

August 21, 2024

Jake Janicek
EHS Specialist
Caerus Oil and Gas LLC (Operator: 10456)
jjanicek@caerusoilandgas.com

Report of Work Completed – P&A Investigation

ECMC Location Name (ID)	NPR/G09 Pad (335699)
ECMC Well Name	N. PARACHUTE #CP14A-09 G09 59 (API: 05-045-13007)
Operator Well Name	G09-596 14A-09
ECMC Remediation Project Number	28648
Legal Description	SWNE Sec. 9 T5S-R96W
Coordinates (Lat/Long)	39.632252 / -108.173752
County	Garfield County, Colorado

Mr. Janicek,

Confluence Compliance Companies, LLC (Confluence) prepared this Report of Work Completed (ROWC) for Caerus Oil and Gas, LLC (Caerus) to document site investigation activities associated with the plugging and abandonment (P&A) of the N. PARACHUTE #CP14A-09 G09 59 wellhead (API: 05-045-13007) at the G09-596 well pad (Location). The Location is 13.7 miles northwest of Parachute, Colorado, in Garfield County as illustrated in the attached Topographic Location Map. Additional information on the Location and the associated investigation 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 site investigation, results of the investigation, and recommendations for how to proceed with this information.

Background

On March 9, 2023, to comply with Energy & Carbon Management Commission (ECMC) Rule 913.c.(9)., Caerus submitted Form 27 Document 403342279 to serve as notification to P&A the N. PARACHUTE #CP14A-09 G09 59 (G09-596 14A-09) wellhead and to open Remediation Project 28648. Additional wellheads were decommissioned at the Location and are being reported separately with individual Remediation Project numbers.

On July 20, 2023, Confluence conducted a pre-P&A investigation at the Location to document soil conditions prior to cut and cap operations. Using a hydro-vacuum truck, one soil boring was advanced to a depth of 10 feet below ground surface (bgs). One soil sample was collected at the terminus of the soil boring. The soil sample was submitted for laboratory analysis of all ECMC Table 915-1 soil constituents of concern. Analytical results indicated compliance with Table 915-1 Residential Soil Screening Levels (RSSLs) except for arsenic and hexavalent chromium.

On December 20, 2023, Form 27 Document 403562678 was submitted to report results of the pre-P&A investigation, propose a sampling plan for post-P&A investigation, and request a reduced analyte list of arsenic and hexavalent chromium for all future investigation. The form and associated requests were approved on January 24, 2024.

On April 15, 2024, Confluence returned to the Location to conduct a background soil investigation. Four soil samples were collected from native, non-impacted areas near the Location within similar lithology and submitted for laboratory analysis of pH, arsenic, and hexavalent chromium. Analytical results of background soil samples indicated native concentrations of arsenic and pH elevated above Table 915-1 RSSLs.

On April 24, 2024, Confluence returned to the Location following cut and cap operations to conduct post-P&A soil characterization in the wellhead excavation. An excavation was opened that measured approximately 42 feet by 16 feet to a depth of nine feet and encompassed three wellheads that were recently cut and capped at the Location. The 14A-09 well is the middle wellhead within the excavation. Three soil samples were collected in the immediate vicinity to the wellhead: one from the north sidewall at six feet bgs, one from south sidewall at six feet bgs, and one from the base of the excavation adjacent to the capped wellhead at nine feet bgs. Additionally, one composite soil sample was collected from the associated stockpile. Analytical results of post-P&A soil samples exceeded Table 915-1 RSSLs for arsenic in all samples and hexavalent chromium within the base and north sidewall. Analytical results for the stockpile sample indicated an exceedance of arsenic at 5.13 mg/kg and did not detect hexavalent chromium above the laboratory Reporting Detection Limit (RDL). The stockpiled material, totaling approximately 365 cubic yards, was left onsite.

Methodology

On July 31, 2024, Confluence returned to the Location to collect delineation soil samples from the wellhead excavation. Prior to sampling, an excavation had been expanded approximately 20 feet by 5 feet to a depth of 18 feet adjacent to the cut and capped wellhead. The 14A-09 well is the middle wellhead within the excavation. Two samples were collected to delineate hexavalent chromium exceedances; one sample was collected near the wellhead at 18 feet below ground surface (bgs) to achieve vertical delineation and one sample was collected north of the former excavation extent at 15 feet bgs to achieve northern horizontal delineation. All soil samples were characterized using visual and olfactory observations and field-screened using a PID.

The samples were placed in laboratory provided jars, immediately placed on ice, and shipped to Pace Analytical Services (Pace) under completed chain-of-custody and analyzed for the approved reduced analyte suite of arsenic and hexavalent chromium. The sample locations are illustrated in the attached Site Diagrams.

Results

These results summarize observations from onsite investigation efforts and associated laboratory analytical results. For organizational and presentation purposes, the results summary is divided between general observations of lithology and hydrogeology for the entire Location and site investigation activities. Laboratory analytical reports are attached and summarized in the Soil Analytical Results Tables.

Lithology and Hydrogeology

Lithology at the Location is characterized as sandy clay. Groundwater is expected to flow northeast to West Fork Parachute Creek and ultimately to the Colorado River, located 14.7 miles south of the Location. The Location sits approximately 120 feet higher in elevation than West Fork Parachute Creek, located 0.12 miles north of the Location. Based on the elevation difference



between the Location and the creek, depth to water at the Location is estimated to be greater than 100 feet. No groundwater was observed during sampling activities.

Delineation Results

PID measurements of samples collected from the excavation range from 0.0 to 2.3 parts per million (ppm). Analytical results of delineation soil samples exceed Table 915-1 RSSLs for arsenic and hexavalent chromium. Arsenic exceeds in both samples with concentrations of 5.96 and 13.2 mg/kg, and hexavalent chromium exceeds in both samples with concentrations of 0.600 and 0.632 mg/kg.

Analysis and Recommendations

Based on the estimated depth to groundwater at greater than 100 feet bgs, Confluence recommends that Caerus request to compare analytical results for this remediation project to Table 915-1 RSSLs as no reasonable pathway to groundwater appears to exist.

Although levels of arsenic exceeding Table 915-1 RSSLs are present in the investigation area, background data collected from the Location indicates these results are within native levels at the Location. Despite the elevation differences of approximately 4 to 50 feet between the background and investigation samples, it is evident based on the consistent parent material of colluvium over residuum weathered from sandstone and shale, that the lithology and soil type between the Location and background sampling area are comparable. Therefore, it is reasonable to conclude that background samples are representative of native conditions at the Location. Confluence recommends Caerus request use of Table 915-1 Footnote 1 to establish an alternative allowable limit for arsenic of 17.4 mg/kg. Assuming the request is approved, arsenic concentrations at the Location are below the alternative allowable limit.

Hexavalent chromium concentrations exceeding the Table 915-1 RSSL, with values ranging 1.19 to 1.94 mg/kg, were detected adjacent to the capped wellhead at the base of the original excavation and at the north sidewall during the post-P&A investigation. However, post-excavation confirmation samples indicate these exceedances were removed. Although hexavalent chromium was detected in recent samples, concentrations are between the laboratory Method Detection Limit (MDL) of 0.255 mg/kg and the RDL of 1.0 mg/kg. Based on laboratory equipment capabilities, these values are considered estimates. Due to these limitations of laboratory analysis and reporting, Confluence recommends Caerus request consideration of Table 915-1 Footnote 9 to substitute the RDL of 1.0 mg/kg as an alternative screening level for hexavalent chromium.

Assuming the proposed screening levels and above-mentioned requests are approved, all constituents of concern are within Table 915-1 RSSLs or requested alternative allowable limits. For this reason, Confluence recommends that Caerus request closure of Remediation Project 28648 with a no further action (NFA) determination. Additionally, Confluence recommends soil sampling and laboratory analysis for characterization of stockpiled material to determine potential for reuse as backfill at the Location.



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

Regards,

Steve Sivigliano

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

John Axelson

John Axelson
Program Manager
(720) 233-2927
john.axelson@confluence-cc.com

Attachments

- Topographic Location Map
- Site Diagram – Site Investigation
- Site Diagram – Background Samples
- Soil Analytical Results Table
- Photographic Log
- Laboratory Analytical Reports



Topographic Location Map

Caerus Oil and Gas LLC

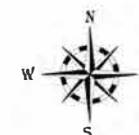
G09 596

(NPR/G09 Pad)

ECMC Location ID: 335699

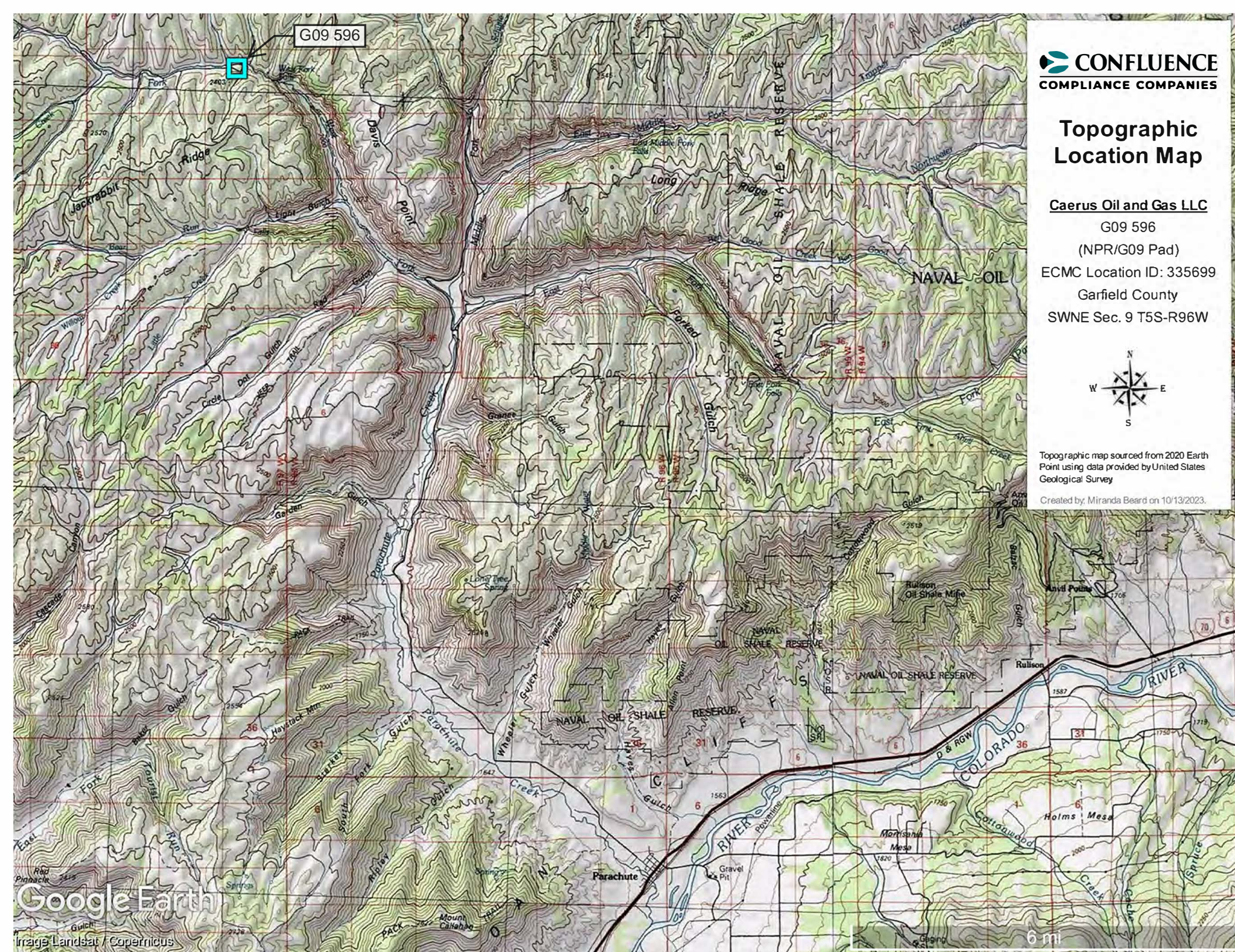
Garfield County

SWNE Sec. 9 T5S-R96W



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

Created by: Miranda Beard on 10/13/2023.



Site Diagram
P&A Investigation

Caerus Oil and Gas LLC

G09-596 (14A-09)

API: 045-13007

(NPR/G09 Pad)


ECMC Location ID: 335699

Garfield County

SWNE Sec. 9 T5S-R96W



Legend

 Soil Sample

 Excavation Extent – 07/31/2024

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 08/07/2024.

20240731-G09 596-14A-09-(BASE)@18

20240731-G09 596-14A-09-(NW)@15

20240424_G09 596-14A-09-(NW)@6

20230720-G09 596-(FC-WH02)@10

20240424_G09 596-14A-09-(BASE)@9

20240424_G09 596-14A-09-(SW)@6

Site Diagram
Background Samples

Caerus Oil and Gas LLC

G09-596 (14A-09)

API: 045-13007

(NPR/G09 Pad)

ECMC Location ID: 335699

Garfield County

SWNE Sec. 9 T5S-R96W



Legend

 Background Soil Sample

 Excavation Extent – 07/31/2024

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 08/07/2024.

20231009-NPRBG-(G09 596-N)@0.5

20240415-NPRBG-(G09 596-N)@1.5
20240415-NPRBG-(G09 596-N)@4

20240415-NPRBG-(G09 596-NE)@0.5

20231009-NPRBG-(G09 596-S)@0.5

20240415-NPRBG-(G09 596-E)@0.5



SOIL ANALYTICAL RESULTS TABLE
G09-596 14A-09

Analyte 915-1 RESIDENTIAL SOIL				GRO	DRO	ORO	Benzene	Toluene	Ethylbenzene	Total Xylenes	1,2,4-TMB	1,3,5-TMB	Acenaphthene	Anthracene	Benz(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Chrysene	Dibenz(a,h)anthracen	Fluoranthene	Fluorene	Indeno(1,2,3-cd)Pyre	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Pyrene
				500			1.2	490	5.8	58	30	27	360	1800	1.1	1.1	11	0.11	110	0.11	240	240	1.1	18	24	2	180
				mg/kg			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				Units																							
Sample Name	Sample Type	Sample	Lab Report																								
20230720-G09 596-(FC-WH02)@10	Facility Closure	07/20/2023	L1637978	0.0261	8.53	73.0	< 0.00100	< 0.00500	< 0.00250	< 0.00650	< 0.00500	< 0.00500	< 0.00600	< 0.00600	< 0.00600	< 0.00600	< 0.00600	< 0.00600	< 0.00600	< 0.00600	< 0.00600	< 0.00600	< 0.00600	0.00647	0.0173	0.0462	< 0.00600

Notes:
Bold with silver highlight: Exceeds RSSLs
"<" (as in, less than laboratory reporting detection limit)



SOIL ANALYTICAL RESULTS TABLE
G09-596 14A-09

Analyte 915-1 RESIDENTIAL SOIL				EC	SAR	pH	Boron	Arsenic	Barium	Cadmium	Chromium VI	Copper	Lead	Nickel	Selenium	Silver	Zinc
				4	6	8.3	2	0.68	15000	71	0.3	3100	400	1500	390	390	23000
				Units	mmhos/cm	No Unit	SU	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample Name	Sample Type	Sample	Lab Report														
20230720-G09 596-(FC-WH02)@10	Facility Closure	07/20/2023	L1637978	0.126	0.283	7.84	0.144	10.1	464	0.366	1.94	35.3	18.4	24.5	0.377	0.0935	79.8
20240424-G09 596-(STOCK)	Excavation	04/24/2024	L1730005					5.13			< 1.00						
20240424-G09 596-14A-09-(BASE)@9	Excavation	04/24/2024	L1730007					3.69			1.58						
20240424-G09 596-14A-09-(NW)@6	Excavation	04/24/2024	L1730007					2.42			1.19						
20240424-G09 596-14A-09-(SW)@6	Excavation	04/24/2024	L1730007					2.70			< 1.00						
20240731-G09 596-14A-09-(BASE)@18	Excavation	07/31/2024	L1763152					13.2			0.632						
20240731-G09 596-14A-09-(NW)@15	Excavation	07/31/2024	L1763152					5.96			0.600						

Notes:
Bold with silver highlight: Exceeds RSSLs
"<" (as in, less than laboratory reporting detection limit)



SOIL ANALYTICAL RESULTS TABLE
NPRBG

Analyte 915-1 RESIDENTIAL SOIL				EC	SAR	pH	Boron	Arsenic	Barium	Cadmium	Chromium VI	Copper	Lead	Nickel	Selenium	Silver	Zinc
				4	6	8.3	2	0.68	15000	71	0.3	3100	400	1500	390	390	23000
				Units	mmhos/cm	No Unit	SU	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample Name	Sample Type	Sample Date	Lab Report														
20231009-NPRBG-(G09 596-N)@0.5	Background	10/09/2023	L1665272	0.0346	0.104	7.17	0.333	6.37	178	0.266	< 1.00	13.7	11.2	15.2	0.419	< 0.500	39.9
20231009-NPRBG-(G09 596-S)@0.5	Background	10/09/2023	L1665276	0.0531	0.229	6.82	0.452	5.84	215	0.271	< 1.00	13.0	13.3	16.1	0.379	< 0.500	47.3
20240415-NPRBG-(G09 596-E)@0.5	Background	04/15/2024	L1726702			6.74		8.14			< 1.00						
20240415-NPRBG-(G09 596-N)@1.5	Background	04/15/2024	L1726702			7.16		7.04			< 1.00						
20240415-NPRBG-(G09 596-N)@4	Background	04/15/2024	L1726702			7.68		7.00			< 1.00						
20240415-NPRBG-(G09 596-NE)@0.5	Background	04/15/2024	L1726702			7.34		17.4			< 1.00						

Notes:
Bold with silver highlight: Exceeds RSSLs
"<" (as in, less than laboratory reporting detection limit)



Photographic Log

Remediation Investigation
G09 596 (ECMC Location ID: 335699)

Page 1 of 5



Site Overview: Orientation North



Photographic Log

Remediation Investigation
G09 596 (ECMC Location ID: 335699)

Page 2 of 5



Site Overview: View Northwest



Photographic Log

Remediation Investigation
G09 596 (ECMC Location ID: 335699)

Page 3 of 5



Excavation Overview: Orientation North



Photographic Log

Remediation Investigation

G09 596 (ECMC Location ID: 335699)

Page 4 of 5



Excavation Overview: View East



Photographic Log

Remediation Investigation

G09 596 (ECMC Location ID: 335699)

Page 5 of 5



Excavation Overview: View Northeast



ANALYTICAL REPORT

August 12, 2024

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: L1763152
Samples Received: 08/02/2024
Project Number: G09 596
Description: G09 596 14A-09
Site: G09 596
Report To: Jake J. / Brett M. / Blair R. / Andy V.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward

Chris Ward
Project Manager

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

Pace Analytical National

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

TABLE OF CONTENTS

Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	³ Ss
20240731-G09 596-14A-09-(BASE)@18 L1763152-01	5	
20240731-G09 596-14A-09-(NW)@15 L1763152-02	6	⁴ Cn
Qc: Quality Control Summary	7	⁵ Sr
Wet Chemistry by Method 7199	7	
Metals (ICP) by Method 6010B	8	⁶ Qc
Gl: Glossary of Terms	9	⁷ Gl
Al: Accreditations & Locations	10	⁸ Al
Sc: Sample Chain of Custody	11	⁹ Sc

SAMPLE SUMMARY

20240731-G09 596-14A-09-(BASE)@18 L1763152-01 Solid

Collected by
Olivia Floyd

Collected date/time
07/31/24 10:15

Received date/time
08/02/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG2335688	1	08/09/24 12:05	08/12/24 05:01	EKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2335699	1	08/07/24 10:47	08/07/24 15:20	MAP	Mt. Juliet, TN

20240731-G09 596-14A-09-(NW)@15 L1763152-02 Solid

Collected by
Olivia Floyd

Collected date/time
07/31/24 10:20

Received date/time
08/02/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG2335688	1	08/09/24 12:05	08/12/24 05:07	EKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2335699	1	08/07/24 10:47	08/07/24 15:21	MAP	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

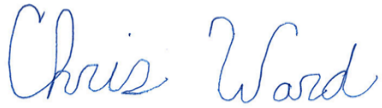
⁷Gl

⁸Al

⁹Sc

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.632	J	0.255	1.00	1	08/12/2024 05:01	WG2335688

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Arsenic	13.2		0.518	2.00	1	08/07/2024 15:20	WG2335699

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.600	J	0.255	1.00	1	08/12/2024 05:07	WG2335688

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.96		0.518	2.00	1	08/07/2024 15:21	WG2335699

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4105433-1 08/12/24 04:22

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1763173-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1763173-01 08/12/24 06:03 • (DUP) R4105433-3 08/12/24 06:09

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

L1763173-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1763173-03 08/12/24 06:21 • (DUP) R4105433-4 08/12/24 06:28

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

Laboratory Control Sample (LCS)

(LCS) R4105433-2 08/12/24 04:30

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.4	104	80.0-120	

L1763173-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1763173-05 08/12/24 06:52 • (MS) R4105433-6 08/12/24 07:05 • (MSD) R4105433-7 08/12/24 07:11

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Hexavalent Chromium	20.0	U	3.50	5.82	17.5	29.1	1	75.0-125	J6	J3 J6	49.9	20

L1763173-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1763173-05 08/12/24 06:52 • (MS) R4105433-9 08/12/24 07:17

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	641	U	322	50.3	50	75.0-125	J6

Method Blank (MB)

(MB) R4104116-1 08/07/24 14:59

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Arsenic	U		0.518	2.00

Laboratory Control Sample (LCS)

(LCS) R4104116-2 08/07/24 15:01

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Arsenic	100	99.8	99.8	80.0-120	

L1762763-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1762763-01 08/07/24 15:03 • (MS) R4104116-5 08/07/24 15:08 • (MSD) R4104116-6 08/07/24 15:10

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Arsenic	100	3.19	95.5	96.0	92.3	92.8	1	75.0-125			0.493	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

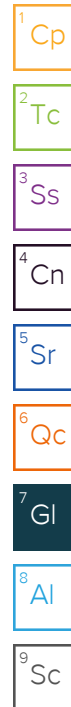
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

Abbreviations and Definitions

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

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.



ACCREDITATIONS & LOCATIONS

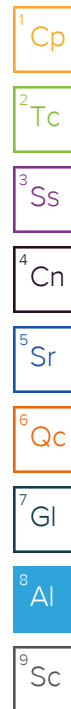
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

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

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

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





ANALYTICAL REPORT

April 19, 2024

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: L1726702
Samples Received: 04/17/2024
Project Number: G09 BACKGROUND SAMPL
Description: G09 Background Sampling
Site: G09 BACKGROUND SAMPLING
Report To: Jake J. / Brett M. / Blair R. / Andy V.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward

Chris Ward
Project Manager

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

Pace Analytical National

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

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
20240415-NPRBG-(G09 596-N)@1.5 L1726702-01	5
20240415-NPRBG-(G09 596-N)@4 L1726702-02	6
20240415-NPRBG-(G09 596-NE)@0.5 L1726702-03	7
20240415-NPRBG-(G09 596-E)@0.5 L1726702-04	8
Qc: Quality Control Summary	9
Wet Chemistry by Method 7199	9
Wet Chemistry by Method 9045D	11
Metals (ICP) by Method 6010B	12
Gl: Glossary of Terms	13
Al: Accreditations & Locations	14
Sc: Sample Chain of Custody	15

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

SAMPLE SUMMARY

20240415-NPRBG-(G09 596-N)@1.5 L1726702-01 Solid

Collected by Alexis Hitzeroth
Collected date/time 04/15/24 11:45
Received date/time 04/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG2269412	1	04/17/24 23:19	04/18/24 09:01	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2269542	1	04/18/24 08:29	04/19/24 09:30	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2269668	1	04/18/24 11:32	04/19/24 11:13	JTM	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

20240415-NPRBG-(G09 596-N)@4 L1726702-02 Solid

Collected by Alexis Hitzeroth
Collected date/time 04/15/24 11:55
Received date/time 04/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG2269412	1	04/17/24 23:19	04/18/24 09:32	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2269542	1	04/18/24 08:29	04/19/24 09:30	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2269668	1	04/18/24 11:32	04/19/24 11:15	JTM	Mt. Juliet, TN

20240415-NPRBG-(G09 596-NE)@0.5 L1726702-03 Solid

Collected by Alexis Hitzeroth
Collected date/time 04/15/24 11:50
Received date/time 04/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG2269412	1	04/17/24 23:19	04/18/24 10:15	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2269542	1	04/18/24 08:29	04/19/24 09:30	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2269668	1	04/18/24 11:32	04/19/24 11:17	JTM	Mt. Juliet, TN

20240415-NPRBG-(G09 596-E)@0.5 L1726702-04 Solid

Collected by Alexis Hitzeroth
Collected date/time 04/15/24 11:30
Received date/time 04/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG2269412	1	04/17/24 23:19	04/18/24 10:21	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2269542	1	04/18/24 08:29	04/19/24 09:30	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2269668	1	04/18/24 11:32	04/19/24 11:18	JTM	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



Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Hexavalent Chromium	ND	J3 J6	1.00	1	04/18/2024 09:01	WG2269412

1
Cp

2
Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	pH			date / time	
pH	7.16	T8	1	04/19/2024 09:30	WG2269542

3
Ss

4
Cn

Sample Narrative:

L1726702-01 WG2269542: 7.16 at 20.6C

5
Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	7.04		2.00	1	04/19/2024 11:13	WG2269668

6
Qc

7
Gl

8
Al

9
Sc

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Hexavalent Chromium	ND	J3 J6	1.00	1	04/18/2024 09:32	WG2269412

1
Cp

2
Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	pH			date / time	
pH	7.68	T8	1	04/19/2024 09:30	WG2269542

3
Ss

4
Cn

Sample Narrative:

L1726702-02 WG2269542: 7.68 at 20.8C

5
Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	7.00		2.00	1	04/19/2024 11:15	WG2269668

6
Qc

7
Gl

8
Al

9
Sc

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Hexavalent Chromium	ND		1.00	1	04/18/2024 10:15	WG2269412

¹ Cp

² Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	pH			date / time	
pH	7.34	T8	1	04/19/2024 09:30	WG2269542

³ Ss

⁴ Cn

Sample Narrative:

L1726702-03 WG2269542: 7.34 at 20.2C

⁵ Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	17.4		2.00	1	04/19/2024 11:17	WG2269668

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	04/18/2024 10:21	WG2269412

1
Cp

2
Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	6.74	T8	1	04/19/2024 09:30	WG2269542

3
Ss

4
Cn

Sample Narrative:
L1726702-04 WG2269542: 6.74 at 20.2C

5
Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	8.14		2.00	1	04/19/2024 11:18	WG2269668

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4059266-1 04/18/24 06:30

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

L1726475-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1726475-01 04/18/24 06:51 • (DUP) R4059266-3 04/18/24 06:57

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	3.78	4.35	1	14.0		20

L1726475-20 Original Sample (OS) • Duplicate (DUP)

(OS) L1726475-20 04/18/24 07:59 • (DUP) R4059266-4 04/18/24 08:05

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	2.78	1.44	1	63.6	P1	20

Laboratory Control Sample (LCS)

(LCS) R4059266-2 04/18/24 06:39

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

L1726702-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1726702-01 04/18/24 09:01 • (MS) R4059266-6 04/18/24 09:13 • (MSD) R4059266-7 04/18/24 09:19

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Hexavalent Chromium	20.0	ND	6.33	4.74	31.7	23.7	1	75.0-125	J6	J3 J6	28.7	20

L1726702-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1726702-02 04/18/24 09:32 • (MS) R4059266-10 04/18/24 09:44 • (MSD) R4059266-11 04/18/24 09:50

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Hexavalent Chromium	20.0	ND	9.71	7.03	47.0	33.6	1	75.0-125	J6	J3 J6	32.1	20



L1726702-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1726702-01 04/18/24 09:01 • (MS) R4059266-8 04/18/24 09:26

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Hexavalent Chromium	651	ND	528	81.1	50	75.0-125	

L1726702-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1726702-02 04/18/24 09:32 • (MS) R4059266-12 04/18/24 09:57

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Hexavalent Chromium	654	ND	642	98.2	50	75.0-125	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1726702-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1726702-03 04/19/24 09:30 • (DUP) R4059700-3 04/19/24 09:30

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	pH	su		%		%
pH	7.34	7.33	1	0.136		1

Sample Narrative:

OS: 7.34 at 20.2C

DUP: 7.33 at 20.3C

Laboratory Control Sample (LCS)

(LCS) R4059700-1 04/19/24 09:30

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

Sample Narrative:

LCS: 10.01 at 20.8C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4059792-1 04/19/24 10:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.518	2.00

Laboratory Control Sample (LCS)

(LCS) R4059792-2 04/19/24 10:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	88.7	88.7	80.0-120	

L1726636-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1726636-10 04/19/24 10:34 • (MS) R4059792-5 04/19/24 10:39 • (MSD) R4059792-6 04/19/24 10:40

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	4.35	86.3	75.5	82.0	71.2	1	75.0-125		J6	13.3	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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.

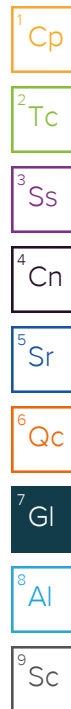
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. 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.
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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	Sample(s) received past/too close to holding time expiration.



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	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

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

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

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

