	27
Acenaphthylene	0.0800	ND	0.0608	0.0607	76.0	75.9	1	21.0-124			0.165	25
Benzo(a)anthracene	0.0800	ND	0.0731	0.0627	87.5	74.5	1	10.0-139			15.3	30
Benzo(a)pyrene	0.0800	ND	0.0646	0.0594	78.5	72.0	1	10.0-141			8.39	31
Benzo(b)fluoranthene	0.0800	ND	0.0634	0.0571	75.5	67.6	1	10.0-140			10.5	36
Benzo(g,h,i)perylene	0.0800	ND	0.0620	0.0589	77.5	73.6	1	10.0-140			5.13	33
Benzo(k)fluoranthene	0.0800	ND	0.0612	0.0574	76.5	71.8	1	10.0-137			6.41	31
Chrysene	0.0800	ND	0.0651	0.0577	77.6	68.4	1	10.0-145			12.1	30
Dibenz(a,h)anthracene	0.0800	ND	0.0610	0.0603	76.3	75.4	1	10.0-132			1.15	31
Fluoranthene	0.0800	0.00903	0.0931	0.0668	105	72.2	1	10.0-153			32.9	33
Fluorene	0.0800	ND	0.0600	0.0590	75.0	73.8	1	11.0-130			1.68	29
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0625	0.0599	78.1	74.9	1	10.0-137			4.25	32
Naphthalene	0.0800	ND	0.0527	0.0527	65.9	65.9	1	10.0-135			0.000	27
Phenanthrene	0.0800	ND	0.0735	0.0583	86.8	67.8	1	10.0-144			23.1	31
Pyrene	0.0800	ND	0.0763	0.0584	88.2	65.8	1	10.0-148			26.6	35
1-Methylnaphthalene	0.0800	ND	0.0592	0.0587	74.0	73.4	1	10.0-142			0.848	28
2-Methylnaphthalene	0.0800	ND	0.0559	0.0554	69.9	69.3	1	10.0-137			0.898	28
2-Chloronaphthalene	0.0800	ND	0.0551	0.0547	68.9	68.4	1	29.0-120			0.729	24
(S) Nitrobenzene-d5					*84.2*	*86.9*		*14.0-149*				
(S) 2-Fluorobiphenyl					*71.6*	*73.5*		*34.0-125*				
(S) p-Terphenyl-d14					*68.1*	*71.1*		*23.0-120*				

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

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

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* 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 National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
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	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

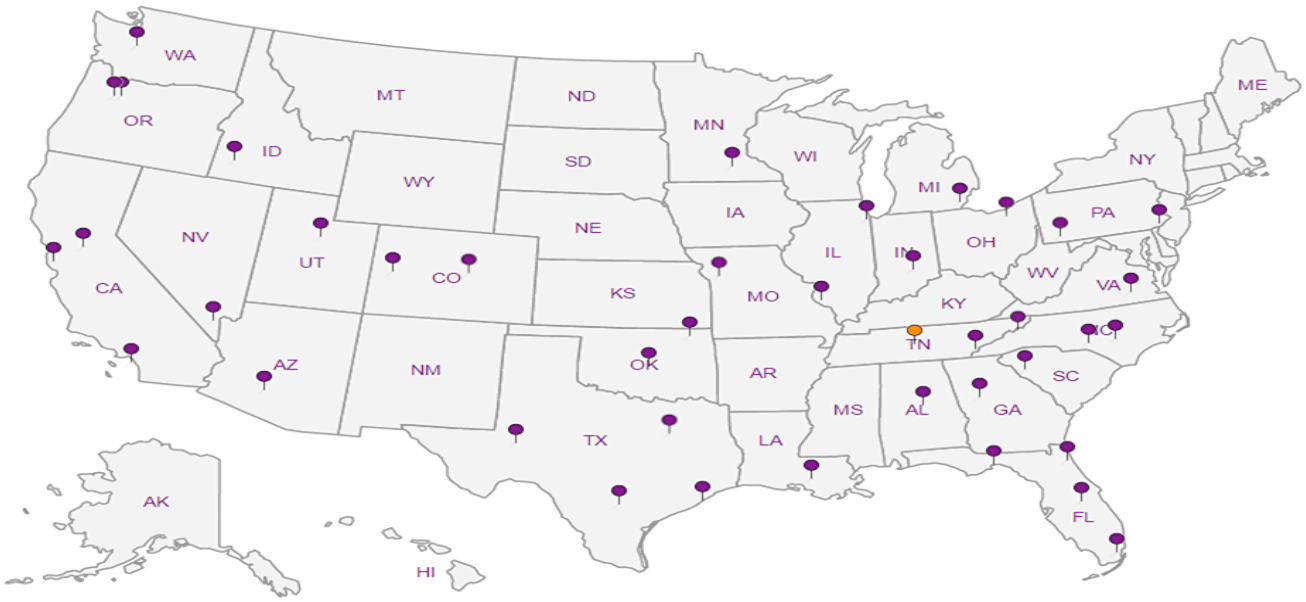
Third Party Federal Accreditations

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

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information: **Same as left**

Report to: **Blair Rollins**

Email To: **brollins@caerusoilandgas.com**

Project Description: **KE ROAD**

City/State Collected: **CO**

Phone: **(970) 640-6919**

Fax:

Client Project # **KE ROAD**

Lab Project #

Collected by (print): **Jessica Dilka**

Site/Facility ID # **KE ROAD**

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # 1230982

G095

Acctnum:

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPH (DRO and GRO)	BTEX	EC, SAR	Table 910-1 metals	PAHs	TPH (DRO and GRO)	Remarks	Sample # (lab only)
20200618-KE Road SW 0-6"	G	SS	0-6"	6/18/20	1040	2	X	X	X	X	X	X		01
20200618-KE Road SW 18-24"			18-24"		1045		X	X	X	X	X	X		02
20200618-KE Road SE 0-6"			0-6"		1000		X	X	X	X	X	X		03
20200618-KE Road SE 18-24"			18-24"		1005		X	X	X	X	X	X		04
20200618-KE Road Center 0-6"			0-6"		1015		X	X	X	X	X	X		05
20200618-KE Road Center 18-24"			18-24"		1020		X	X	X	X	X	X		06
20200618-KE Road NW 0-6"			0-6"		1100		X	X	X	X	X	X		07
20200618-KE Road NW 18-24"			18-24"		1110		X	X	X	X	X	X		08
20200618-KE Road NE 0-6"			0-6"		1135		X	X	X	X	X	X		09
20200618-KE Road NE 18-24"	G	SS	18-24"	6/18/20	1145	2	X	X	X	X	X	X		10

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Checklist
COC Seal Present/Intact: ___NP ___Y ___N
COC Signed/Accurate: ___Y ___N
Bottles arrive intact: ___Y ___N
Correct bottles used: ___Y ___N
Sufficient volume sent: ___Y ___N
If Applicable
VOA Zero Headspace: ___Y ___N
Preservation Correct/Checked: ___Y ___N

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

Tracking #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	6/18/20	1615	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	6/18/20	1700	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 1.9 °C Bottles Received: 20
-0.1=1.9

Date: 6/19/20 Time: 8:45

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

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ANALYTICAL REPORT

September 01, 2020

Caerus Oil and Gas

Sample Delivery Group:	L1255261
Samples Received:	08/27/2020
Project Number:	
Description:	KE Road West

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

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager

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20200826-KE ROAD WN 8-12" L1255261-01 Solid

Collected by: Jessica Dilka | Collected date/time: 08/26/20 11:10 | Received date/time: 08/27/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1534155	1	08/31/20 16:03	08/31/20 16:03	EL	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1534324	1	08/29/20 08:00	08/29/20 10:00	SRG	Mt. Juliet, TN

20200826-KE ROAD WNN 18-24" L1255261-02 Solid

Collected by: Jessica Dilka | Collected date/time: 08/26/20 11:40 | Received date/time: 08/27/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1534155	1	08/31/20 16:05	08/31/20 16:05	EL	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1534324	1	08/29/20 08:00	08/29/20 10:00	SRG	Mt. Juliet, TN

20200826-KE ROAD WC 8-12" L1255261-03 Solid

Collected by: Jessica Dilka | Collected date/time: 08/26/20 12:10 | Received date/time: 08/27/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1534155	1	08/31/20 16:26	08/31/20 16:26	EL	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1534324	1	08/29/20 08:00	08/29/20 10:00	SRG	Mt. Juliet, TN

20200826-KE ROAD WC 18-24" L1255261-04 Solid

Collected by: Jessica Dilka | Collected date/time: 08/26/20 12:35 | Received date/time: 08/27/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1534155	1	08/31/20 16:29	08/31/20 16:29	EL	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1534324	1	08/29/20 08:00	08/29/20 10:00	SRG	Mt. Juliet, TN

20200826-KE ROAD WS 8-12" L1255261-05 Solid

Collected by: Jessica Dilka | Collected date/time: 08/26/20 13:10 | Received date/time: 08/27/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1534155	1	08/31/20 16:37	08/31/20 16:37	EL	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1534324	1	08/29/20 08:00	08/29/20 10:00	SRG	Mt. Juliet, TN

20200826-KE ROAD WS 18-24" L1255261-06 Solid

Collected by: Jessica Dilka | Collected date/time: 08/26/20 13:30 | Received date/time: 08/27/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1534155	1	08/31/20 16:40	08/31/20 16:40	EL	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1534324	1	08/29/20 08:00	08/29/20 10:00	SRG	Mt. Juliet, TN

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

Chris Ward
Project Manager

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.78		1	08/31/2020 16:03	WG1534155

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	193		10.0	1	08/29/2020 10:00	WG1534324

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.66		1	08/31/2020 16:05	WG1534155

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	195		10.0	1	08/29/2020 10:00	WG1534324

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.43		1	08/31/2020 16:26	WG1534155

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	288		10.0	1	08/29/2020 10:00	WG1534324

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.45		1	08/31/2020 16:29	WG1534155

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	316		10.0	1	08/29/2020 10:00	WG1534324

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	6.39		1	08/31/2020 16:37	WG1534155

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	377		10.0	1	08/29/2020 10:00	WG1534324

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	7.99		1	08/31/2020 16:40	WG1534155

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	301		10.0	1	08/29/2020 10:00	WG1534324

Method Blank (MB)

(MB) R3565144-1 08/29/20 10:00

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

L1255261-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1255261-01 08/29/20 10:00 • (DUP) R3565144-3 08/29/20 10:00

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	193	205	1	5.88		20

L1255412-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1255412-01 08/29/20 10:00 • (DUP) R3565144-4 08/29/20 10:00

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	3090	3100	1	0.323		20

Laboratory Control Sample (LCS)

(LCS) R3565144-2 08/29/20 10:00

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	741	740	99.9	85.0-115	

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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* 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 National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
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	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

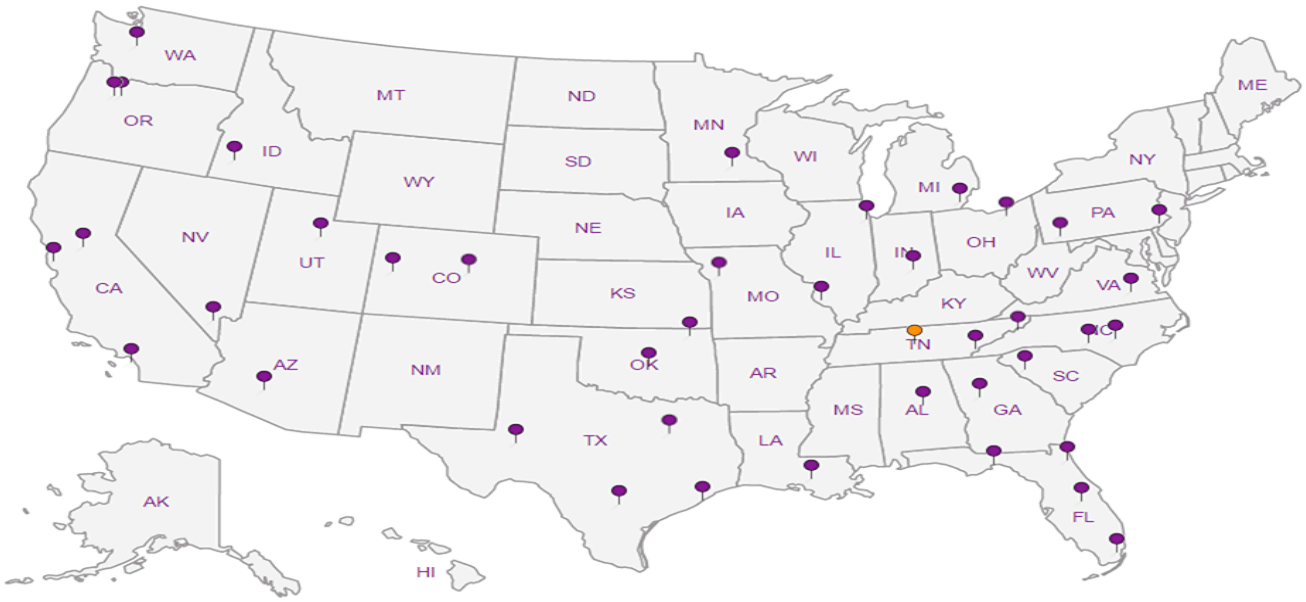
Third Party Federal Accreditations

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

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information: **Same as left**

Pres Chk

Report to: **Blair Rollins**

Email To: **brollins@caerusoilandgas.com**

Project Description: KE Road West

City/State Collected: **CO**

Phone:
Fax:

Client Project #

Lab Project #

Collected by (print): Jessica Dikan

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPH (DRO and GRO)	BTEX	EC, SAR	Table 910-1 metals	PAHs	Remarks	Sample # (lab only)
20200826-KE Road WN	8-12"	SS	8-12"	8/26/20	1110	2			X				-01
20200826-KE Road WN	18-24"	SS	18-24"	8/26/20	1140	2			X				02
20200826-KE Road WC	8-12"	SS	8-12	8/26/20	1210	2			X				03
20200826-KE Road WC	18-24"	SS	18-24	8/26/20	1235	2			X				04
20200826-KE Road WS	8-12"	SS	8-12	8/26/20	1310	2			X				05
20200826-KE Road WS	18-24"	SS	18-24	8/26/20	1330	2			X				06

Chain of Custody Page 1 of 1

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1255261

H054

Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via:

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking # 1676 2750 5889

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/26/20	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/26/20	180	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			MPappas

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: NPAS °C Bottles Received: 12
1.9-5=1.4

Date: 8-27-20 Time: 930

If preservation required by Login: Date/Time

Hold:

Condition: NCF OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 01, 2020

Caerus Oil and Gas

Sample Delivery Group:	L1255265
Samples Received:	08/27/2020
Project Number:	
Description:	KE Road West

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

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager

TABLE OF CONTENTS

20200826-KE ROAD EN 8-12" L1255265-01 Solid

Collected by: Jessica Dilka | Collected date/time: 08/26/20 15:45 | Received date/time: 08/27/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1534155	1	08/31/20 16:43	08/31/20 16:43	EL	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1534324	1	08/29/20 08:00	08/29/20 10:00	SRG	Mt. Juliet, TN

20200826-KE ROAD EN 18-24" L1255265-02 Solid

Collected by: Jessica Dilka | Collected date/time: 08/26/20 16:20 | Received date/time: 08/27/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1534155	1	08/31/20 16:45	08/31/20 16:45	EL	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1534324	1	08/29/20 08:00	08/29/20 10:00	SRG	Mt. Juliet, TN

20200826-KE ROAD EX 8-12" L1255265-03 Solid

Collected by: Jessica Dilka | Collected date/time: 08/26/20 15:10 | Received date/time: 08/27/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1534155	1	08/31/20 16:48	08/31/20 16:48	EL	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1534324	1	08/29/20 08:00	08/29/20 10:00	SRG	Mt. Juliet, TN

20200826-KE ROAD EX 18-24" L1255265-04 Solid

Collected by: Jessica Dilka | Collected date/time: 08/26/20 15:20 | Received date/time: 08/27/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1534155	1	08/31/20 16:51	08/31/20 16:51	EL	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1534324	1	08/29/20 08:00	08/29/20 10:00	SRG	Mt. Juliet, TN

20200826-KE ROAD ES 8-12" L1255265-05 Solid

Collected by: Jessica Dilka | Collected date/time: 08/26/20 14:05 | Received date/time: 08/27/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1534155	1	08/31/20 16:53	08/31/20 16:53	EL	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1534324	1	08/29/20 08:00	08/29/20 10:00	SRG	Mt. Juliet, TN

20200826-KE ROAD ES 18-24" L1255265-06 Solid

Collected by: Jessica Dilka | Collected date/time: 08/26/20 14:36 | Received date/time: 08/27/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1534155	1	08/31/20 16:56	08/31/20 16:56	EL	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1534324	1	08/29/20 08:00	08/29/20 10:00	SRG	Mt. Juliet, TN

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

Chris Ward
Project Manager

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.41		1	08/31/2020 16:43	WG1534155

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	217		10.0	1	08/29/2020 10:00	WG1534324

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	6.02		1	08/31/2020 16:45	WG1534155

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	290		10.0	1	08/29/2020 10:00	WG1534324

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.08		1	08/31/2020 16:48	WG1534155

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	234		10.0	1	08/29/2020 10:00	WG1534324

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.52		1	08/31/2020 16:51	WG1534155

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	266		10.0	1	08/29/2020 10:00	WG1534324

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	8.06		1	08/31/2020 16:53	WG1534155

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	396		10.0	1	08/29/2020 10:00	WG1534324

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	8.55		1	08/31/2020 16:56	WG1534155

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	457		10.0	1	08/29/2020 10:00	WG1534324

Method Blank (MB)

(MB) R3565144-1 08/29/20 10:00

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

L1255261-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1255261-01 08/29/20 10:00 • (DUP) R3565144-3 08/29/20 10:00

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	193	205	1	5.88		20

L1255412-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1255412-01 08/29/20 10:00 • (DUP) R3565144-4 08/29/20 10:00

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	3090	3100	1	0.323		20

Laboratory Control Sample (LCS)

(LCS) R3565144-2 08/29/20 10:00

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	741	740	99.9	85.0-115	

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Abbreviations and Definitions

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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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* 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 National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
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	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

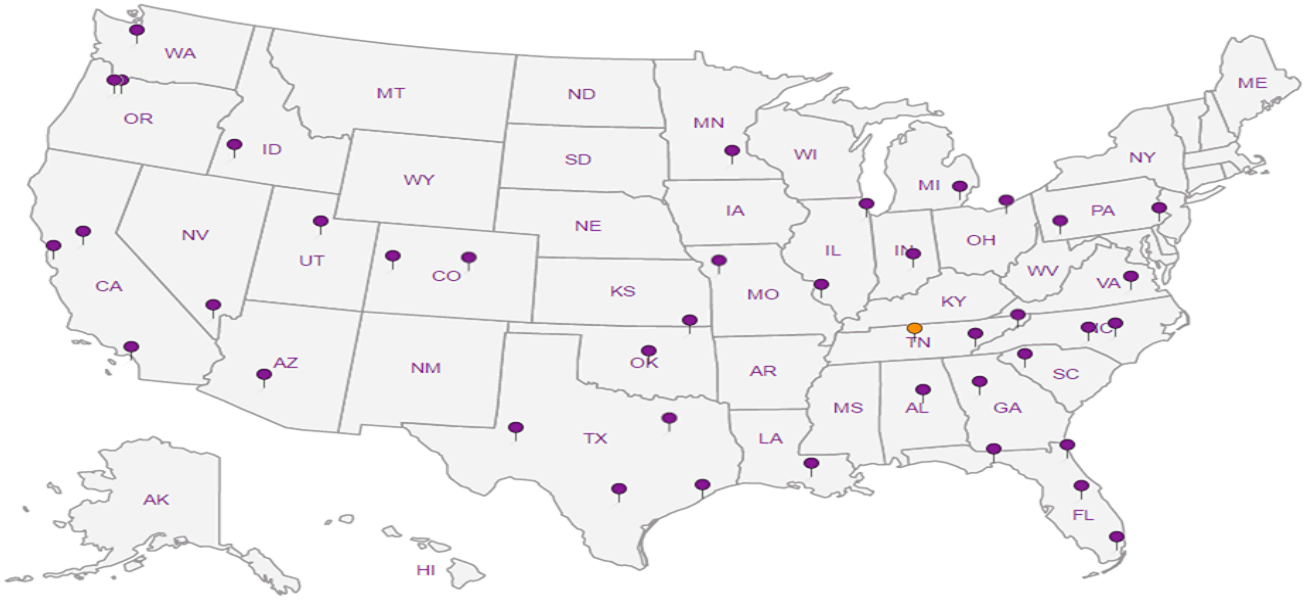
Third Party Federal Accreditations

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

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information: **Same as left**

Pres Chk

Report to: **Blair Rollins**

Email To: **brollins@caerusoilandgas.com**

Project Description: KE Road East

City/State Collected: **CO**

Phone:
Fax:

Client Project #

Lab Project #

Collected by (print): Jessica Dilka

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Date Results Needed

Quote #

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1255265
H055

Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPH (DRO and GRO)	BTEX	EC, SAR	Table 910-1 metals	PAHs	Remarks	Sample # (lab only)
20200826-KERoadEN	8-12"	SS	8-12	8/26/20	1545	2			X				-01
20200826-KERoadEN	18-24"	SS	18-24	8/26/20	1620	2			X				02
20200826-KERoadEC	8-12"	SS	8-12	8/26/20	1510	2			X				03
20200826-KERoadEC	18-24"	SS	18-24	8/26/20	1530	2			X				04
20200826-KERoadES	8-12"	SS	8-12	8/26/20	1405	2			X				05
20200826-KERoadES	18-24"	SS	18-24	8/26/20	1436	2			X				06

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking # 167627505869

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	8/26/20	1730		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.3 °C Bottles Received: 1.9-5=1.4 12
	8/26/20	1800		
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
			MPappas	8-27-20 930

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK