

July 13, 2023

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Raptor Materials, LLC.

Sample Delivery Group: L1625660
Samples Received: 06/14/2023
Project Number:
Description: P124 - Two Rivers
Site: P124-TWO RIVERS
Report To: Garrett Varra
8120 Gage St
Frederick, CO 80516

Entire Report Reviewed By:



Kelly Mercer
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

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SAMPLE SUMMARY

1 GAP L1625660-01 Non-Potable Water

Collected by
Garrett Varra

Collected date/time
06/13/23 14:27

Received date/time
06/14/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 900	WG2078908	1	06/16/23 09:24	06/20/23 20:12	RRE	Mt. Juliet, TN

2 GAP L1625660-02 Non-Potable Water

Collected by
Garrett Varra

Collected date/time
06/13/23 14:27

Received date/time
06/14/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 900	WG2078908	1	06/16/23 09:24	06/20/23 20:12	RRE	Mt. Juliet, TN

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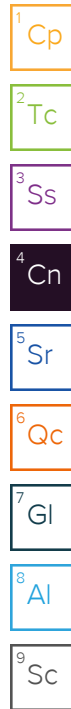
⁹Sc

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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Kelly Mercer
Project Manager



Radiochemistry by Method 900

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
GROSS ALPHA	5.71		2.42	2.42	06/20/2023 20:12	WG2078908

¹Cp

²Tc

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⁸Al

⁹Sc

Radiochemistry by Method 900

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
GROSS ALPHA	8.50		3.47	3.69	06/20/2023 20:12	WG2078908

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3947907-1 06/20/23 11:41

	MB Result	MB Qualifier	MB Uncertainty	MB MDA
Analyte	pCi/l		+ / -	pCi/l
GROSS ALPHA	-0.547	U	0.343	0.698

L1624772-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1624772-01 06/20/23 11:41 • (DUP) R3947907-5 06/20/23 11:41

	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
Analyte	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
GROSS ALPHA	0.488	0.647	0.903	0.766	0.589	0.903	1	44.3	0.318		20	3

Laboratory Control Sample (LCS)

(LCS) R3947907-2 06/20/23 11:41

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	pCi/l	pCi/l	%	%	
GROSS ALPHA	15.0	12.3	81.9	80.0-120	

L1621698-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621698-20 06/20/23 11:41 • (MS) R3947907-3 06/20/23 11:41 • (MSD) R3947907-4 06/20/23 11:41

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
Analyte	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
GROSS ALPHA	15.0	0.0682	9.21	11.2	60.9	74.0	1	70.0-130	J6		19.3		20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

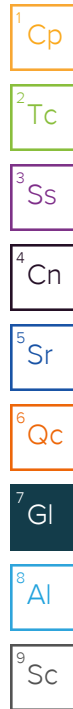
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
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
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
U	Below Detectable Limits: Indicates that the analyte was not detected.



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.



Company Name/Address: Raptor Materials, LLC. 8120 Gage St Frederick, CO 80516		Billing Information: Cathy Clark 8120 Gage St Frederick, CO 80516		Analysis / Container / Preservative <div style="display: flex; justify-content: space-between;"> <div>Pres Chk</div> <div> <div style="border: 1px solid black; padding: 2px;">42</div> <div style="border: 1px solid black; padding: 2px;">42</div> <div style="border: 1px solid black; padding: 2px;">42</div> <div style="border: 1px solid black; padding: 2px;">42</div> </div> </div>		Chain of Custody Page ____ of ____ <div style="text-align: center;"> PEOPLE ADVANCING SCIENCE </div>							
Report to: Garrett Varra		Email To: gvarra@raptormaterialsllc.com		PH-10BDH4321 TRC-21-M-11 CR6-20221V		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-terms-conditions.pdf							
Project Description: P124 - Two Rivers		City/State Collected: EVANS, CO						Please Circle: PT <input checked="" type="radio"/> MT <input type="radio"/> CT <input type="radio"/> ET <input type="radio"/>					
Phone: 720-272-2857		Client Project # P124-TWO RIVERS		Lab Project # RAPMATFCO-P124 TWO R		SDG # L1625660 D055							
Collected by (print): Garrett Varra		Site/Facility ID # P124-TWO RIVERS		P.O. #									
Collected by (signature): 		Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input checked="" type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day		Quote #		Acctnum: RAPMATFCO Template: T232043 Prelogin: P1005609 PM: 841 - Kelly Mercer PB: Shipped Via: FedEX Ground							
Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>		Date Results Needed		No. of Cntrs 1									
Sample ID		Comp/Grab		Matrix *		Depth		Date		Time		**Nitrate, Sulfate 125mlHDPE-NoPres Diss Metals 6010 250mlHDPE-HNO3 Diss Metals 6020 250mlHDPE-HNO3 TDS 1L-HDPE NoPres Total HG 250mlHDPE-HNO3 Gross Alpha Particle	
MW-12 MW-12 MW-12 MW-12 MW-12 1 GAP 2 GAP		grab grab grab grab grab grab grab		GW GW GW GW GW GW GW		6/13/23 6/13/23 6/13/23 6/13/23 6/13/23 6/13/23 6/13/23		1:05pm 1:07pm 1:08pm 1:10pm 1:11pm 2:27P 2:27pm		1 1 1 1 1 1 1			
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other _____		Remarks: **Nitrate= 48 hour hold time -- Dissolved metals 6010: As, Cd, Cr, Cu, Pb, Mn, Ni, Se, Zn-- Dissolved metals 6020: U, Mn		pH _____ Temp _____ Flow _____ Other _____		Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N RAD Screen <0.5 mR/hr: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N							
Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier		Tracking # 6481 5466 2156		Trip Blank Received: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> HCL / MeOH TBR		Bottles Received: 7		If preservation required by Login: Date/Time					
Relinquished by : (Signature)		Date:		Time:		Received by: (Signature)		Date:		Time:		Hold:	
Relinquished by : (Signature)		Date:		Time:		Received by: (Signature)		Date:		Time:		Condition: NCF / OK	
Relinquished by : (Signature)		Date:		Time:		Received for lab by: (Signature) Hayden		Date: 6/14/23		Time: 905		Condition: NCF / OK	