ANALYTICAL REPORT

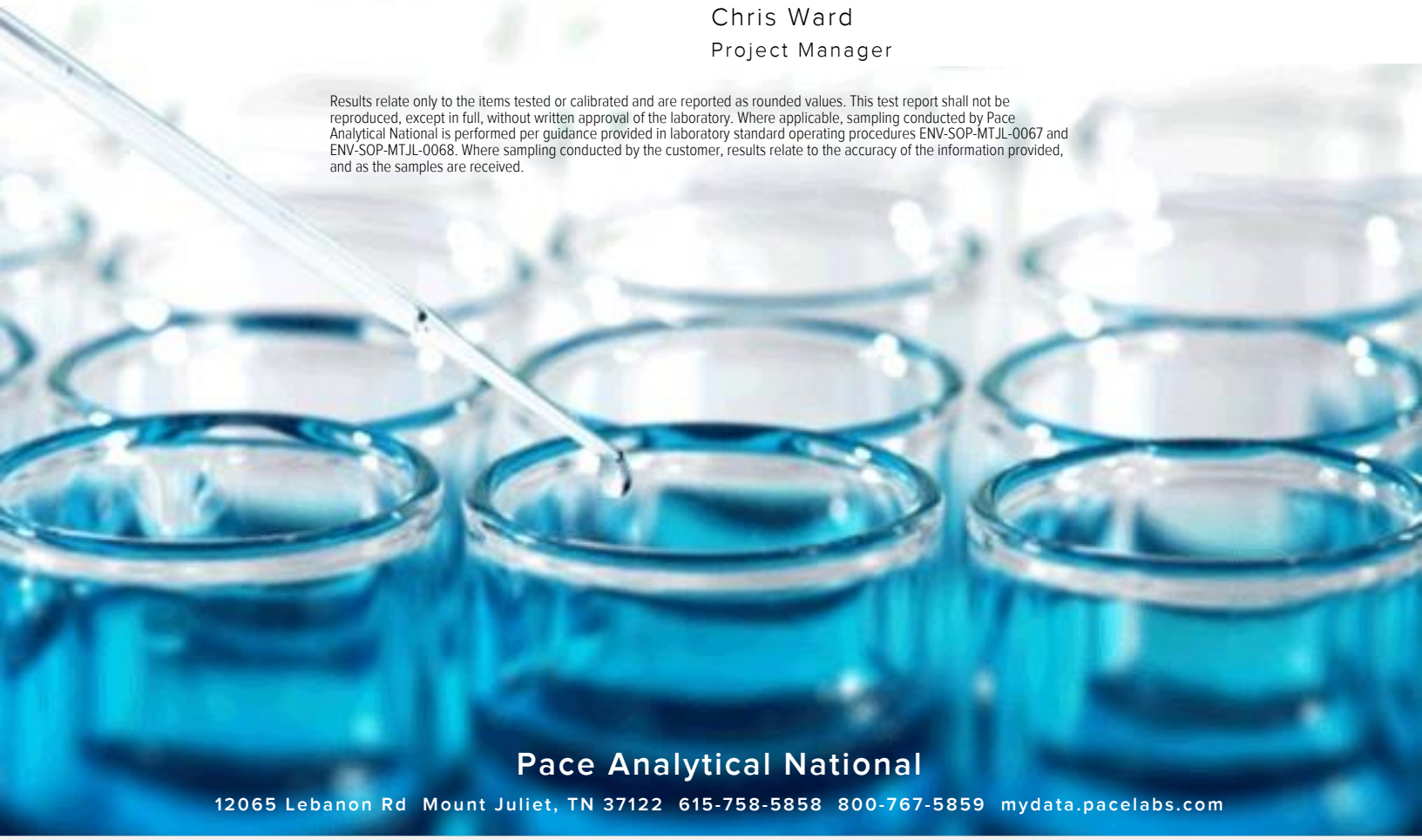
October 30, 2024

Laramie Energy - Grand Junction, CO

Sample Delivery Group:	L1791870
Samples Received:	10/23/2024
Project Number:	CC4" BAKER
Description:	CC4 BAKER pipe
Site:	CC4" BAKER
Report To:	Matt Kasten 760 Horizon Dr., Ste. 101 Grand Junction, CO 81506

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 mydata.pacelabs.com

TABLE OF CONTENTS

CC4 BAKER UP L1791870-01 GW

Collected by: Matt Kasten
Collected date/time: 10/22/24 10:30
Received date/time: 10/23/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2388174	1	10/23/24 17:22	10/23/24 22:48	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388444	1	10/25/24 13:12	10/25/24 13:12	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388444	5	10/25/24 22:31	10/25/24 22:31	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2391761	1	10/29/24 20:50	10/29/24 20:50	KST	Mt. Juliet, TN

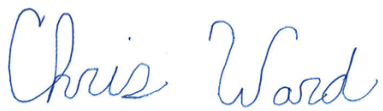
CC4 BAKER DOWN L1791870-02 GW

Collected by: Matt Kasten
Collected date/time: 10/22/24 10:40
Received date/time: 10/23/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2388174	1	10/23/24 17:22	10/23/24 22:48	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388444	1	10/25/24 13:30	10/25/24 13:30	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388444	5	10/25/24 22:49	10/25/24 22:49	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2391761	1	10/29/24 21:11	10/29/24 21:11	KST	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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	950		20.0	1	10/23/2024 22:48	WG2388174

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	60.6		0.547	1.00	1	10/25/2024 13:12	WG2388444
Sulfate	277		3.18	25.0	5	10/25/2024 22:31	WG2388444

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	10/29/2024 20:50	WG2391761
Toluene	U		0.000278	0.00100	1	10/29/2024 20:50	WG2391761
Ethylbenzene	U		0.000137	0.00100	1	10/29/2024 20:50	WG2391761
Xylenes, Total	U		0.000174	0.00300	1	10/29/2024 20:50	WG2391761
Naphthalene	U		0.00100	0.00500	1	10/29/2024 20:50	WG2391761
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/29/2024 20:50	WG2391761
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/29/2024 20:50	WG2391761
(S) Toluene-d8	*108*			*80.0-120*		*10/29/2024 20:50*	WG2391761
(S) 4-Bromofluorobenzene	*95.9*			*77.0-126*		*10/29/2024 20:50*	WG2391761
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*10/29/2024 20:50*	WG2391761

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	934		20.0	1	10/23/2024 22:48	WG2388174

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	61.3		0.547	1.00	1	10/25/2024 13:30	WG2388444
Sulfate	278		3.18	25.0	5	10/25/2024 22:49	WG2388444

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000941	0.00100	1	10/29/2024 21:11	WG2391761
Toluene	U		0.000278	0.00100	1	10/29/2024 21:11	WG2391761
Ethylbenzene	U		0.000137	0.00100	1	10/29/2024 21:11	WG2391761
Xylenes, Total	U		0.000174	0.00300	1	10/29/2024 21:11	WG2391761
Naphthalene	U		0.00100	0.00500	1	10/29/2024 21:11	WG2391761
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/29/2024 21:11	WG2391761
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/29/2024 21:11	WG2391761
(S) Toluene-d8	*109*			*80.0-120*		*10/29/2024 21:11*	WG2391761
(S) 4-Bromofluorobenzene	*98.6*			*77.0-126*		*10/29/2024 21:11*	WG2391761
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*		*10/29/2024 21:11*	WG2391761

Method Blank (MB)

(MB) R4138244-1 10/23/24 22:48

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1791681-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1791681-02 10/23/24 22:48 • (DUP) R4138244-3 10/23/24 22:48

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	960	976	1	1.65		10

L1791870-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1791870-02 10/23/24 22:48 • (DUP) R4138244-4 10/23/24 22:48

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	934	1010	1	7.42		10

Laboratory Control Sample (LCS)

(LCS) R4138244-2 10/23/24 22:48

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8160	92.7	85.0-115	

Method Blank (MB)

(MB) R4138315-1 10/25/24 11:25

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.547	1.00
Sulfate	U		0.637	5.00

L1791848-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1791848-01 10/25/24 12:00 • (DUP) R4138315-3 10/25/24 12:18

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	10.8	10.7	1	0.697		15
Sulfate	20.7	20.6	1	0.581		15

L1791857-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1791857-14 10/25/24 13:48 • (DUP) R4138315-5 10/25/24 14:05

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	6.03	5.74	1	4.79		15
Sulfate	28.7	28.5	1	0.697		15

Laboratory Control Sample (LCS)

(LCS) R4138315-2 10/25/24 11:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	38.9	97.2	80.0-120	
Sulfate	40.0	40.4	101	80.0-120	

L1791848-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1791848-01 10/25/24 12:00 • (MS) R4138315-4 10/25/24 12:36

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40.0	10.8	48.6	94.6	1	80.0-120	
Sulfate	40.0	20.7	57.3	91.6	1	80.0-120	

L1791857-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1791857-14 10/25/24 13:48 • (MS) R4138315-6 10/25/24 14:23 • (MSD) R4138315-7 10/25/24 14:41

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	6.03	44.2	44.3	95.4	95.7	1	80.0-120			0.254	15
Sulfate	40.0	28.7	63.6	63.8	87.3	87.7	1	80.0-120			0.225	15

Method Blank (MB)

(MB) R4139685-3 10/29/24 16:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Xylenes, Total	U		0.000174	0.00300
Naphthalene	U		0.00100	0.00500
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
(S) Toluene-d8	*105*			*80.0-120*
(S) 4-Bromofluorobenzene	*94.6*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4139685-1 10/29/24 15:06

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.00500	0.00477	95.4	70.0-123	
Toluene	0.00500	0.00481	96.2	79.0-120	
Ethylbenzene	0.00500	0.00484	96.8	79.0-123	
Xylenes, Total	0.0150	0.0153	102	79.0-123	
Naphthalene	0.00500	0.00418	83.6	54.0-135	J
1,2,4-Trimethylbenzene	0.00500	0.00480	96.0	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00492	98.4	76.0-122	
(S) Toluene-d8			*103*	*80.0-120*	
(S) 4-Bromofluorobenzene			*95.4*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*106*	*70.0-130*	

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

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

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

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.

Company Name/Address:
Laramie Energy - Grand Junction, CO

760 Horizon Dr., Ste. 101
Grand Junction, CO 81506

Billing Information:
Accounts Payable
1401 Seventeenth St, Ste 1400
Denver, CO 80202

Pres Chk

Report to: **Matt Kasten**

Email To: **mkasten@laramie-energy.com**

Project Description: CC4 BAKER PIPE

City/State Collected:

Please Circle: PT MT CT ET

Phone: **970-263-3601**

Client Project #: CC4" BAKER

Lab Project #: **OXYGJCO-915**

Collected by (print): Matt Kasten

Site/Facility ID #: CC4" BAKER

P.O. #

Collected by (signature):

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

Quote #

Date Results Needed

Immediately
Packed on Ice N ___ Y X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE,SULFATE 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	V8260 40mlAmb-HCl	Remarks	Sample # (lab only)
CC4 BAKER UP	Grab	GW	—	10/22/24	1030	5	X	X	X		-01
CC4 BAKER DOWN	Grab	GW	—	10/22/24	1040	5	X	X	X		02

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
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

SDG # L1791870
K230

Acctnum: **OXYGJCO**
Template: **T222240**
Prelogin: **P973161**
PM: **824 - Chris Ward**
PB:

Shipped Via: **FedEX Ground**

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeoH TBR	
	10/22/24	1800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 10	If preservation required by Login: Date/Time
	102224	1700			
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/23/24 Time: 0900	Hold: / Condition: NCF / (OK)

L1791870

Fed Ex tracking #	Gun ID	Temperature
7315 3202 6578	M5A9	0.6+0.3=0.9
7315 3202 6589	↓	4.8+0.3=5.1

Name

Date