

August 10, 2021

Report to:

Ronald Mack
Ogris Operations, LLC
21603 Hwy 12
Trinidad, CO 81082

Bill to:

Dianna Bayes
Ogris Operations, LLC
21603 Hwy 12
Trinidad, CO 81082

cc: Javier Martinez, Sam Bollinger, Dennis Barton

Project ID:

ACZ Project ID: L66780

Ronald Mack:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 28, 2021. This project has been assigned to ACZ's project number, L66780. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L66780. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after September 09, 2021. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Sue Webber has reviewed and approved this report.



Ogris Operations, LLC

Project ID:

Sample ID: 019A-A

Locator:

ACZ Sample ID: **L66780-01**

Date Sampled: 06/25/21 10:30

Date Received: 06/28/21

Sample Matrix: Waste Water

Radium 226, total
M903.1

Prep Method:

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226, total	07/20/21 0:25		0.22	0.12	0.21	pCi/L	*	djc

Radium 228, total
M904.0

Prep Method:

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228, total	08/07/21 18:50		-0.64	0.93	2.2	pCi/L	*	cer

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Error(+/-)</i>	Calculated sample specific uncertainty
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>LCL</i>	Lower Control Limit, in % (except for LCSS, mg/Kg)
<i>LLD</i>	Calculated sample specific Lower Limit of Detection
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>REr</i>	Relative Error Ratio, calculation used for Dup. QC taking into account the error factor.
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>UCL</i>	Upper Control Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>DUP</i>	Sample Duplicate	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBS</i>	Prep Blank - Soil
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBW</i>	Prep Blank - Water

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Matrix Spikes	Determines sample matrix interferences, if any.

ACZ Qualifiers (Qual)

H	Analysis exceeded method hold time.
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Method Prefix Reference

M	EPA methodology, including those under SDWA, CWA, and RCRA
SM	Standard Methods for the Examination of Water and Wastewater.
D	ASTM
RP	DOE
ESM	DOE/ESM

Comments

- (1) Solid matrices are reported on a dry weight basis.
- (2) Preparation method: "Method" indicates preparation defined in analytical method.
- (3) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click:

<https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf>

Ogris Operations, LLC

ACZ Project ID: **L66780**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Radium 226, total

M903.1

Units: pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec%	Lower	Upper	RPD/RER	Limit	Qual
WG522976																
WG522976PBW	PBW	07/20/21						-03	0.09	0.1			0.2			
WG522976LCSW	LCSW	07/20/21	PCN62879	20				16	0.54	0.1	80	43	148			
L66766-07DUP1	DUP-RPD	07/20/21			0.55	0.16	0.22	.47	0.25	0.27				16	20	
L66766-09MS	MS	07/20/21	PCN62879	40	9	0.46	0.18	39	1.3	0.41	75	43	148			
L66778-01DUP2	DUP-RPD	07/20/21			0.24	0.11	0.32	.18	0.1	0.2				29	20	RG
L66778-01DUP2	DUP-RER	07/20/21			0.24	0.11	0.32	.18	0.1	0.2				0.4	2	

Radium 228, total

M904.0

Units: pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec%	Lower	Upper	RPD/RER	Limit	Qual
WG523127																
WG523127PBW	PBW	08/07/21						-09	0.39	0.41			0.82			
WG523127LCSW	LCSW	08/07/21	PCN63356	9.58				11	1	0.64	115	47	123			
L66735-01DUP	DUP-RPD	08/07/21			4	3.1	6.7	2.6	1.2	2.8				42	20	RG
L66735-01DUP	DUP-RER	08/07/21			4	3.1	6.7	2.6	1.2	2.8				0.42	2	
L66804-02DUP	DUP-RPD	08/07/21			-0.16	0.89	2.2	1.2	0.82	2				262	20	RG
L66804-02DUP	DUP-RER	08/07/21			-0.16	0.89	2.2	1.2	0.82	2				1.12	2	
L66804-01MS	MS	08/07/21	PCN63356	9.58	0.34	0.89	2	7.8	0.89	1.5	78	47	123			

Ogris Operations, LLCACZ Project ID: **L66780**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L66780-01	WG522976	Radium 226, total	M903.1	RG	Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control.
	WG523127	Radium 228, total	M904.0	Q5	Sample received with inadequate chemical preservation. Additional preservation performed by the laboratory.
			M904.0	RG	Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control.

Ogris Operations, LLC

ACZ Project ID: **L66780**

No certification qualifiers associated with this analysis

Timber Creek Energy LLC

ACZ Project ID: L66780
 Date Received: 06/28/2021 13:09
 Received By:
 Date Printed: 6/29/2021

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody form or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody form complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Are all labels on containers and are they intact and legible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11) For preserved bottle types, was the pH checked and within limits? ¹ L66780-01 Container B2422470 (RED CUBE): Added 10 mls nitric acid to the sub-sample to adjust the pH to the appropriate range.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12) Is there sufficient sample volume to perform all requested work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13) Is the custody seal intact on all containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14) Are samples that require zero headspace acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15) Are all sample containers appropriate for analytical requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16) Is there an Hg-1631 trip blank present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17) Is there a VOA trip blank present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18) Were all samples received within hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Temp Criteria (°C)	Rad (µR/Hr)	Custody Seal Intact?
5201	19.6	NA	15	Yes

Was ice present in the shipment container(s)?

No - Wet or gel ice was not present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

Timber Creek Energy LLC

ACZ Project ID: L66780

Date Received: 06/28/2021 13:09

Received By:

Date Printed: 6/29/2021

¹ The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).



Chain of Custody

Company Name: Ogris Operating, LLC
 Address: 21603 State Hwy 12
 Trinidad, CO 81082
 Contact: Sam Bollinger
 Phone #: 719-680-0808
 Permit #: CO0048062

225 C-2773 Downhill Drive
 Steamboat Springs, CO 80524
 Phone: (800) 334-5493 - Email: suew@acz.com

Annual Analytical Chain of Custody

Sample Description	Sample Date	Time MST	(C)omp/ (G)rab	# Containers	Preservatives
019A-A	6/25/2021	10:30AM	G	1	HNO3
Radium 226-228 X					

Collected by: (Signature)		Date: 6-25-21	Time: 4:30 PM
Relinquished by: (Signature)		Date: 6/28/21	Time: 12:57
Received by: (Signature)		Date: _____	Time: _____
Received by: (Signature)		Date: _____	Time: _____
Method of Shipment:	Fed-ex		
Additional Comments:	Annual Radium		