August 8, 2023

Jake Janicek
Environmental Specialist
Caerus Oil & Gas LLC (Operator #: 10456)
jjanicek@caerusoilandgas.com

Report of Work Completed – Separator Release

COGCC Location Name (ID)	SAVAGE-67S94W/5NWSW (335007)
Operator Location Name	5L
COGCC Remediation Project Number	24100
Legal Description	NWSW Sec. 5 T7S-R94W
Coordinates (Lat/Long)	39.465038 / -107.914348
County	Garfield County, Colorado

Mr. Janicek,

Confluence Compliance Companies, LLC (Confluence) prepared this Report of Work Completed (ROWC) for Caerus Oil & Gas LLC (Caerus) to document remedial investigation activities associated with a recent produced water release at the 5L well pad (Location). The Location is 7.3 miles east of Parachute, Colorado, in Garfield County as illustrated in the attached Topographic Map. Additional information on the Location and the associated remediation project is provided in the title block above, the attached Site Diagrams, and laboratory analytical reports. This ROWC provides background on the Location, methods used to complete the remedial investigation, results of the investigation, and recommendations for how to proceed with this information.

Background

On May 4, 2022, a produced water release was discovered while conducting separator calibration. The line was isolated, and the leak was stopped. The release was confined to the working surface of the pad and was reported in Colorado Oil and Gas Conservation Commission (COGCC) Form 19 Document 403038068. Form 27 Document 403077093 was later submitted to open Spill/Release Point ID 482116.

On May 19, 2022, Confluence coordinated and oversaw initial site investigation activities associated with the recent release at the Location. Using a hydro vacuum truck, the point of release (POR) was exposed and identified as the flowline associated with the westernmost separator. One soil sample was collected from the POR. The soil sample was characterized using visual and olfactory observations and field-screened for volatile organic compounds using a photoionization detector (PID). Six potholes were also advanced using a hydrovac to characterize the extent of olfactory soil impacts in each cardinal direction. A soil sample was collected from the terminus of three of the six potholes: PHW, PHE3, and PHN. A soil sample could not be collected from the southern pothole (PHS) due to the presence of large rocks. Soil samples were not collected from potholes PHE and PHE2 as field screening and characterization indicated potential soil impacts in these areas. A sample was collected from

PHE3 to demonstrate the eastern extent of the observed impacts. Laboratory results of initial characterization sampling exceeded COGCC Table 915-1 Residential Soil Screening Levels for total petroleum hydrocarbons (TPH), xylenes, electrical conductivity (EC), sodium adsorption ration (SAR), boron, pH, and arsenic. Based on the results of initial site investigation, the COGCC approved a reduced analyte list of TPH, xylenes, EC, SAR, pH, boron, and arsenic via Document 403077093.

From March 9 through March 21, 2023, Confluence oversaw drilling activities to delineate the vertical and horizontal extents of soil impacts. Four soil borings (SB01-SB04) were advanced to total depths ranging from 36 to 86 feet bgs. SB03 and SB04 were completed as soil vapor extraction (SVE) wells. Twenty-one soil samples were collected from the four soil borings. Analytical results of drilling assessment samples exceed COGCC Table 915-1 Residential Soil Screening Levels for TPH, xylenes, SAR, pH, and arsenic.

Methodology

On May 09, 2023, Confluence personnel was onsite at the Location to conduct a pilot test of the SVE wells. A trailer-mounted SVE system was used to apply airflow to SB03 and SB04 prior to collecting two air samples from each well. Airflow was applied at a rate of 30 to 35 standard cubic feet per minute (SCFM) and maintained for 10 minutes prior to collecting an air sample. Airflow was then increased to 50 to 55 SCFM and maintained for an additional 10 minutes prior to collecting a second air sample. Air from the wells was constantly monitored using a photoionization detector (PID), and samples were collected during the period of highest PID measurements when the opposing well was sealed.

All air samples were collected in laboratory provided containers, immediately placed on ice, and shipped under a completed chain-of-custody form to Pace Analytical Services (Pace). Air samples were analyzed for M18-MOD Tedlar analysis.

Results

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

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

Lithology and Hydrogeology

Lithology at the Location is characterized as sand with gravel to sandy clay. Groundwater is expected to flow northeast toward Cache Creek and ultimately to the Colorado River, located 1.8 miles north of the Location. Depth to groundwater at the Location is estimated to be approximately 170 feet below ground surface based on Division of Water Resources (DWR) Permit 320331 located 934 feet northeast of the Location.

Pilot Test Results

Although significant flow rates were achieved from the observation wells, no influence was observed at the nearest adjacent observation wells during the tests. Analytical results of air samples collected from SB03 indicate total petroleum hydrocarbons – gasoline range organics (TPH-GRO) up to 36,900 milligrams per cubic meter (mg/m^3) and benzene up to 1,060 mg/m^3. Laboratory results of air samples collected from SB04 indicate TPH-GRO up to 15,500 mg/m^3 and benzene up to 257 mg/m^3. Complete analytical results are summarized in the attached table.

Analysis and Recommendations

Influence readings were not observed in adjacent wells during the pilot test despite significant flow rates being achieved. This is most likely because SB03 and SB04 are screened at different intervals. SB03 is screened from 56 to 86 feet bgs, and SB04 is screened from 16 to 36 feet bgs. Samples collected from both wells indicate significant concentrations of hydrocarbons at sustained flow rates. Based on these results, it is reasonable to conclude that SVE would be a viable means of hydrocarbon remediation for the release area. Confluence recommends the installation of additional SVE wells screened at different intervals to continue remediation efforts. Based on the depths of observed impacts, a system that cycles through multiple zones targeting specific intervals may be more effective than a system of singular wells with up to 60 feet of screen each. Following horizontal delineation soil impacts, Confluence will prepare a more detailed SVE remediation plan.

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

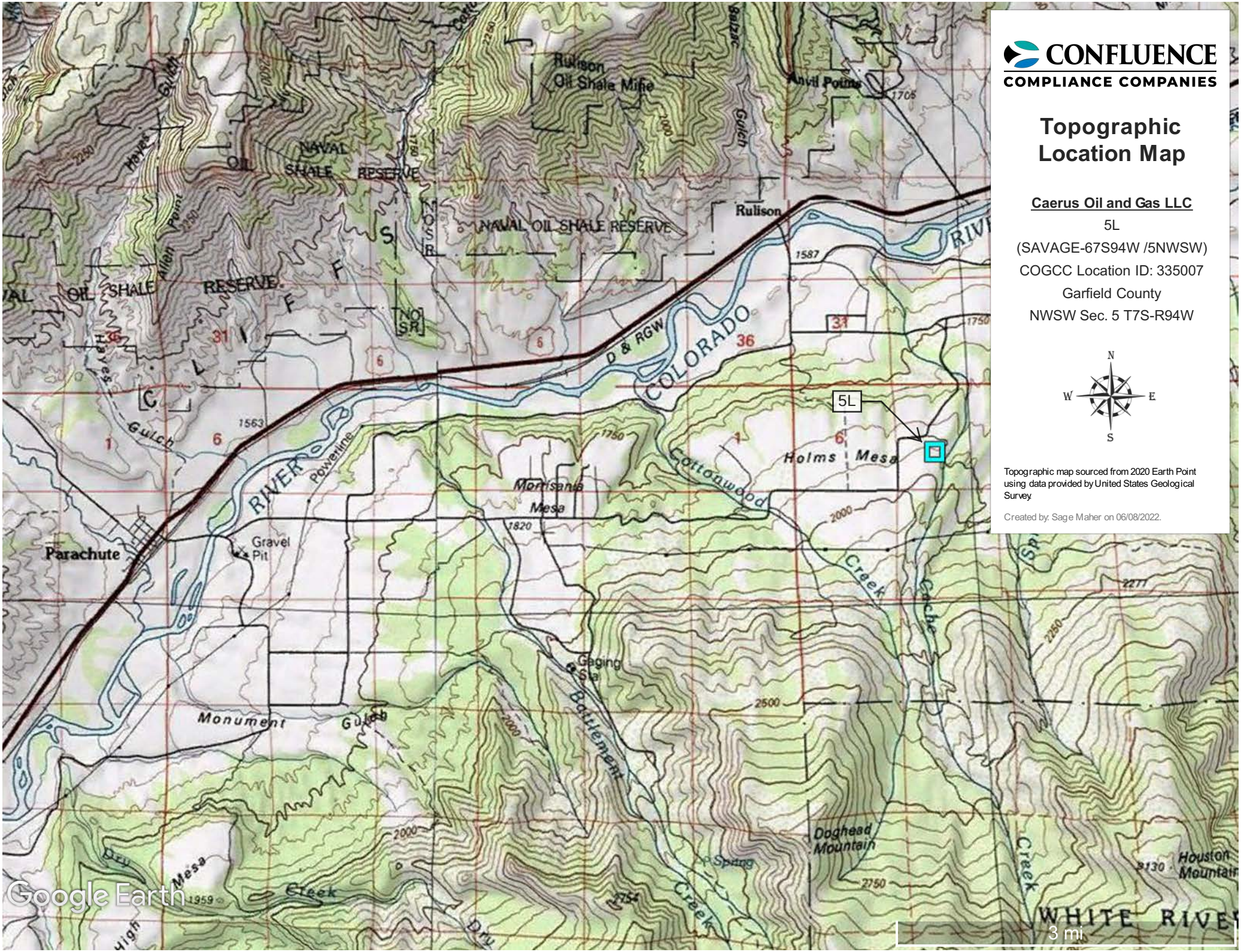
Regards,

Sage Maher
Project Manager
(404) 641-8912
sage.maher@confluence-cc.com

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

Attachments

- Topographic Location Diagram
- Site Diagram – Site Investigation
- Analytical Results Summary Table – Air
- Laboratory Report


CONFLUENCE
COMPLIANCE COMPANIES
Topographic Location Map
Caerus Oil and Gas LLC
5L
(SAVAGE-67S94W /5NWSW)
COGCC Location ID: 335007
Garfield County
NWSW Sec. 5 T7S-R94W
N
W
E
S
5L
Topographic map sourced from 2020 Earth Point using data provided by United States Geological Survey.
Created by: Sage Maher on 06/08/2022.
Rulison Oil Shale Mine
Anvil Points
NAVAL OIL SHALE RESERVE
Rulison
COLORADO RIVER
D & RGW
Powerline
Cottonwood Creek
Holms Mesa
Morrisania Mesa
Parachute
Gravel Pit
Gaging Sta
Battlement Creek
Monument Gulch
Dry Mesa Creek
Doghead Mountain
Spring
Houston Mountain
WHITE RIVER
Google Earth
3 mi

CONFLUENCE
COMPLIANCE COMPANIES

Site Diagram
Site Investigation

Caerus Oil and Gas LLC
5L
(SAVAGE-67S94W/5NWSW)
COGCC Location ID: 335007
Garfield County
NWSW Sec. 5 T7S-R94W

N
W E
S

Legend
- Soil Sample – 05/19/2022
- Soil Sample – March 2023
- SVE Well – March 2023
- Excavation Extent – 5/19/2022

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

Map created by: Miranda Beard on 07/20/2023.

CONFLUENCE

Laboratory Results Summary Table - Air
5L

7/24/2023

						Organic Compounds						
Sample Date	**Solid/Soil Source (Equipment)** [Vault/Sump, Separator, Tank Battery, Dump Line, Pit, Cuttings, Background, etc.]	**Cleanup Standard** (910-1, 915-1 Residential, 915-1 GW Protection)	**Depth - Z** (feet) **(NEGATIVE VALUE)** below ground surface (bgs)	**Sample ID**	**PID** (ppm)	**TPH (GC/MS) Low Fraction (mg/m3)**	**Benzene (mg/m3)**	**Toluene (mg/m3)**	**Ethylbenzene (mg/m3)**	**m&p-Xylenes2 (mg/m3)**	**o-Xylenes (mg/m3)**	**Methyl tert-butyl ether (mg/m3)**
5/9/2023	Separator	Residential (915-1)	-30	20230509-RULISON 5L-(AIR-SB-03-30)	*NA*	5870	148.0	263.0	7.33	74.6	8.28	*<1.440*
5/9/2023	Separator	Residential (915-1)	-55	20230509-RULISON 5L-(AIR-SB-03-55)	*NA*	36900	1060.0	2220.0	69.80	672.0	76.30	*<1.440*
5/9/2023	Separator	Residential (915-1)	-35	20230509-RULISON 5L-(AIR-SB-04-35)	*NA*	9290	152.0	524.0	23.20	245.0	27.70	*<1.440*
5/9/2023	Separator	Residential (915-1)	-50	20230509-RULISON 5L-(AIR-SB-04-50)	*NA*	15500	257.0	1370.0	38.10	397.0	45.50	*<1.440*

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

Dark Gray Italics = Below Reporting Detection Limit (RDL)
"NA" = Not Analyzed
mg/m3 = milligrams per cubic meter

ANALYTICAL REPORT

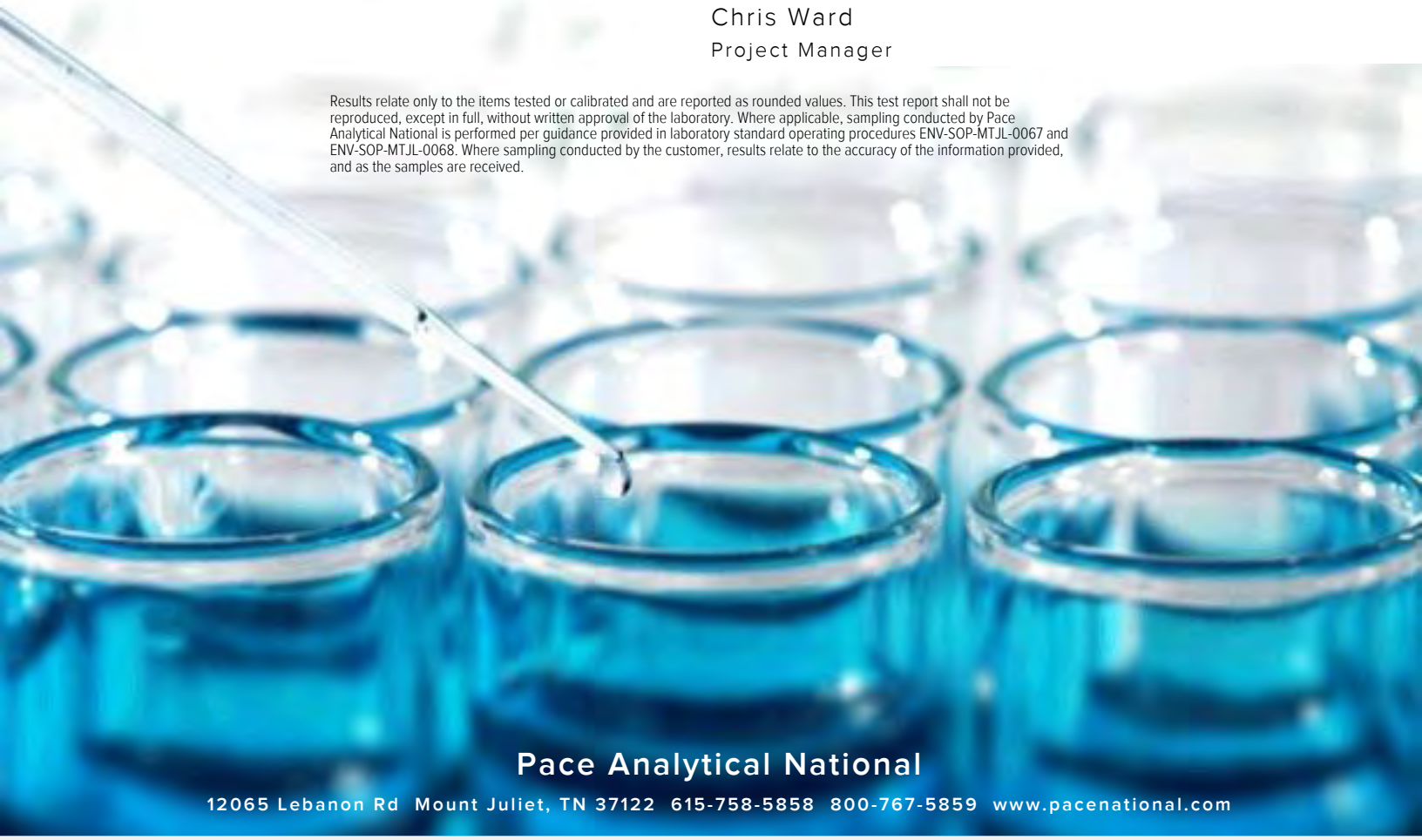
May 15, 2023

Caerus Oil and Gas

Sample Delivery Group:	L1614978
Samples Received:	05/11/2023
Project Number:	
Description:	Rulison 5L SVE Pilot Test
Report To:	Brett M. , Jake J. , Blair R. 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager



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

TABLE OF CONTENTS

SAMPLE SUMMARY

20230509-RULISON 5L-(AIR-SB-03-30) L1614978-01 Air

Collected by: Andrew Smith
Collected date/time: 05/09/23 12:50
Received date/time: 05/11/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG2058923	2000	05/12/23 23:10	05/12/23 23:10	DAH	Mt. Juliet, TN

20230509-RULISON 5L-(AIR-SB-03-55) L1614978-02 Air

Collected by: Andrew Smith
Collected date/time: 05/09/23 13:05
Received date/time: 05/11/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG2058923	2000	05/12/23 23:45	05/12/23 23:45	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method M18-Mod	WG2059389	10000	05/13/23 13:20	05/13/23 13:20	JAP	Mt. Juliet, TN

20230509-RULISON 5L-(AIR-SB-04-35) L1614978-03 Air

Collected by: Andrew Smith
Collected date/time: 05/09/23 13:20
Received date/time: 05/11/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG2058923	2000	05/13/23 00:21	05/13/23 00:21	DAH	Mt. Juliet, TN

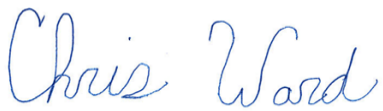
20230509-RULISON 5L-(AIR-SB-04-50) L1614978-04 Air

Collected by: Andrew Smith
Collected date/time: 05/09/23 13:30
Received date/time: 05/11/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method M18-Mod	WG2058923	2000	05/13/23 00:56	05/13/23 00:56	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method M18-Mod	WG2059389	10000	05/13/23 13:58	05/13/23 13:58	JAP	Mt. Juliet, TN

CASE NARRATIVE

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



Chris Ward
Project Manager

Volatile Organic Compounds (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	400	1280	46400	148000		2000	WG2058923
Toluene	108-88-3	92.10	1000	3770	69800	263000		2000	WG2058923
Ethylbenzene	100-41-4	106	400	1730	1690	7330		2000	WG2058923
m&p-Xylene	1330-20-7	106	800	3470	17200	74600		2000	WG2058923
o-Xylene	95-47-6	106	400	1730	1910	8280		2000	WG2058923
Methyl tert-butyl ether	1634-04-4	88.10	400	1440	ND	ND		2000	WG2058923
TPH (GC/MS) Low Fraction	8006-61-9	101	400000	1650000	1420000	5870000		2000	WG2058923
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*94.5*				WG2058923

Volatile Organic Compounds (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	2000	6390	333000	1060000		10000	WG2059389
Toluene	108-88-3	92.10	5000	18800	589000	2220000		10000	WG2059389
Ethylbenzene	100-41-4	106	400	1730	16100	69800		2000	WG2058923
m&p-Xylene	1330-20-7	106	800	3470	155000	672000		2000	WG2058923
o-Xylene	95-47-6	106	400	1730	17600	76300		2000	WG2058923
Methyl tert-butyl ether	1634-04-4	88.10	400	1440	ND	ND		2000	WG2058923
TPH (GC/MS) Low Fraction	8006-61-9	101	400000	1650000	8930000	36900000		2000	WG2058923
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*103*				WG2058923
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.9*				WG2059389

Volatile Organic Compounds (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	400	1280	47600	152000		2000	WG2058923
Toluene	108-88-3	92.10	1000	3770	139000	524000		2000	WG2058923
Ethylbenzene	100-41-4	106	400	1730	5340	23200		2000	WG2058923
m&p-Xylene	1330-20-7	106	800	3470	56600	245000		2000	WG2058923
o-Xylene	95-47-6	106	400	1730	6390	27700		2000	WG2058923
Methyl tert-butyl ether	1634-04-4	88.10	400	1440	ND	ND		2000	WG2058923
TPH (GC/MS) Low Fraction	8006-61-9	101	400000	1650000	2250000	9290000		2000	WG2058923
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*99.0*				WG2058923

Volatile Organic Compounds (MS) by Method M18-Mod

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	400	1280	80500	257000		2000	WG2058923
Toluene	108-88-3	92.10	5000	18800	365000	1370000		10000	WG2059389
Ethylbenzene	100-41-4	106	400	1730	8790	38100		2000	WG2058923
m&p-Xylene	1330-20-7	106	800	3470	91600	397000		2000	WG2058923
o-Xylene	95-47-6	106	400	1730	10500	45500		2000	WG2058923
Methyl tert-butyl ether	1634-04-4	88.10	400	1440	ND	ND		2000	WG2058923
TPH (GC/MS) Low Fraction	8006-61-9	101	400000	1650000	3750000	15500000		2000	WG2058923
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*99.9*				WG2058923
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.8*				WG2059389

Method Blank (MB)

(MB) R3924202-2 05/12/23 10:03

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0715	0.200
Toluene	U		0.0870	0.500
Ethylbenzene	U		0.0835	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
MTBE	U		0.0647	0.200
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	*94.3*			*60.0-140*

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

(LCS) R3924202-1 05/12/23 09:26 • (LCSD) R3924202-3 05/12/23 10:54

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	3.75	3.55	3.55	94.7	94.7	70.0-130			0.000	25
Toluene	3.75	3.57	3.61	95.2	96.3	70.0-130			1.11	25
Ethylbenzene	3.75	3.64	3.58	97.1	95.5	70.0-130			1.66	25
m&p-Xylene	7.50	7.39	7.29	98.5	97.2	70.0-130			1.36	25
o-Xylene	3.75	3.61	3.61	96.3	96.3	70.0-130			0.000	25
MTBE	3.75	3.56	3.57	94.9	95.2	70.0-130			0.281	25
TPH (GC/MS) Low Fraction	203	184	187	90.6	92.1	70.0-130			1.62	25
(S) 1,4-Bromofluorobenzene				*100*	*98.8*	*60.0-140*				

Method Blank (MB)

(MB) R3924597-3 05/13/23 08:21

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.0715	0.200
Toluene	U		0.0870	0.500
(S) 1,4-Bromofluorobenzene	*92.9*			*60.0-140*

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

(LCS) R3924597-1 05/13/23 07:05 • (LCSD) R3924597-2 05/13/23 07:43

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	3.75	3.71	3.66	98.9	97.6	70.0-130			1.36	25
Toluene	3.75	3.64	3.62	97.1	96.5	70.0-130			0.551	25
(S) 1,4-Bromofluorobenzene				*99.2*	*98.5*	*60.0-140*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

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

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

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

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

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: Rulison 5L SVE Pilot Test	State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: / Email:	Site/Facility ID #: Rulison 5L / Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Andrew Smith	Purchase Order # : / Quote #: / DW PWS ID #: / DW Location Code:
Collected By (signature): A Smith	Turnaround Date Required: **Standard Turnaround** / Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day **[ ] 5 Day** / Field Filtered (if applicable): [ ] Yes [ ] No / Analysis: _____

Container Preservative Type **

Lab Project Manager:

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

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

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Analyses: M18-MOD Tedlar	Lab Sample # / Comments:
20230509-RULISON 5L-(AIR-SB03-30)	SL	G			5/9/2023	1250		2	P	X	L1614978 -01
20230509-RULISON 5L-(AIR-SB03-55)	SL	G			5/9/2023	1305		2	P	X	-02
20230509-RULISON 5L-(AIR-SB04-35)	SL	G			5/9/2023	1320		2	P	X	-03
20230509-RULISON 5L-(AIR-SB04-50)	SL	G			5/9/2023	1330		2	P	X	-04

Lab Profile/Line:

Lab Sample Receipt Checklist:

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

LAB USE ONLY:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

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

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

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#: _____

Cooler 1 Temp Upon Receipt: __oC

Cooler 1 Therm Corr. Factor: __oC

Cooler 1 Corrected Temp: _____oC

Comments:

Relinquished by/Company: (Signature) A Smith	Date/Time: 5/10/23 1500	Received by/Company: (Signature)	Date/Time:	F137
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Acctnum: / Template: / Prelogin: / PM: / PB:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time: 5/11/23 0915	

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____