



July 30, 2020

Mr. Jake Janicek
Caerus Oil and Gas LLC
143 Diamond Ave
Parachute, CO 81635

Via Email

**RE Caerus C16OU - Soil Investigation
 COGCC Facility ID 469290, REM # 14788
 Mesa County, Colorado**

Mr. Janicek,

Entrada Consulting Group, Inc. (Entrada) was contracted by Caerus Oil and Gas, LLC (Caerus) to conduct soil boring and sampling activities associated with the release of produced water and condensate from a flowline at the C16OU pad (Site). The Site is located in Caerus's Orchard Unit Area in the NENW, of Section 16, Township 8S, Range 96W of the 6th Principal Meridian in Mesa County, Colorado. The Site location is shown on **Figure 1**. The following Investigation Summary Report provides Site background information and presents the results of a subsurface investigation conducted by Entrada June 9th through June 11th, 2020.

BACKGROUND

On November 15, 2019, during a routine pressure test of the production pipeline infrastructure at the Site, the leaking flowline to the production tank was found, resulting in the release of approximately 985 barrels (bbls) of produced water and condensate into the soil beneath the pad surface.

On December 17, 2019, Caerus and LT Environmental (LTE) personnel conducted potholing and sampling activities at the Site to delineate hydrocarbon impacts associated with the flowline release. During advancement of each pothole location the soil was inspected for the presence or absence of petroleum hydrocarbon odor and/or staining. Laboratory analytical results of the pothole soil samples indicated concentrations of analytes that were either below the laboratory detection limit or within the COGCC Table 910-1 Concentration Levels except for EC, SAR, and pH.

From December 18 through 20, 2019, LTE personnel conducted excavation oversight of the removal of hydrocarbon impacted soil beneath the failed flowline at the Site. The excavation was directed by an LTE geologist who inspected the soil for the presence or absence of petroleum hydrocarbon odor and/or staining. When field screening techniques indicated the removal of hydrocarbon impacted soil, excavation confirmation soil samples were collected. Laboratory

analytical results of all excavation confirmation soil samples indicate concentrations of analytes that were either below the laboratory detection limit or within the COGCC Table 910-1 Concentration Levels except for TPH, EC and SAR. The total depth of the excavation extent was approximately 21 feet below ground surface (ft-bgs). Approximately 756 cubic yards of excavated soil was transported to Greenleaf Environmental Services for disposal.

On January 8, 2020 an additional 8 feet of impacted soil was removed from the northern portion of the excavation. Confirmation soil samples were collected from the north bottom, north wall, east wall and west wall of the excavation. Laboratory analytical results indicated that all four samples were within the COGCC Table 910-1 Concentration Levels except for EC, SAR and/or pH in varying combinations. The excavated soil was transported to Greenleaf Environmental Services for disposal.

SOIL BORINGS

Entrada contracted Dakota Drilling Inc. of Denver, Colorado to advance five soil borings in the former excavation area to identify any remaining non-hydrocarbon impacts from the produced water spill. The location of these additional borings is shown on **Figure 2**. Each boring was hydro-excavated to a depth of 8 ft-bgs prior to drilling. The soil borings were advanced to a total depth of 50 ft-bgs with a 7-inch hollow stem auger driven by a track-mounted Dietrich 50 drill rig. Soil samples were collected at 5 foot intervals starting at 10 ft-bgs in each boring to determine likely zones of contamination. A split spoon sampler was used in the upper portion of each boring. Due to drilling difficulties, samples in the lower portion of each boring were taken directly from cuttings from air-rotary drilling. Soil samples were characterized for site lithology, soil color, soil texture, relative moisture content, and potential environmental impact (i.e. chemical staining and/or odors). Soil was screened for volatile organic compound head space measurements at select intervals by placing it into a re-sealable bag, allowing the soil to warm and volatilize any organic compounds, and monitoring the headspace in the bag with a photoionization detector (PID) equipped with a 10.6 eV lamp. A total of 40 samples (8 per boring) were collected for laboratory analysis.

SOIL ANALYSIS

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 EPA Method 9050AMod;
- pH by EPA Method 9045D;
- Sodium adsorption ratio (SAR) calculated by USDA Method H60.

SOIL ANALYTICAL RESULTS

Soil analytical results were reported for the 40 soil samples. Analytical results are summarized in **Table 1** and are compared to the COGCC Table 910-1 concentration levels. There were exceedances to the allowable concentration levels in every boring except SB01. These exceedances are summarized below:

- pH was elevated in the soil samples collected at SB02 (25-26.5') and SB03 (20-21.5', 25-26.5', 30-35', 35-40', and 40-45') at levels ranging from 9.01 to 9.70. The COGCC allowable concentration level for pH in soil is 6-9.
- EC was elevated in the soil samples collected at SB04 (35-40') and SB05 (45-50') at levels ranging from 4.15 to 4.87 mmhos/cm. The COGCC allowable concentration level for EC in soil is <4 mmhos/cm or 2X background.
- SAR was elevated in the soil samples collected at SB02 (25-26.5', 30-35', and 35-40'), SB03 (15-16.5', 25-26.5', 30-31.5', 35-40', 40-45', and 45-50'), SB04 (10-11.5', 15-16.5', 20-21.5', 25-26.5', 30-35', 35-40', 40-45', and 45-50') and SB05 (10-11.5', 15-16.5', 25-26.5', 30-31.5', 40-45', and 45-50') at concentrations ranging from 12.1 to 62.1. The COGCC allowable concentration level for SAR in soil is 12.

A spatial representation of sample locations and corresponding analytical results is included as **Figure 2**. The laboratory analytical report and chain-of-custody documentation are included as an attachment.

CONCLUSIONS

Based on the soil sample results collected from the soil borings, the produced water impacts associated with the release at the C16OU location are still present at levels above the COGCC allowable concentration levels however Caerus should request relief from the Table 910-1 concentration levels for SAR, EC and pH following the guidelines set forth under FAQ32 at this location. It is believed that the request for FAQ 32 consideration is acceptable due to the depth of the exceedances and the minimal risk to potential receptors in the area. The nearest surface water drainage is located approximately 1500 feet to the west. Groundwater at the site is estimated to be greater than 270 feet below ground surface. Based on the request for consideration for FAQ 32, the elevated concentrations of SAR, EC and pH are well below the three foot target depth to ensure agronomic growth.

We appreciate the opportunity to assist Caerus Oil and Gas. Please contact me at (970) 270-2986 if you have any questions.

Sincerely,
ENTRADA CONSULTING GROUP, INC



Reed Johnson
Senior Project Geologist



Tim Dobransky
Principal Scientist

Attachments:

Table 1 – Soil Data Summary
Figure 1 – Site Location Map
Figure 2 – Analytical Results Map
Boring Logs
Laboratory Analytical Reports

Tables

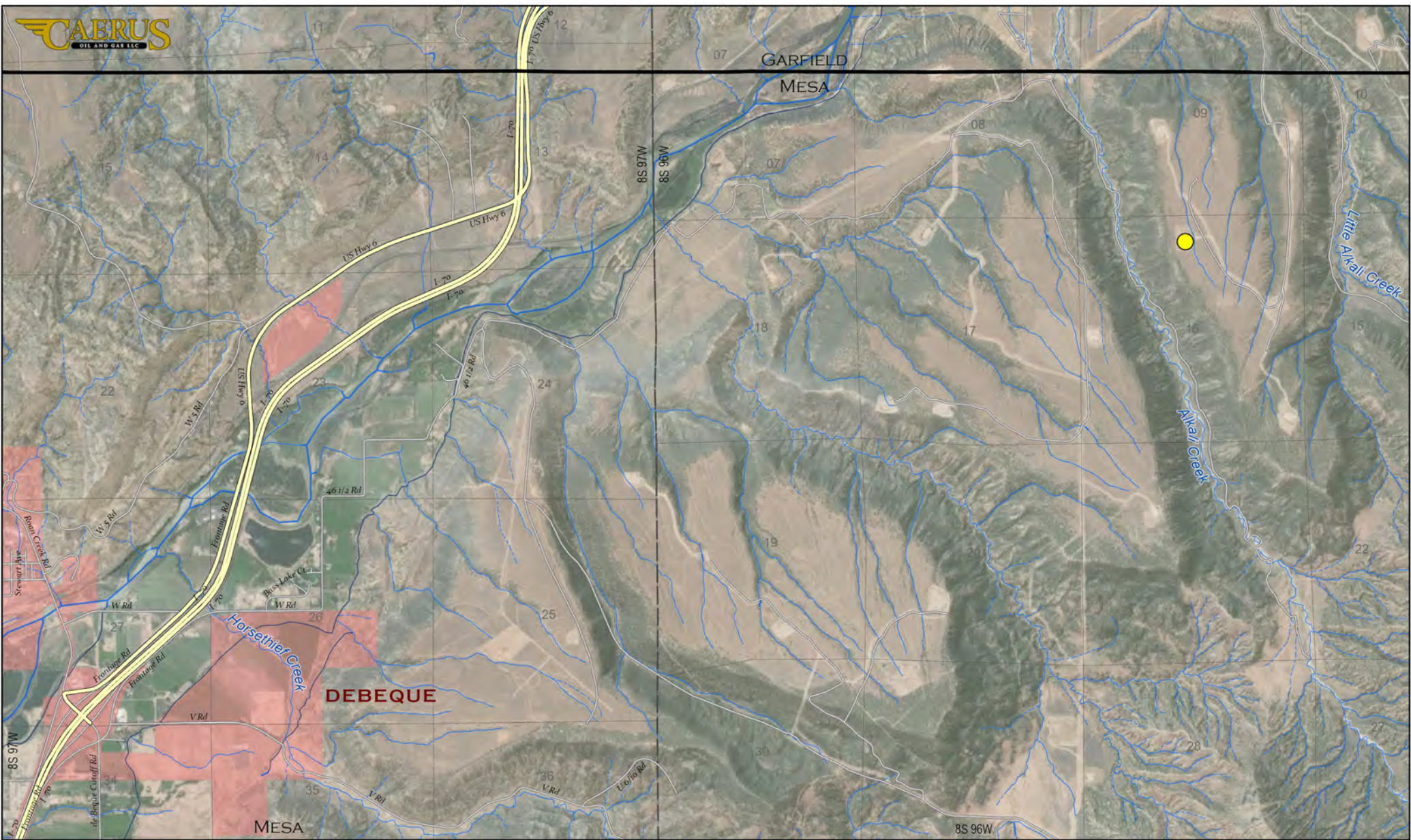
Table 1
C16OU
Soil Analytical Results Summary
Soil Borings 6/9/20-6/11/20

LABORATORY DATA SUMMARY											
SB01	Sample ID	20200609-C16OU-SB1	20200609-C16OU-SB1	20200609-C16OU-SB1	20200609-C16OU-SB1	20200609-C16OU-SB1	20200609-C16OU-SB1	20200609-C16OU-SB1	20200609-C16OU-SB1	COGCC TABLE 910-1 CONCENTRATION LEVELS	UNITS
	Sample Depth	10-11.5'	15-16.5'	20-21.5'	25-26.5'	30.5-35'	35-40'	40-45'	45-50'		
	Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab		
	Sample Description	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
	Analytical Parameters										
	Sodium Adsorption Ratio	8.29	8.93	8.73	8.39	6.10	6.36	6.72	6.72		
	Electrical Conductivity	1.56	1.69	1.42	1.55	1.53	1.38	1.63	1.66	<4 or 2 x the background 6-9	ratio mmhos/cm su
	pH	8.76	8.19	8.68	8.44	8.56	8.53	8.53	8.48		
SB02	Sample ID	20200610-C16OU-SB2	20200610-C16OU-SB2	20200610-C16OU-SB2	20200610-C16OU-SB2	20200610-C16OU-SB2	20200610-C16OU-SB2	20200610-C16OU-SB2	20200610-C16OU-SB2	COGCC TABLE 910-1 CONCENTRATION LEVELS	UNITS
	Sample Depth	10-11.5'	15-16.5'	20-21.5'	25-26.5'	30-35'	35-40'	40-45'	45-50'		
	Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab		
	Sample Description	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
	Analytical Parameters										
	Sodium Adsorption Ratio	11.8	11.0	11.8	12.6	12.9	12.5	11.2	10.3		
	Electrical Conductivity	1.03	2.16	2.24	1.78	1.19	1.15	0.97	1.11	<4 or 2 x the background 6-9	ratio mmhos/cm su
	pH	8.89	8.52	8.71	9.10	8.92	8.91	8.75	8.68		
SB03	Sample ID	20200610-C16OU-SB3	20200610-C16OU-SB3	20200610-C16OU-SB3	20200610-C16OU-SB3	20200610-C16OU-SB3	20200610-C16OU-SB3	20200610-C16OU-SB3	20200610-C16OU-SB3	COGCC TABLE 910-1 CONCENTRATION LEVELS	UNITS
	Sample Depth	10-11.5'	15-16.5'	20-21.5'	25-26.5'	30-31.5'	35-40'	40-45'	45-50'		
	Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab		
	Sample Description	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
	Analytical Parameters										
	Sodium Adsorption Ratio	8.92	12.2	6.15	62.1	59.2	43.5	50.5	48.6		
	Electrical Conductivity	3.44	2.42	2.08	3.21	3.61	1.83	2.47	3.82	<4 or 2 x the background 6-9	ratio mmhos/cm su
	pH	8.13	8.18	9.30	9.01	9.70	9.38	9.40	8.67		
SB04	Sample ID	20200611-C16OU-SB4	20200611-C16OU-SB4	20200611-C16OU-SB4	20200611-C16OU-SB4	20200611-C16OU-SB4	20200611-C16OU-SB4	20200611-C16OU-SB4	20200611-C16OU-SB4	COGCC TABLE 910-1 CONCENTRATION LEVELS	UNITS
	Sample Depth	10-11.5'	15-16.5'	20-21.5'	25-26.5'	30-35'	35-40'	40-45'	45-50'		
	Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab		
	Sample Description	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
	Analytical Parameters										
	Sodium Adsorption Ratio	12.5	15.4	15.3	14.6	13.5	13.8	14.4	20.7		
	Electrical Conductivity	1.51	2.41	3.38	2.66	2.24	4.15	3.75	3.14	<4 or 2 x the background 6-9	ratio mmhos/cm su
	pH	8.88	8.50	8.30	8.39	8.64	8.42	8.46	8.80		
SB05	Sample ID	20200611-C16OU-SB5	20200611-C16OU-SB5	20200611-C16OU-SB5	20200611-C16OU-SB5	20200611-C16OU-SB5	20200611-C16OU-SB5	20200611-C16OU-SB5	20200611-C16OU-SB5	COGCC TABLE 910-1 CONCENTRATION LEVELS	UNITS
	Sample Depth	10-11.5'	15-16.5'	20-21.5'	25-26.5'	30-31.5'	35-40'	40-45'	45-50'		
	Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab		
	Sample Description	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
	Analytical Parameters										
	Sodium Adsorption Ratio	14.0	12.8	11.9	12.4	12.1	11.4	16.7	22.0		
	Electrical Conductivity	1.77	2.05	2.81	2.99	3.51	2.12	2.78	4.87	<4 or 2 x the background 6-9	ratio mmhos/cm su
	pH	8.81	8.68	8.46	8.50	8.34	8.75	8.75	8.31		

mg/kg - milligrams per kilogram
mg/L - milligrams per liter
J - indicates an estimated value
mmhos/cm - millimhos per centimeter
mv - millivolts
su - standard units
NA - not applicable
NT - parameter was not tested
ND - not detected above method detection limit

Over COGCC Table 910-1 concentration levels but under BACKGROUND level.
Over COGCC Table 910-1 concentration levels and not within BACKGROUND level.
Over COGCC Table 910-1 concentration levels

Figures




LEGEND
 Site Location

04,0008,000

Feet

1 inch = 4,000 ft



Project No: 019-087		C160U LOCATION MAP CAERUS OIL AND GAS LLC NENW SEC 16 T8S R96W 6TH PM MESA COUNTY, COLORADO	 <div>330 Grand Avenue, Unit C Grand Junction, CO 81501 970-579-1015</div>	Figure
Map By: NDB				
Date: 7/7/2020				1

SB5			
Sample Date	6/11/2020		
Depth	SAR	EC	pH
10-11.5'	14.0	1.770	8.81
15-16.5'	12.8	2.050	8.68
20-21.5'	11.9	2.810	8.46
25-26.5'	12.4	2.990	8.50
30-31.5'	12.1	3.510	8.34
35-40'	11.4	2.120	8.75
40-45'	16.7	2.780	8.75
45-50'	22.0	4.870	8.31

SB3			
Sample Date	6/10/2020		
Depth	SAR	EC	pH
10-11.5'	8.9	3.440	8.13
15-16.5'	12.2	2.420	8.18
20-21.5'	6.2	2.080	9.30
25-26.5'	62.1	3.210	9.01
30-31.5'	59.2	3.610	9.70
35-40'	43.5	1.830	9.38
40-45'	50.5	2.470	9.40
45-50'	48.6	3.820	8.67

SB4			
Sample Date	6/11/2020		
Depth	SAR	EC	pH
10-11.5'	12.5	1.510	8.88
15-16.5'	15.4	2.410	8.50
20-21.5'	15.3	3.380	8.30
25-26.5'	14.6	2.660	8.39
30-35'	13.5	2.240	8.64
35-40'	13.8	4.150	8.42
40-45'	14.4	3.750	8.46
45-50'	20.7	3.140	8.80

SB1			
Sample Date	6/9/2020		
Depth	SAR	EC	pH
10-11.5'	8.3	1.560	8.76
15-16.5'	8.9	1.690	8.19
20-21.5'	8.7	1.420	8.68
25-26.5'	8.4	1.550	8.44
30.5-35'	6.1	1.530	8.56
35-40'	6.4	1.380	8.53
40-45'	6.7	1.630	8.53
45-50'	6.7	1.660	8.48

SB2			
Sample Date	6/10/2020		
Depth	SAR	EC	pH
10-11.5'	11.8	1.030	8.89
15-16.5'	11.0	2.160	8.52
20-21.5'	11.8	2.240	8.71
25-26.5'	12.6	1.780	9.10
30-35'	12.9	1.190	8.92
35-40'	12.5	1.150	8.91
40-45'	11.2	0.966	8.75
45-50'	10.3	1.110	8.68

Label Legend		Standard	Units
Ratio	Sodium Adsorption Ratio	<12	Ratio
EC	Electrical Conductivity	<4 or 2x Background	mmhos/cm
pH	pH	6-9	s.u.
RED	Analyte exceeds COGCC Standard		

LEGEND

● Boring Location

0 100 200 Feet
1 inch = 100 ft



Project No: 019-087

Map By: NDB

Date: 7/8/2020

C16OU ANALYTICAL RESULTS MAP
CAERUS OIL AND GAS LLC
NENW SEC 16 T8S R96W 6TH PM
MESA COUNTY, COLORADO



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

Figure

2

Boring Logs



Caerus Operating LLC
143 Diamond Ave.
Parachute, CO 81635

C16OU Assessment

SB01



Date Started : 6/9/20
Detector : MiniRae PID
Hole Diameter : 7"
Drilling Method : Hollow Stem - Air Rotary
Sampling Method : Cuttings/Split Spoon
Drilling Company : Dakota Drilling
Latitude : 39.355153°
Longitude : -108.113968°
Project Number : 019-089
Logged By : R. Johnson

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	Moisture (%)	% Fines	Structure	PID (ppm)	Staining	Blow Count	Recovery (in)	Sample
0			Hydroexcavated to 8'								
5											
10	CL		SANDY CLAY, with trace gravels and cobbles. No odor.	10	70	NA	0.0	N	11,16,22	18	10-11.5
15	CL		SANDY CLAY, with trace gravels. No odor.	20	70	NA	0.0	N	15,24,33	18	15-16.5
20	SC		CLAYEY SAND, with shale and basalt cobbles. No odor.	30	50	NA	0.0	N	11,19,21	16	20-21.5
25	CL		SANDY AND GRAVELLY CLAY into 4" sandstone cobble into sandy clay. No odor.	30	60	NA	0.0	N	9,21,26	18	25-26.5
30	CL		SANDY CLAY into shale fragments and weathered sandstone. No odor.	40	40	NA	0.0	N	*	8	30.5-35
35	GC		SANDSTONE, SHALE, and BASALT gravels. No odor.	30	30	NA	0.1	N			35-40
40	SC		CLAYEY SAND with basalt and sandstone gravel. No odor.	30	20	NA	0.0	N			40-45
45	SC		CLAYEY SAND (fine grained) with sandstone and shale gravel. No odor.	20	30	NA	0.0	N			45-50
50	SC		CLAYEY SAND (fine grained) with interbedded sandstone and claystone. No odor.	20	30	NA	0.0	N			
TD at 50' *15, 50/3" Notes: Split spoon samples taken from 10-30.5'. Switched to cuttings from air rotary from 30.5'-50' due to difficult drilling. Boring filled with cuttings and pad material.											



Caerus Operating LLC
143 Diamond Ave.
Parachute, CO 81635

C16OU Assessment
SB02



Date Started : 6/10/20
Detector : MiniRae PID
Hole Diameter : 7"
Drilling Method : Hollow Stem - Air Rotary
Sampling Method : Cuttings/Split Spoon
Drilling Company : Dakota Drilling
Latitude : 39.355054°
Longitude : -108.114101°
Project Number : 019-089
Logged By : R. Johnson

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	Moisture (%)	% Fines	Structure	PID (ppm)	Staining	Blow Count	Recovery (in)	Sample
0			Hydroexcavated to 8'								
5											
10	SC		CLAYEY SAND into weathered siltstone clast. Slightly moist into dry. No odor.	30	60	NA	0.0	N	18,50/5	10	10-11.5
15	SC		CLAYEY SAND with sandstone cobbles into weathered siltstone clast. No odor.	30	60	NA	0.0	N	18,21,17	12	15-16.5
20	CL		SANDY CLAY with trace gravel. No odor.	50	70	NA	0.0	N	6,5,8	18	20-21.5
25	CL		SILTY AND SANDY CLAY with sandstone, siltstone, and basalt gravel into weathered 3" sandstone cobble. No odor.	30	50	NA	0.0	N	*	9	25-26.5
30	SC		Basalt cobble into CLAYEY SAND into sandstone gravel. No odor.	20	30	NA	0.0	N			30-35
35	SC		CLAYEY SAND (fine grained) with basalt and siltstone gravel. No odor.	20	30	NA	0.1	N			35-40
40	SC		CLAYEY SAND (fine grained) with sandstone, siltstone, and volcanic gravel. No odor.	10	30	NA	0.3	N			40-45
45	SC		CLAYEY SAND (fine to med grained) with basalt and sandstone gravel. No odor.	20	30	NA	0.1	N			45-50
50	GC		Basalt GRAVEL into sandy clay. No odor.	50	50	NA	0.5	N			
TD at 50' Notes: Split spoon samples taken from 10-28'. Switched to cuttings from air rotary from 28'-50' due to auger refusal. Boring filled with cuttings and pad material. *26,20,50/5											



Caerus Operating LLC
143 Diamond Ave.
Parachute, CO 81635

C16OU Assessment
SB03



Date Started : 6/10/20
Detector : MiniRae PID
Hole Diameter : 7"
Drilling Method : Hollow Stem - Air Rotary
Sampling Method : Cuttings/Split Spoon
Drilling Company : Dakota Drilling
Latitude : 39.355152°
Longitude : -108.114050°
Project Number : 019-089
Logged By : R. Johnson

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	Moisture (%)	% Fines	Structure	PID (ppm)	Staining	Blow Count	Recovery (in)	Sample
0			Hydroexcavated to 8'								
5											
10	CL		SILTY CLAY with gravel. Stiff. No odor.	50	80	NA	0.3	N	3,4,8	10	10-11.5
15	CL		SANDY CLAY with gravel into 1" sandstone cobble into sandy clay.	50	70	NA	0.8	N	3,2,3	7	15-16.5
20	CL		SANDY, GRAVELLY CLAY into 2" volcanic cobble. Poor recovery.	40	70	NA	1.5	N	3,4,5	6	20-21.5
25	CL		SANDY CLAY with gravel into 3" siltstone and basalt cobbles. No odor.	40	70	NA	1.6	N	16,17,18	14	25-26.5
30	GC		SANDY CLAY with gravel into volcanic and siltstone cobbles into sandy clay into weathered siltstone cobble. No odor.	50	60	NA	2.5	N	*	18	30-31.5
35	SC		CLAYEY SAND with siltstone, basalt, and quartz gravel.	40	50	NA	2.6	N			
40	SC		CLAYEY SAND (fine grained) with basalt, siltstone, and sandstone gravel. No odor.	30	50	NA	2.7	N			35-40
45	GC		SANDY AND SILTY GRAVEL comprised of mixed volcanics.	30	30	NA	1.5	N			40-45
50	SC		CLAYEY SAND into moist red clay.	50	70	NA	1.2	N			45-50
TD at 50' Notes: Split spoon samples taken from 10-31.5'. Switched to cuttings from air rotary from 31.5'-50' due to difficult drilling. Boring filled with cuttings and pad material. *8,16,18											



Caerus Operating LLC
143 Diamond Ave.
Parachute, CO 81635

C16OU Assessment

SB04



Date Started : 6/11/20
Detector : MiniRae PID
Hole Diameter : 7"
Drilling Method : Hollow Stem - Air Rotary
Sampling Method : Cuttings/Split Spoon
Drilling Company : Dakota Drilling
Latitude : 39.355177°
Longitude : -108.114125°
Project Number : 019-089
Logged By : R. Johnson

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	Moisture (%)	% Fines	Structure	PID (ppm)	Staining	Blow Count	Recovery (in)	Sample
0			Hydroexcavated to 8'								
5											
10	CL		SANDY CLAY into 6" weathered siltstone clast into fine grained sand with gravel. No odor.	30	40	NA	0.2	N	6,9,8	18	10-11.5
15	CL		SANDY CLAY, mottled, into weathered claystone clast into sandy clay. Trace gravel throughout. No odor.	40	60	NA	0.2	N	6,14,14	16	15-16.5
20	SC		CLAYEY SAND with siltstone gravel into mottled sandy clay. No odor.	40	60	NA	0.0	N	8,27,30	18	20-21.5
25	CL		SILTY CLAY with sandstone and siltstone gravel. Mottled and iron stained. Tough Drilling.	50	60	NA	0.2	N	7,15,22	18	25-26.5
30	GC		GRAVEL, Basalt and volcanic rock fragments.	10	0	NA	0.6	N			
	GC		GRAVEL, Basalt and volcanic rock fragments into brown sandy clay with gravels into volcanic rock fragments.	10	20	NA	1.1	N			30-35
35	SC		CLAYEY AND SILTY SAND with volcanic rock fragments.	20	50	NA	1.3	N			35-40
40	SC		CLAYEY SAND with abundant volcanic rock fragments. No odor.	20	20	NA	0.6	N			40-45
45	SC		SILTY AND CLAYEY SAND with abundant volcanic rock fragments. No odor.	20	20	NA	0.8	N			45-50
50			TD at 50' Notes: Split spoon samples taken from 10-29'. Switched to cuttings from air rotary from 29'-50' due to difficult drilling. Boring filled with cuttings and pad material.								



Caerus Operating LLC
143 Diamond Ave.
Parachute, CO 81635

C16OU Assessment
SB05



Date Started : 6/11/20
Detector : MiniRae PID
Hole Diameter : 7"
Drilling Method : Hollow Stem - Air Rotary
Sampling Method : Cuttings/Split Spoon
Drilling Company : Dakota Drilling
Latitude : 39.355229°
Longitude : -108.114090°
Project Number : 019-089
Logged By : R. Johnson

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	Moisture (%)	% Fines	Structure	PID (ppm)	Staining	Blow Count	Recovery (in)	Sample
0			Hydroexcavated to 8'								
5											
10	CL		SILTY CLAY into sandy clay. Siltstone gravel throughout. No odor.	20	70	NA	0.6	N	7,8,13	17	10-11.5
15	CL		SILTY CLAY with trace gravel. Mottled. No odor.	30	80	NA	0.8	N	9,9,14	18	15-16.5
20	CL		SILTY AND SANDY CLAY with weathered volcanic gravels. trace mottling. No odor.	30	70	NA	0.1	N	8,13,15	18	20-21.5
25	CL		SILTY CLAY with gravel. Mottled. 2" siltstone and volcanic cobbles at base. No odor.	40	70	NA	0.7	N	9,24,22	18	25-26.5
30	CL		SANDY AND GRAVELLY CLAY, siltstone and volcanic gravels. Mottled. No odor.	40	70	NA	0.0	N	*	15	30-31.5
35	CL		SANDY CLAY with volcanic rock fragments. No odor.	40	60	NA	0.4	N			
40	CL		SANDY AND SILTY CLAY with volcanic rock fragments. No odor.	30	60	NA	2.0	N			35-40
45	CL		SANDY CLAY with volcanic rock fragments. No odor.	20	50	NA	1.2	N			40-45
50	CL		SANDY CLAY with volcanic rock fragments into silty clay. No odor.	40	60	NA	1.1	N			45-50
TD at 50' Notes: Split spoon samples taken from 10-31.5'. Switched to cuttings from air rotary from 31.5'-50' due to difficult drilling. Boring filled with cuttings and pad material. *19,13,18											

Laboratory Analytical Reports

June 23, 2020

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Caerus Oil and Gas

Sample Delivery Group: L1229097
Samples Received: 06/13/2020
Project Number:
Description: C16OU Subsurface Investigation

Report To: Jake Janicek
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Jason Romer
Project Manager

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



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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20200609-C16OU-SB1 (10-11') L1229097-01 Solid

Collected by
Reed J

Collected date/time
06/09/20 13:00

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492758	1	06/19/20 08:38	06/19/20 08:38	TRB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495629	1	06/19/20 14:00	06/19/20 15:00	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496647	1	06/21/20 19:09	06/21/20 23:18	AKA	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

20200609-C16OU-SB1 (15-16') L1229097-02 Solid

Collected by
Reed J

Collected date/time
06/09/20 13:30

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 11:51	06/22/20 11:51	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495629	1	06/19/20 14:00	06/19/20 15:00	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496647	1	06/21/20 19:09	06/21/20 23:18	AKA	Mt. Juliet, TN

20200609-C16OU-SB1 (20-21') L1229097-03 Solid

Collected by
Reed J

Collected date/time
06/09/20 13:50

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 11:54	06/22/20 11:54	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495629	1	06/19/20 14:00	06/19/20 15:00	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496647	1	06/21/20 19:09	06/21/20 23:18	AKA	Mt. Juliet, TN

20200609-C16OU-SB1 (25-26') L1229097-04 Solid

Collected by
Reed J

Collected date/time
06/09/20 14:10

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 11:57	06/22/20 11:57	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495629	1	06/19/20 14:00	06/19/20 15:00	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496647	1	06/21/20 19:09	06/21/20 23:18	AKA	Mt. Juliet, TN

20200609-C16OU-SB1 (30.5-35') L1229097-05 Solid

Collected by
Reed J

Collected date/time
06/09/20 14:30

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:00	06/22/20 12:00	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495629	1	06/19/20 14:00	06/19/20 15:00	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496647	1	06/21/20 19:09	06/21/20 23:18	AKA	Mt. Juliet, TN

20200609-C16OU-SB1 (35-40') L1229097-06 Solid

Collected by
Reed J

Collected date/time
06/09/20 14:35

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:03	06/22/20 12:03	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495629	1	06/19/20 14:00	06/19/20 15:00	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496647	1	06/21/20 19:09	06/21/20 23:18	AKA	Mt. Juliet, TN

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20200609-C16OU-SB1 (40-45') L1229097-07 Solid

Collected by
Reed J

Collected date/time
06/09/20 14:45

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:06	06/22/20 12:06	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495629	1	06/19/20 14:00	06/19/20 15:00	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496647	1	06/21/20 19:09	06/21/20 23:18	AKA	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

20200609-C16OU-SB1 (45-50') L1229097-08 Solid

Collected by
Reed J

Collected date/time
06/09/20 14:55

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:08	06/22/20 12:08	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495629	1	06/19/20 14:00	06/19/20 15:00	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496647	1	06/21/20 19:09	06/21/20 23:18	AKA	Mt. Juliet, TN

20200610-C16OU-SB2 (10-11') L1229097-09 Solid

Collected by
Reed J

Collected date/time
06/10/20 08:45

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:11	06/22/20 12:11	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496647	1	06/21/20 19:09	06/21/20 23:18	AKA	Mt. Juliet, TN

20200610-C16OU-SB2 (15-16') L1229097-10 Solid

Collected by
Reed J

Collected date/time
06/10/20 09:15

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:14	06/22/20 12:14	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

20200610-C16OU-SB2 (20-21') L1229097-11 Solid

Collected by
Reed J

Collected date/time
06/10/20 09:45

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:23	06/22/20 12:23	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

20200610-C16OU-SB2 (25-26') L1229097-12 Solid

Collected by
Reed J

Collected date/time
06/10/20 10:15

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:26	06/22/20 12:26	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN



20200610-C16OU-SB2 (30-35') L1229097-13 Solid

Collected by
Reed JCollected date/time
06/10/20 11:30Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:29	06/22/20 12:29	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

20200610-C16OU-SB2 (35-40') L1229097-14 Solid

Collected by
Reed JCollected date/time
06/10/20 11:40Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:32	06/22/20 12:32	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

20200610-C16OU-SB2 (40-45') L1229097-15 Solid

Collected by
Reed JCollected date/time
06/10/20 11:50Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:35	06/22/20 12:35	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

20200610-C16OU-SB2 (45-50') L1229097-16 Solid

Collected by
Reed JCollected date/time
06/10/20 12:00Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 13:13	06/22/20 13:13	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

20200610-C16OU-SB3 (10-11') L1229097-17 Solid

Collected by
Reed JCollected date/time
06/10/20 13:15Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:40	06/22/20 12:40	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

20200610-C16OU-SB3 (15-16') L1229097-18 Solid

Collected by
Reed JCollected date/time
06/10/20 13:45Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:43	06/22/20 12:43	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20200610-C16OU-SB3 (20-21') L1229097-19 Solid

Collected by
Reed J

Collected date/time
06/10/20 14:05

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:46	06/22/20 12:46	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

20200610-C16OU-SB3 (25-26') L1229097-20 Solid

Collected by
Reed J

Collected date/time
06/10/20 14:25

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 12:49	06/22/20 12:49	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

20200610-C16OU-SB3 (30-31') L1229097-21 Solid

Collected by
Reed J

Collected date/time
06/10/20 14:45

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492759	1	06/22/20 11:40	06/22/20 11:40	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

20200610-C16OU-SB3 (35-40') L1229097-22 Solid

Collected by
Reed J

Collected date/time
06/10/20 15:10

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 11:40	06/22/20 11:40	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

20200610-C16OU-SB3 (40-45') L1229097-23 Solid

Collected by
Reed J

Collected date/time
06/10/20 15:20

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 11:43	06/22/20 11:43	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

20200610-C16OU-SB3 (45-50') L1229097-24 Solid

Collected by
Reed J

Collected date/time
06/10/20 15:30

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 11:46	06/22/20 11:46	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20200611-C16OU-SB4 (10-11') L1229097-25 Solid

Collected by
Reed J

Collected date/time
06/11/20 08:45

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 11:49	06/22/20 11:49	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

20200611-C16OU-SB4 (15-16') L1229097-26 Solid

Collected by
Reed J

Collected date/time
06/11/20 09:00

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 11:51	06/22/20 11:51	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

20200611-C16OU-SB4 (20-21') L1229097-27 Solid

Collected by
Reed J

Collected date/time
06/11/20 09:20

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 11:54	06/22/20 11:54	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

20200611-C16OU-SB4 (25-26') L1229097-28 Solid

Collected by
Reed J

Collected date/time
06/11/20 09:50

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 11:57	06/22/20 11:57	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1495883	1	06/19/20 18:00	06/19/20 19:00	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

20200611-C16OU-SB4 (30-35') L1229097-29 Solid

Collected by
Reed J

Collected date/time
06/11/20 10:15

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 12:00	06/22/20 12:00	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1496263	1	06/20/20 16:15	06/20/20 19:42	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1496648	1	06/21/20 19:10	06/22/20 02:40	AKA	Mt. Juliet, TN

20200611-C16OU-SB4 (35-40') L1229097-30 Solid

Collected by
Reed J

Collected date/time
06/11/20 10:55

Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 12:03	06/22/20 12:03	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1496263	1	06/20/20 16:15	06/20/20 19:42	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1497174	1	06/23/20 05:00	06/23/20 06:15	CAT	Mt. Juliet, TN



20200611-C16OU-SB4 (40-45') L1229097-31 Solid

Collected by
Reed JCollected date/time
06/11/20 11:05Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 12:11	06/22/20 12:11	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1496263	1	06/20/20 16:15	06/20/20 19:42	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1497174	1	06/23/20 05:00	06/23/20 06:15	CAT	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

20200611-C16OU-SB4 (45-50') L1229097-32 Solid

Collected by
Reed JCollected date/time
06/11/20 11:15Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 12:14	06/22/20 12:14	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1496263	1	06/20/20 16:15	06/20/20 19:42	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1497174	1	06/23/20 05:00	06/23/20 06:15	CAT	Mt. Juliet, TN

20200611-C16OU-SB5 (10-11') L1229097-33 Solid

Collected by
Reed JCollected date/time
06/11/20 12:25Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 13:08	06/22/20 13:08	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1496263	1	06/20/20 16:15	06/20/20 19:42	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1497174	1	06/23/20 05:00	06/23/20 06:15	CAT	Mt. Juliet, TN

20200611-C16OU-SB5 (15-16') L1229097-34 Solid

Collected by
Reed JCollected date/time
06/11/20 12:40Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 12:19	06/22/20 12:19	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1496263	1	06/20/20 16:15	06/20/20 19:42	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1497174	1	06/23/20 05:00	06/23/20 06:15	CAT	Mt. Juliet, TN

20200611-C16OU-SB5 (20-21') L1229097-35 Solid

Collected by
Reed JCollected date/time
06/11/20 13:00Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 12:22	06/22/20 12:22	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1496263	1	06/20/20 16:15	06/20/20 19:42	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1497174	1	06/23/20 05:00	06/23/20 06:15	CAT	Mt. Juliet, TN

20200611-C16OU-SB5 (25-26') L1229097-36 Solid

Collected by
Reed JCollected date/time
06/11/20 13:15Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 12:25	06/22/20 12:25	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1496263	1	06/20/20 16:15	06/20/20 19:42	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1497174	1	06/23/20 05:00	06/23/20 06:15	CAT	Mt. Juliet, TN



20200611-C16OU-SB5 (30-31') L1229097-37 Solid

Collected by
Reed JCollected date/time
06/11/20 13:30Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 12:28	06/22/20 12:28	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1496263	1	06/20/20 16:15	06/20/20 19:42	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1497174	1	06/23/20 05:00	06/23/20 06:15	CAT	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

20200611-C16OU-SB5 (35-40') L1229097-38 Solid

Collected by
Reed JCollected date/time
06/11/20 14:00Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 12:30	06/22/20 12:30	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1496263	1	06/20/20 16:15	06/20/20 19:42	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1497174	1	06/23/20 05:00	06/23/20 06:15	CAT	Mt. Juliet, TN

20200611-C16OU-SB5 (40-45') L1229097-39 Solid

Collected by
Reed JCollected date/time
06/11/20 14:10Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 12:33	06/22/20 12:33	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1496263	1	06/20/20 16:15	06/20/20 19:42	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1497174	1	06/23/20 05:00	06/23/20 06:15	CAT	Mt. Juliet, TN

20200611-C16OU-SB5 (45-50') L1229097-40 Solid

Collected by
Reed JCollected date/time
06/11/20 14:20Received date/time
06/13/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1492760	1	06/22/20 12:46	06/22/20 12:46	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1496263	1	06/20/20 16:15	06/20/20 19:42	KEG	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1497174	1	06/23/20 05:00	06/23/20 06:15	CAT	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.

Jason Romer
Project Manager

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	8.29		1	06/19/2020 08:38	WG1492758

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.76	T8	1	06/19/2020 15:00	WG1495629

³ Ss

⁴ Cn

Sample Narrative:
L1229097-01 WG1495629: 8.76 at 23C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1560		10.0	1	06/21/2020 23:18	WG1496647

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	8.93		1	06/22/2020 11:51	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.19	T8	1	06/19/2020 15:00	WG1495629

³ Ss

⁴ Cn

Sample Narrative:
L1229097-02 WG1495629: 8.19 at 22.9C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1690		10.0	1	06/21/2020 23:18	WG1496647

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	8.73		1	06/22/2020 11:54	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.68	T8	1	06/19/2020 15:00	WG1495629

³ Ss

⁴ Cn

Sample Narrative:
L1229097-03 WG1495629: 8.68 at 22.8C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1420		10.0	1	06/21/2020 23:18	WG1496647

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	8.39		1	06/22/2020 11:57	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.44	T8	1	06/19/2020 15:00	WG1495629

³ Ss

⁴ Cn

Sample Narrative:
L1229097-04 WG1495629: 8.44 at 22.7C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1550		10.0	1	06/21/2020 23:18	WG1496647

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	6.10		1	06/22/2020 12:00	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.56	T8	1	06/19/2020 15:00	WG1495629

³ Ss

⁴ Cn

Sample Narrative:
L1229097-05 WG1495629: 8.56 at 22.7C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1530		10.0	1	06/21/2020 23:18	WG1496647

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	6.36		1	06/22/2020 12:03	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.53	T8	1	06/19/2020 15:00	WG1495629

³ Ss

⁴ Cn

Sample Narrative:

L1229097-06 WG1495629: 8.53 at 22.8C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1380		10.0	1	06/21/2020 23:18	WG1496647

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	6.72		1	06/22/2020 12:06	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.53	T8	1	06/19/2020 15:00	WG1495629

³ Ss

⁴ Cn

Sample Narrative:

L1229097-07 WG1495629: 8.53 at 22.7C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1630		10.0	1	06/21/2020 23:18	WG1496647

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	6.27		1	06/22/2020 12:08	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.48	T8	1	06/19/2020 15:00	WG1495629

³ Ss

⁴ Cn

Sample Narrative:
L1229097-08 WG1495629: 8.48 at 22.9C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1660		10.0	1	06/21/2020 23:18	WG1496647

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	11.8		1	06/22/2020 12:11	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.89	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:
L1229097-09 WG1495883: 8.89 at 22.7C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1030		10.0	1	06/21/2020 23:18	WG1496647

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	11.0		1	06/22/2020 12:14	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.52	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:

L1229097-10 WG1495883: 8.52 at 21.6C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	2160		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	11.8		1	06/22/2020 12:23	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.71	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:
L1229097-11 WG1495883: 8.71 at 21.7C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	2240		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Collected date/time: 06/10/20 10:15

L1229097

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.6		1	06/22/2020 12:26	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	9.10	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:

L1229097-12 WG1495883: 9.1 at 22.5C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1780		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.9		1	06/22/2020 12:29	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.92	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:

L1229097-13 WG1495883: 8.92 at 22.3C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
Specific Conductance	1190		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Collected date/time: 06/10/20 11:40

L1229097

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.5		1	06/22/2020 12:32	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.91	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:

L1229097-14 WG1495883: 8.91 at 22.5C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
Specific Conductance	1150		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	11.2		1	06/22/2020 12:35	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.75	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:

L1229097-15 WG1495883: 8.75 at 22.5C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	966		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	10.3		1	06/22/2020 13:13	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.68	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:

L1229097-16 WG1495883: 8.68 at 23.2C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
Specific Conductance	1110		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	8.92		1	06/22/2020 12:40	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.13	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:
L1229097-17 WG1495883: 8.13 at 21.3C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	3440		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.2		1	06/22/2020 12:43	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.18	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:
L1229097-18 WG1495883: 8.18 at 21.4C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	2420		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	6.15		1	06/22/2020 12:46	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	9.30	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:

L1229097-19 WG1495883: 9.3 at 23.2C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	2080		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	62.1		1	06/22/2020 12:49	WG1492759

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	9.01	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:

L1229097-20 WG1495883: 9.01 at 20.8C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	3210		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	59.2		1	06/22/2020 11:40	WG1492759

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	9.70	T8	1	06/19/2020 19:00	WG1495883

Sample Narrative:
L1229097-21 WG1495883: 9.7 at 20.6C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	3610		10.0	1	06/22/2020 02:40	WG1496648

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	43.5		1	06/22/2020 11:40	WG1492760

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	9.38	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:

L1229097-22 WG1495883: 9.38 at 20.9C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1830		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	50.5		1	06/22/2020 11:43	WG1492760

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	9.40	T8	1	06/19/2020 19:00	WG1495883

Sample Narrative:
L1229097-23 WG1495883: 9.4 at 21C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	2470		10.0	1	06/22/2020 02:40	WG1496648



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	48.6		1	06/22/2020 11:46	WG1492760

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.67	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:

L1229097-24 WG1495883: 8.67 at 21C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	3820		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.5		1	06/22/2020 11:49	WG1492760

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.88	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:
L1229097-25 WG1495883: 8.88 at 21C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1510		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	15.4		1	06/22/2020 11:51	WG1492760

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.50	T8	1	06/19/2020 19:00	WG1495883

³ Ss

⁴ Cn

Sample Narrative:
L1229097-26 WG1495883: 8.5 at 21C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	2410		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	15.3		1	06/22/2020 11:54	WG1492760

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

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.30	T8	1	06/19/2020 19:00	WG1495883

Sample Narrative:
L1229097-27 WG1495883: 8.3 at 20.8C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
Specific Conductance	3380		10.0	1	06/22/2020 02:40	WG1496648

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	14.6		1	06/22/2020 11:57	WG1492760

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.39	T8	1	06/19/2020 19:00	WG1495883

Sample Narrative:
L1229097-28 WG1495883: 8.39 at 20.7C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	2660		10.0	1	06/22/2020 02:40	WG1496648

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	13.5		1	06/22/2020 12:00	WG1492760

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.64	T8	1	06/20/2020 19:42	WG1496263

³ Ss

⁴ Cn

Sample Narrative:
L1229097-29 WG1496263: 8.64 at 23.2C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	2240		10.0	1	06/22/2020 02:40	WG1496648

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	13.8		1	06/22/2020 12:03	WG1492760

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.42	T8	1	06/20/2020 19:42	WG1496263

³ Ss

⁴ Cn

Sample Narrative:
L1229097-30 WG1496263: 8.42 at 23.2C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	4150		10.0	1	06/23/2020 06:15	WG1497174

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	14.4		1	06/22/2020 12:11	WG1492760

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.46	T8	1	06/20/2020 19:42	WG1496263

³ Ss

⁴ Cn

Sample Narrative:
L1229097-31 WG1496263: 8.46 at 23C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
Specific Conductance	3750		10.0	1	06/23/2020 06:15	WG1497174

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	20.7		1	06/22/2020 12:14	WG1492760

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.80	T8	1	06/20/2020 19:42	WG1496263

Sample Narrative:
L1229097-32 WG1496263: 8.8 at 23C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	3140		10.0	1	06/23/2020 06:15	WG1497174

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Collected date/time: 06/11/20 12:25

L1229097

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	14.0		1	06/22/2020 13:08	WG1492760

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.81	T8	1	06/20/2020 19:42	WG1496263

³ Ss

⁴ Cn

Sample Narrative:

L1229097-33 WG1496263: 8.81 at 23.2C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
Specific Conductance	1770		10.0	1	06/23/2020 06:15	WG1497174

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.8		1	06/22/2020 12:19	WG1492760

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.68	T8	1	06/20/2020 19:42	WG1496263

³ Ss

⁴ Cn

Sample Narrative:
L1229097-34 WG1496263: 8.68 at 23.2C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	2050		10.0	1	06/23/2020 06:15	WG1497174

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	11.9		1	06/22/2020 12:22	WG1492760

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.46	T8	1	06/20/2020 19:42	WG1496263

³ Ss

⁴ Cn

Sample Narrative:
L1229097-35 WG1496263: 8.46 at 23.3C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	2810		10.0	1	06/23/2020 06:15	WG1497174

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.4		1	06/22/2020 12:25	WG1492760

1
Cp

2
Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.50	T8	1	06/20/2020 19:42	WG1496263

3
Ss

4
Cn

Sample Narrative:
L1229097-36 WG1496263: 8.5 at 23.2C

5
Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	2990		10.0	1	06/23/2020 06:15	WG1497174

6
Qc

7
Gl

8
Al

9
Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.1		1	06/22/2020 12:28	WG1492760

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.34	T8	1	06/20/2020 19:42	WG1496263

Sample Narrative:
L1229097-37 WG1496263: 8.34 at 23.2C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
Specific Conductance	3510		10.0	1	06/23/2020 06:15	WG1497174

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	11.4		1	06/22/2020 12:30	WG1492760

1
Cp

2
Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.75	T8	1	06/20/2020 19:42	WG1496263

3
Ss

4
Cn

Sample Narrative:
L1229097-38 WG1496263: 8.75 at 23.1C

5
Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	2120		10.0	1	06/23/2020 06:15	WG1497174

6
Qc

7
Gl

8
Al

9
Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	16.7		1	06/22/2020 12:33	WG1492760

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.75	T8	1	06/20/2020 19:42	WG1496263

³ Ss

⁴ Cn

Sample Narrative:
L1229097-39 WG1496263: 8.75 at 23.2C

⁵ Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	2780		10.0	1	06/23/2020 06:15	WG1497174

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	22.0		1	06/22/2020 12:46	WG1492760

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.31	T8	1	06/20/2020 19:42	WG1496263

Sample Narrative:
L1229097-40 WG1496263: 8.31 at 23.2C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
Specific Conductance	4870		10.0	1	06/23/2020 06:15	WG1497174



L1229080-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1229080-04 06/19/20 15:00 • (DUP) R3540803-2 06/19/20 15:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	5.37	5.32	1	0.935		1

Sample Narrative:

OS: 5.37 at 22.7C
DUP: 5.32 at 22.9C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1229097-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1229097-06 06/19/20 15:00 • (DUP) R3540803-3 06/19/20 15:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.53	8.50	1	0.352		1

Sample Narrative:

OS: 8.53 at 22.8C
DUP: 8.5 at 22.7C

Laboratory Control Sample (LCS)

(LCS) R3540803-1 06/19/20 15:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	9.98	99.8	99.0-101	

Sample Narrative:

LCS: 9.98 at 21.8C



L1229097-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1229097-09 06/19/20 19:00 • (DUP) R3540822-2 06/19/20 19:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.89	8.90	1	0.112		1

Sample Narrative:

OS: 8.89 at 22.7C

DUP: 8.9 at 21.7C

L1229097-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1229097-23 06/19/20 19:00 • (DUP) R3540822-3 06/19/20 19:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	9.40	9.41	1	0.106		1

Sample Narrative:

OS: 9.4 at 21C

DUP: 9.41 at 21.3C

Laboratory Control Sample (LCS)

(LCS) R3540822-1 06/19/20 19:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	9.96	99.6	99.0-101	

Sample Narrative:

LCS: 9.96 at 21C





L1228874-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1228874-02 06/20/20 19:42 • (DUP) R3540962-2 06/20/20 19:42

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	6.10	6.25	1	2.43	J3	1

Sample Narrative:

OS: 6.1 at 23.3C

DUP: 6.25 at 23.01C

L1229128-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1229128-07 06/20/20 19:42 • (DUP) R3540962-3 06/20/20 19:42

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	5.21	5.21	1	0.000		1

Sample Narrative:

OS: 5.21 at 22.9C

DUP: 5.21 at 22.9C

Laboratory Control Sample (LCS)

(LCS) R3540962-1 06/20/20 19:42

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	9.95	99.5	99.0-101	

Sample Narrative:

LCS: 9.95 at 22.3C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3541135-1 06/21/20 23:18

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1228730-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1228730-23 06/21/20 23:18 • (DUP) R3541135-3 06/21/20 23:18

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	umhos/cm	umhos/cm		%		%
Specific Conductance	3090	3090	1	0.000		20

L1228736-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1228736-05 06/21/20 23:18 • (DUP) R3541135-4 06/21/20 23:18

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	umhos/cm	umhos/cm		%		%
Specific Conductance	2990	2970	1	0.671		20

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3541135-2 06/21/20 23:18

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	umhos/cm	umhos/cm	%	%	
Specific Conductance	445	442	99.3	85.0-115	



Method Blank (MB)

(MB) R3541154-1 06/22/20 02:40

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1229097-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1229097-15 06/22/20 02:40 • (DUP) R3541154-3 06/22/20 02:40

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	966	962	1	0.415		20

⁷Gl

⁸Al

L1229097-26 Original Sample (OS) • Duplicate (DUP)

(OS) L1229097-26 06/22/20 02:40 • (DUP) R3541154-4 06/22/20 02:40

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2410	2410	1	0.249		20

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3541154-2 06/22/20 02:40

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	445	440	98.9	85.0-115	



Method Blank (MB)

(MB) R3541623-1 06/23/20 06:15

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1229097-33 Original Sample (OS) • Duplicate (DUP)

(OS) L1229097-33 06/23/20 06:15 • (DUP) R3541623-3 06/23/20 06:15

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1770	1780	1	0.789		20

L1229097-34 Original Sample (OS) • Duplicate (DUP)

(OS) L1229097-34 06/23/20 06:15 • (DUP) R3541623-4 06/23/20 06:15

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2050	1990	1	2.87		20

Laboratory Control Sample (LCS)

(LCS) R3541623-2 06/23/20 06:15

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	445	443	99.6	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.

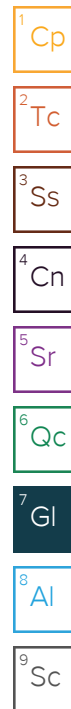
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

J3	The associated batch QC was outside the established quality control range for precision.
T8	Sample(s) received past/too close to holding time expiration.





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	LA000356
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.



Company Name/Address: Caerus 143 Diamond Avenue Parachute, CO 81635				Billing Information: Blair Rollings 143 Diamond Avenue Parachute, CO 81635				Analysis / Container / Preservative <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTXGRO/DRO - 8021/8015</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SV8270PAHSIM - 8270SIM</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SPCON - 9050AMod</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SAR - Calc.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">RCRA8 Metals + Cu, Ni, and Zn - 6010/7470</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CR6SS - 3060A/7196</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CR3 - Calc.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">pH</div> </div>								Chain of Custody Page ____ of ____ L.A.B S.C.I.E.N.C.E.S YOUR LAB OF CHOICE 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 	
Report to: Jake Janicek				Email To: jjanicek@caerusoilandgas.com													
Project Description: C16OU Subsurface Investigation				City/State Collected: 													
Phone: 970.285.2720 Fax:		Client Project #		Lab Project #													
Collected by (print): Reed Johnson		Site/Facility ID #		P.O. #													
Collected by (signature): Immediately Packed on Ice N ___ Y <input checked="" type="checkbox"/>		Rush? (Lab MUST Be Notified) ___ Same Day200% ___ Next Day100% ___ Two Day50% ___ Three Day25%		Date Results Needed Email? ___ No <input checked="" type="checkbox"/> Yes FAX? <input checked="" type="checkbox"/> No ___ Yes		No. of Cntrs											
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time												
20200609-C16OU-SB1 (1 ₊)	Grab	SS	10-11 ₊	6/9/2020	1300	2			X	X				X			
20200609-C16OU-SB1 (1₊)	Grab	SS	15-16 ₊	6/9/2020	1330	2			X	X				X			02
20200609-C16OU-SB1 (2 ₊)	Grab	SS	20-21 ₊	6/9/2020	1350	2			X	X				X			03
20200609-C16OU-SB1 (2 ₊)	Grab	SS	25-26 ₊	6/9/2020	1410	2			X	X				X			04
20200609-C16OU-SB1 (3 ₊)	Grab	SS	30.5-3 ₊	6/9/2020	1430	2			X	X				X			05
20200609-C16OU-SB1 (3 ₊)	Grab	SS	35-40'	6/9/2020	1435	2			X	X				X			06
20200609-C16OU-SB1 (4 ₊)	Grab	SS	40-45'	6/9/2020	1445	2			X	X				X			07
20200609-C16OU-SB1 (4 ₊)	Grab	SS	45-50'	6/9/2020	1455	2			X	X				X			08

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

Remarks: pH _____ Temp _____

Relinquished by: (Signature)

Relinquished by: (Signature)

Relinquished by: (Signature)

Date: 6/12/20 Time: 1400

Date: 6/12/20 Time: 1500

Date: _____ Time: _____

Received by: (Signature)

Received by: (Signature)

Received for lab by: (Signature)

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

Temp: 16.7 °C Bottles Received: 80

Date: 6/13/20 Time: 0900

Hold # _____

Condition: (lab use only)

RAD SCREEN: <0.5 mR/hr

COC Seal Intact: ___ Y ___ N ☒ NA

pH Checked: _____ NCF: _____

Company Name/Address: Caerus 143 Diamond Avenue Parachute, CO 81635				Billing Information: Blair Rollings 143 Diamond Avenue Parachute, CO 81635				Analysis / Container / Preservative <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEXGRO/DRO - 8021/8015</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SV8270PAHSIM - 8270SIM</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SPCON - 9050AMod</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SAR - Calc.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">RCRA8 Metals + Cu, Ni, and Zn - 6010/7470</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CR6SS - 3060A/7196</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CR3 - Calc.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">pH</div> </div>										Chain of Custody Page ____ of ____ L.A.B S.C.I.E.N.C.E.S YOUR LAB OF CHOICE 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 	
Report to: Jake Janicek				Email To: jjanicek@caerusoilandgas.com															
Project Description: C16OU Subsurface Investigation				City/State Collected:															
Phone: 970.285.2720		Client Project #		Lab Project #															
Fax:																			
Collected by (print): Reed Johnson		Site/Facility ID #		P.O. #															
Collected by (signature): 		Rush? (Lab MUST Be Notified) ___ Same Day200% ___ Next Day100% ___ Two Day50% ___ Three Day25%		Date Results Needed Email? ___ No <input checked="" type="checkbox"/> Yes FAX? <input checked="" type="checkbox"/> No ___ Yes				No. of Cntrs											
Immediately Packed on Ice N ___ Y <input checked="" type="checkbox"/>																			
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time														
20200610-C16OU-SB2 (1 ₊)	Grab	SS	10-11 ₊	6/10/2020	0845	2			X	X				X			09		
20200610-C16OU-SB2 (1 ₊)	Grab	SS	15-16 ₊	6/10/2020	0915	2			X	X				X			10		
20200610-C16OU-SB2 (2 ₊)	Grab	SS	20-21 ₊	6/10/2020	0945	2			X	X				X			11		
20200610-C16OU-SB2 (2 ₊)	Grab	SS	25-26 ₊	6/10/2020	1015	2			X	X				X			12		
20200610-C16OU-SB2 (3 ₊)	Grab	SS	30-35'	6/10/2020	1130	2			X	X				X			13		
20200610-C16OU-SB2 (3 ₊)	Grab	SS	35-40'	6/10/2020	1140	2			X	X				X			14		
20200610-C16OU-SB2 (4 ₊)	Grab	SS	40-45'	6/10/2020	1150	2			X	X				X			15		
20200610-C16OU-SB2 (4 ₊)	Grab	SS	45-50'	6/10/2020	1200	2			X	X				X			16		

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

pH _____ Temp _____

Flow _____ Other _____

Remarks: _____

Relinquished by: (Signature) 	Date: 6/12/20	Time: 1400	Received by: (Signature) 	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only)
Relinquished by: (Signature) 	Date: 6/2/2020	Time: 1500	Received by: (Signature) 	Temp: <i>avg</i> <i>1.2+2.4</i> C Bottles Received: <i>80</i>	RAD SCREEN: <0.5 mR/hr
Relinquished by: (Signature) 	Date:	Time:	Received for lab by: (Signature) 	Date: 6/13/20 Time: 0900	COC Seal Intact: ___ Y ___ N <input checked="" type="checkbox"/> NA pH Checked: NCF:

Company Name/Address: Caerus 143 Diamond Avenue Parachute, CO 81635				Billing Information: Blair Rollings 143 Diamond Avenue Parachute, CO 81635				Analysis / Container / Preservative <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEXGRO/DRO - 8021/8015</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SV8270PAHSIM - 8270SIM</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SPCON - 9050AMod</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SAR - Calc.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">RCRA8 Metals + Cu, Ni, and Zn - 6010/7470</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CR6SS - 3060A/7196</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CR3 - Calc.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">pH</div> </div>										Chain of Custody Page ____ of ____ L.A.B S.C.I.E.N.C.E.S YOUR LAB OF CHOICE 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 	
Report to: Jake Janicek				Email To: jjanicek@caerusoilandgas.com															
Project Description: C16OU Subsurface Investigation				City/State Collected:															
Phone: 970.285.2720 Fax:		Client Project #		Lab Project #															
Collected by (print): Reed Johnson		Site/Facility ID #		P.O. #															
Collected by (signature): Immediately Packed on Ice N ____ Y <input checked="" type="checkbox"/>		Rush? (Lab MUST Be Notified) ____ Same Day200% ____ Next Day100% ____ Two Day50% ____ Three Day25%		Date Results Needed Email? ____ No <input checked="" type="checkbox"/> Yes FAX? <input checked="" type="checkbox"/> No ____ Yes		No. of Cntrs													
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time														
20200610-C16OU-SB3 (1 ₊)	Grab	SS	10-11 ₊	6/10/2020	1315	2			X	X					X		17		
20200610-C16OU-SB3 (1 ₊)	Grab	SS	15-16 ₊	6/10/2020	1345	2			X	X					X		18		
20200610-C16OU-SB3 (2 ₊)	Grab	SS	20-21 ₊	6/10/2020	1405	2			X	X					X		19		
20200610-C16OU-SB3 (2 ₊)	Grab	SS	25-26 ₊	6/10/2020	1425	2			X	X					X		20		
20200610-C16OU-SB3 (3 ₊)	Grab	SS	30-31 ₊	6/10/2020	1445	2			X	X					X		21		
20200610-C16OU-SB3 (3 ₊)	Grab	SS	35-40'	6/10/2020	1510	2			X	X					X		22		
20200610-C16OU-SB3 (4 ₊)	Grab	SS	40-45'	6/10/2020	1520	2			X	X					X		23		
20200610-C16OU-SB3 (4 ₊)	Grab	SS	45-50'	6/10/2020	1530	2			X	X					X		24		



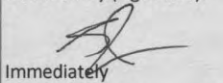
* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other _____

pH _____ Temp _____

Flow _____ Other _____

Remarks: _____

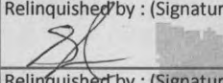
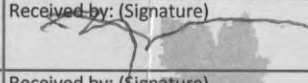
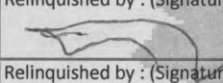
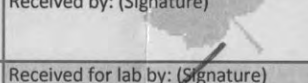
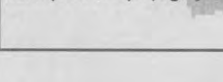

Relinquished by : (Signature) 		Date: 6/12/20 Time: 1400		Received by: (Signature) 		Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____		Condition: (lab use only) RAD SCREEN: <0.5 mR/hr	
Relinquished by : (Signature) 		Date: 6/12/2020 Time: 1500		Received by: (Signature) 		Temp: 77°F Bottles Received: 80		COC Seal Intact: ____ Y ____ N <input checked="" type="checkbox"/> NA	
Relinquished by : (Signature) 		Date: _____ Time: _____		Received for lab by: (Signature) 		Date: 6/13/20 Time: 0100		pH Checked: _____ NCF: _____	

Company Name/Address: Caerus 143 Diamond Avenue Parachute, CO 81635				Billing Information: Blair Rollings 143 Diamond Avenue Parachute, CO 81635				Analysis / Container / Preservative										Chain of Custody Page ____ of ____  L.A.B S.C.I.E.N.C.E.S YOUR LAB OF CHOICE 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 			
Report to: Jake Janicek				Email To: jjanicek@caerusoilandgas.com				<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEXGRO/DRO - 8021/8015</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SV8270PAHSIM - 8270SIM</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SPCON - 9050AMod</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SAR - Calc.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">RCRA8 Metals + Cu, Ni, and Zn - 60107470</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CR6SS - 3060A/7196</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CR3 - Calc.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">pH</div> </div>													
Project Description: C16OU Subsurface Investigation				City/State Collected:																	
Phone: 970.285.2720 Fax:		Client Project #		Lab Project #																	
Collected by (print): Reed Johnson		Site/Facility ID #		P.O. #																	
Collected by (signature):  Immediately Packed on Ice N ____ Y <input checked="" type="checkbox"/>				Rush? (Lab MUST Be Notified) ____ Same Day200% ____ Next Day100% ____ Two Day50% ____ Three Day25%																	
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time															
20200611-C16OU-SB4 (1 ₊)		Grab	SS	10-11 ₊	6/11/2020	0845	2														
20200611-C16OU-SB4 (1 ₊)		Grab	SS	15-16 ₊	6/11/2020	0900	2														
20200611-C16OU-SB4 (2 ₊)		Grab	SS	20-21 ₊	6/11/2020	0920	2														
20200611-C16OU-SB4 (2 ₊)		Grab	SS	25-26 ₊	6/11/2020	0950	2														
20200611-C16OU-SB4 (3 ₊)		Grab	SS	30-35'	6/11/2020	1015	2														
20200611-C16OU-SB4 (3 ₊)		Grab	SS	35-40'	6/11/2020	1055	2														
20200611-C16OU-SB4 (4 ₊)		Grab	SS	40-45'	6/11/2020	1105	2														
20200611-C16OU-SB4 (4 ₊)		Grab	SS	45-50'	6/11/2020	1115	2														

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

pH _____ Temp _____

Flow _____ Other _____

Remarks:				Hold #							
Relinquished by: (Signature) 		Date: 6/12/20		Time: 1400		Received by: (Signature) 		Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____		Condition: (lab use only) RAD SCREEN: <0.5 mB/l	
Relinquished by: (Signature) 		Date: 6/12/2020		Time: 1700		Received by: (Signature) 		Temp: WA °C Bottles Received: 1.2+24.4 80		COC Seal Intact: ____ Y ____ N <input checked="" type="checkbox"/> NA	
Relinquished by: (Signature) 		Date:		Time:		Received for lab by: (Signature) 		Date: 6/13/20		Time: 0900	

Company Name/Address: Caerus 143 Diamond Avenue Parachute, CO 81635				Billing Information: Blair Rollings 143 Diamond Avenue Parachute, CO 81635				Analysis / Container / Preservative <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEXGRO/DRO - 8021/8015</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SV8270PAHSIM - 8270SIM</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SPCON - 9050AMod</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SAR - Calc.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">RCRA8 Metals + Cu, Ni, and Zn - 6010/7470</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CR6SS - 3060A/7196</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CR3 - Calc.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">pH</div> </div>								Chain of Custody Page ____ of ____ L.A.B S.C.I.E.N.C.E.S YOUR LAB OF CHOICE 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 		
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Collected by (signature): Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>		Rush? (Lab MUST Be Notified) ___ Same Day200% ___ Next Day100% ___ Two Day50% ___ Three Day25%		Date Results Needed Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes				No. of Cntrs										
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time													
20200611-C16OU-SB5 (1 ₊)	Grab	SS	10-11 ₊	6/11/2020	1225	2			X	X					X			33
20200611-C16OU-SB5 (1 ₊)	Grab	SS	15-16 ₊	6/11/2020	1240	2			X	X					X			34
20200611-C16OU-SB5 (2 ₊)	Grab	SS	20-21 ₊	6/11/2020	1300	2			X	X					X			35
20200611-C16OU-SB5 (2 ₊)	Grab	SS	25-26 ₊	6/11/2020	1315	2			X	X					X			36
20200611-C16OU-SB5 (3 ₊)	Grab	SS	30-31 ₊	6/11/2020	1330	2			X	X					X			37
20200611-C16OU-SB5 (3 ₊)	Grab	SS	35-40'	6/11/2020	1400	2			X	X					X			38
20200611-C16OU-SB5 (4 ₊)	Grab	SS	40-45'	6/11/2020	1410	2			X	X					X			39
20200611-C16OU-SB5 (4 ₊)	Grab	SS	45-50'	6/11/2020	1420	2			X	X					X			40

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

pH _____ Temp _____

Flow _____ Other _____

Hold # _____

Relinquished by: (Signature) 	Date: 6/12/20	Time: 1400	Received by: (Signature) 	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) RAD SCREEN: <0.5 mR/hr
Relinquished by: (Signature) 	Date: 6/12/20	Time: 1500	Received by: (Signature) 	Temp: ^{max} 77 °C Bottles Received: 1.2+2=1.4 80	COC Seal Intact: <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA
Relinquished by: (Signature) 	Date:	Time:	Received for lab by: (Signature) 	Date: 6/13/20	Time: 0900

Pace Analytical National Center for Testing & Innovation

Cooler Receipt Form

Client:	C AE RUSPO	L1229097
Cooler Received/Opened On:	6 / 13 / 20	Temperature: 1.4
Received By: Paul Minnich		
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?			