September 26, 2024

Mr. Lucas West Environmental Protection Specialist Colorado Division of Reclamation Mining and Safety 101 3rd Street Grand Junction, CO 81501

Subject: TR-17 Adequacy Review Response DRMS Permit No. M-2012-032 Revenue Mine, Ouray County, Colorado

Dear Mr. West,

Below are responses to the adequacy review for technical revision 17 to DRMS Permit No. M-2012-032.

- Down gradient groundwater monitoring wells were drilled the week of July 22nd, 2024. Completion of the wells is planned to take place the week of September 30th, 2024 with the installation of the down-hole materials. Completion report will be submitted once monitoring well material installation is complete. The excavation/construction of stormwater containment pond and emergency outfall will take place post monitoring wells but prior to any milling operations.
- 2. The internal valve will be located on the tank that resides in the secondary containment. The valve will be shut to prevent liquid from entering the secondary containment from the tank. Secondary containment will have no valves so will be closed without the possibility of discharge from the containment in the event of catastrophic failure.
- 3. Filter press is located in secondary containment with the purpose of capturing extracted process water in the event of a catastrophic failure, not to collect for recycling. The extracted process water from the filter presses will report to the process water tank, not the secondary containment area.
- 4. Process water will be bled off (discharged) at the rate that water can be supplied from the mine portal discharge (dependent on seasonal discharge rate). The maximum discharge/feed rate for the process water tank will be 75 gpm. In the event of a 2 minute failure shut-down, there would be the possibility of 150 gallons of additional water input into the system. Updated table provided in adequacy review response under **Attachment A**. The value of previous table shows additional containment capacity, with containment capacity being 146% of volume in the case of the process water volume in the circuit being double engineered circuit volume.
- 5. Updated diagram 1 including flow arrows shown under Attachment B.

- 6. Secondary containment for fluid transportation lines will be maintained in areas outside of containment areas by casing lines in a larger diameter pipe that will direct water/slurry away from uncontained area in the event of line or fitting failure.
- 7. Diagram 2 is showing the layout of the railyard area where the milling circuit will be located prior to the placement of any equipment or secondary containment.
- 8. The purpose of placing the gravity circuit in the covered railyard area is to allow for year-round operation. The railyard building will be winterized with insulation combined with electric heaters to maintain above freezing temperatures and allow for year round operation.
- 9. Secondary containment is no longer planned to be one single containment area with dimensions of 19'W x 100'L x 24" D. Containment is now 6 separate areas consisting of 4 pre-fabricated areas and 2 that will be fabricated on site to the required dimensions. The containment areas are constructed of 18oz PVC. The rectangular shaped containment areas will come pre-constructed from the manufacturer and the odd shaped containment areas will be constructed on site out of the same 18oz PVC. On-site construction will be completed using manufacturer recommendations. Manufacturer specs and construction recommendations are located under **Attachment C.** Installation will consist of placing the pre-fabricated containment areas in the proper location and constructing the remaining areas in place prior to placing equipment. QA/QC will consist of filling secondary containment areas with clean water (Prior to starting process) and doing a time study to ensure that no water is discharged.
- 10. Sample was tested for comparison to discharge standards per CDPHE Discharge Permit No. CO0000003 not Regulation 41 Table 3 as the process water will report to the mine discharge which will then be treated by the pond system prior to discharge to Sneffels creek.
- 11. Samples from Table 2 were taken prior to dilution with portal discharge water as well as treatment by the pond system. Discharge from the gravity circuit which is represented by the results from testing in Table 2 will be pumped to the Atlas Cumberland drift where a coffer dam is located. Dilution will occur at this location due to inflow of ground water over the length of the 1200' drift and again when the water from the coffer dam is discharged to the mine drainage ditch over 5000' of the revenue tunnel. It will then be treated by the pond system prior to discharge to Sneffels Creek.
- 12. Additional sample event has taken place and updated water quality data is provided in **Attachment D** that includes TDS.
- 13. The source for proposed reclamation costs is RSMeans Construction Cost Data.
- a. Disposal methods will include:
 - i. Equipment: Removal of equipment anchors when required, picking of equipment and placement in underground mill. No cutting will be required to dismantle equipment prior to picking & placement.

- b. Table 6 has been updated to include job hours for personnel & equipment where applicable, located under **Attachment F**.
- 14. All equipment and features associated with the milling process in TR-17 will be removed from the railyard upon entering final reclamation. Equipment will be placed in the Mill area.
- 15. Copy of executed permit allowing material transportation from Camp Bird to the Revenue Virginius is located under **Attachment G**.
- 16. SPLP and ABA testing including Net Acid Forming and Net Neutralizing Potential have been performed and the summary table of the data showing that the tailings criteria meets acceptable standards is provided under Attachment H with data sheets corroborating the summary table provided under Attachment I. All tailings handling and placement will be performed under the guidelines set forth by the Tailings Management Plan approved in AM-2 of mining permit M-2012-032.
- 17. Net Acid Forming & Net Neutralizing Potential has been calculated for all feed material samples. There was an error in labeling the samples, but all feed material had both SPLP and ABA testing performed. A summary table of Net Acid Forming vs Net Neutralizing Potential for all feed material samples is provided under **Attachment J** with the corroborating data sheets provided under **Attachment K**.
- 18. Documentation regarding input of system discharge and water quality has been sent to CDPHE via certified mail and receipt of documentation has been verified. Documentation provided and certification of receipt is provided under Attachment L.
- 19. 'Inert' was referring to the Net Neutralizing potential being greater than the Net Acid Generating potential from the sampling & testing that was conducted showing that there is not a potential for acid leaching. The table of data values this is referring to is provided under **Attachment J**
- 20. The estimated duration of the gravity circuit is dependent on sufficient collection of data so that the underground flotation mill can be retrofit with the direction provided by the gravity circuit. Estimated time to reach 75 TPD max throughput is by late spring/early summer of 2025.
- 21. Total amount of material to be exported from Camp Bird is approximately 35,000 tons.
- The concentrate and tailings will be dried by dewatering filter presses. Each stream will have a dedicated filter press that reduces moisture content to 10% 15%.
- 23. Two samples each were taken from the representative mill feed "head-grade" material from the Camp Bird and Revenue, four samples total. Initially one of each sample for the two properties would be used for ABA and the other would be used for SPLP testing, it was then decided to conduct both ABA & SPLP testing on all of the samples for additional data points. RV indicates that the material came from the Revenue-Virginius and CB indicates material originated

from the Camp Bird. A map of sample locations for both the Revenue-Virginius and Camp Brid are provided under **Attachment M**. Sample material for laboratory testing was collected during bench top testing as it was fed through the crushing and grinding portion of the process. Material was collected on set intervals as to obtain an unbiased sample as it passed through the mini-jaw crusher prior to being fed into the impact mill for grinding.

24. A map of sample location is provided under **Attachment M** The methodology to obtain a representative and unbiased sample was to remove material from all sides of the stockpiles as well as to reach the material located at the center of the piles. This material was then mixed on a large scale via the front end loader before being bagged into super sacks to be processed on the bench scale testing circuit. The samples to be sent for analysis were then collected using the methodology mentioned above in question number 23.

Thorin also plans to use a product called BioZem that's use will be to create a foundation layer in the process area. The BioZem will be mixed with the broken rock (aggregate) that makes up the floor of the railyard as well as the entire surface of the mine site and then sprayed with water from the portal before being rolled to create a concrete like structure. This foundation will improve the process by creating a solid foundation to which the Deister Concentration Tables can be mounted to for an improvement in harmonics. It will also aid with the secondary containment by creating a homogeneous structure preventing any punctures in the liner from the equipment placement in the containment area. The MSDS sheets as well as sample analysis are located under **Attachment N**.

Thank you for your attention to our adequacy review response as well as the addition of the BioZem material.

Sincerely,

Chris Skerik Chief Operating Officer Thorin Resources cskerik@thorinresources.com

Attachment A – Updated Emergency 2 Minute Shut-Off Volume & Capacity Table

Shut Off Time	Volume of Luquid Post Shut Off (gal)
Circuit Capacity Pre 2 Min Shutoff	9,247
Max Inflow - 2 Minute Shutoff	150
Actual Containment Volume	27,121
% Containment Coverage at 2 Min w/ Max Inflow Rate	289%

Updated Table 4: Secondary Containment with Shut-Off Capabilities



Attachment B – Updated Equipment Layout with Process Flow

Updated Diagram 1: Equipment Layout with Process Flow

Attachment C - Secondary Containment Specs & Construction recommendations



Ultra-Containment Berm Rapid Rise Model®

KEY FEATURES AND BENEFITS

- Sidewalls remain down during normal operations, loading and unloading. Vehicles and equipment can drive in and out with no set-up or take-down required
- + In the case of a spill, the foam ring around the top perimeter of the Containment Berm rises with the level of spilled liquid.
- + Standard materials include PVC and Copolymer 2000*.

SĮDEWALLS

- + Lay flat unless spill occurs foam ring will rise with liquid level.
- + Eliminates tripping hazards.
- + No set-up required once berm has been positioned in the field.

COMPLIANCE

- + EPA 40 CFR 264.175 Containment of Containers Containing Free Liquid.
- + EPA 40 CFR 112 (SPCC) Spill Prevention, Control and Countermeasure Act

Copolymer 2000 " Part#	PVC 22 øz. Part#	Dimensions ft. (m) Wall Height: 12 in. (305 mm)	Containment Capacity gal. (L)	Copolymer 2000 Weight Lbs. (kg)	PVC 22 oz. Weight Lbs. (kg)
8430	8654	4 x 6 (1.2 x 1.8)	179 (678)	31.0 (14.0)	24.0 (11.0)
8431	8630	6 x 6 (1.8 x 1.8)	269 (1,018)	37.0 (17.0)	30.0 (14.0)
8432	8631	10 x 10 (3.0 x 3.0)	748 (2,831)	69.0 (31.0)	54.0 (24.5)
8710	8655	12 x 12 (3.7 x 3.7)	1077 (4,077)	85.0 (39.0)	66.0 (30.0)
8437	8656	12 x 26 (3.7 x 7.9)	2,333 (8,831)	151.0 (68.5)	118.0 (54.0)
8711	8632	12 x 30 (3.7 x 9.1)	2,692 (10,190)	171.0 (78.0)	134.0 (61.0)
8712	8657	12 x 40 (3.7 x 12.2)	3,590 (13,590)	218.0 (99.0)	170.0 (77.0)
8713	8633	12 x 50 (3.7 x 15.2)	4,488 (16,989)	266.0 (121.0)	207.0 (94.0)
8714	8658	12 x 60 (3.7 x 18.3)	5,385 (20,384)	313.0 (142.0)	244.0 (111.0)
8715	8659	12 x 72 (3.7 x 22.0)	6,462 (24,461)	370.0 (168.0)	288.0 (131.0)
8716	8660	15 x 15 (4.6 x 4.6)	1,683 (6,371)	115.0 (52.0)	93.0 (42.0)
8717	8661	15 x 20 (4.6 x 6.1)	2,244 (8,495)	141.0 (64.0)	114.0 (52.0)
3718	8662	15 x 30 (4.6 x 9.1)	3,366 (12,742)	195.0 (89.0)	158.0 (72.0)
8719	8663	15 x 40 (4.6 x 12.2)	4,488 (16,989)	248.0 (113.0)	201.0 (91.0)
8433	8664	15 x 50 (4.6 x 15.2)	5,610 (21,234)	302.0 (137.0)	244.0 (111.0)
3720	8665	15 x 60 (4.6 x 18.3)	6,732 (25,483)	356.0 (162.0)	286.0 (130.0)
8434	8666	15 x 66 (4.6 x 20.1)	7,405 (28,028)	388.0 (175.0)	313.0 (142.0)
8721	8667	15 x 72 (4.6 x 21.9)	8,078 (30,579)	420.0 (191.0)	338.0 (153.0)

UltraTech International, Inc. · 11542 Davis Creek Court, Jacksonville, Florida 32256 USA (800) 353-1611 · 1-904-292-1611 · spillcontainment.com



PROCEDURE FOR BERM DEPLOYMENT:

- STEP 1: Select a level area and be sure that ground is swept clean of debris and sharp objects. The use of a ground cloth is recommended to prevent puncturing from underneath the berm.
- STEP 2: Place the folded berm at the setup location. Do not drag the folded berm. Unfold berm and position as desired. If tread protectors are being used, place these in the unit at this time.

STEP 3: Your berm is ready for use.

PROPER USE AND BEST PRACTICES

- 2. Do not drive over the sidewall (in parallel).
- 3. Drive slowly, avoiding sudden stops or acceleration.
- 4. Avoid excessive turns while on the berm.

PVC MATERIAL SPECS

	English	Metric	Testing Method
Weight	22 oz./yd²	745 g/m²	FS 5040 / ASTM D3776
Width	up to 126"	up to 320 cm	
Count	18 x 16/1"	7 x 7/cm	-
Denier	1300 x 1500	1430 x 1650	-
Grab Tensile	459 x 418 lbs./1"	2042 x 1859 N/2.5 cm	FS 5100 / ASTM D5034
Tongue Tear	140 x 150 lbs./1"	623 x 667 N/2.5 cm	FS 5134 / ASTM 2261
Adhesion	22 lbs./2*	98 N/5 cm	FS 5970 / ASTM D751
Finish	Matte		
Cold Crack	-30°F	-34°C	FS 5874 / ASTM D2136
Treatments	Anti-Mildew, UV Pi	gments	
Put-Up	75 vds	69 m	

Storage:

- 1. Sweep out berm and be sure that it is dry and free of contaminants.
- 2. Store unit in clean, dry environment.

Repair and Maintenance: If a puncture or tear occurs, call for a repair kit. Describe the damage to the service representative to ensure receipt of the proper kit.

- 1. Enter and exit the berm as perpendicular to the sidewall as possible. Angled entry/exit may cause damage.

COPOLYMER-2000 MATERIAL SPECS

Reinforced	English	Metric	Testing Method
Base Fabric Type	Polyester		
Base Fabric Weight (nominal)	3.0 oz/yd2	102 g/m2	
Finished Coated Weight	28.0 ± 2 oz/yd2	950 ± 70 g/m2	ASTM D751
Thickness	30 mils nominal	0.76 mm nominal	ASTM D751
Trapezoid Tear	30/30 lbf nominal	133/133 N nominal	ASTM D4533
Grab Tensile	250/200 lbf min.	1112/890 N min.	ASTM D751 Grab Method
Hydrostatic Resistance	300 psi min.	2.06 MPa min.	ASTM D751, Procedure A
Adhesion	10 lbf/in min.	9.0 daN/5 cm min.	ASTM D751 Dielectric Seam
Cold Crack	Pass @ -25° F	Pass @ -32° C	ASTM D2136 1/8 in mandrel, 4 hr.
Puncture Resistance	50 lbf typical	225 N typical	ASTM D4833
Dead Load	2 in seam, 4 hr, 1 in strip 100 lbf @ 70° F 50 lbf @ 160° F	5 cm seam, 4 hr, 2.5 cm strip 445 N @ 21° C 220 N @ 70° C	ASTM D751

UltraTech International, Inc. · 11542 Davis Creek Court, Jacksonville, Florida 32256 USA (800) 353-1611 · 1-904-292-1611 · spillcontainment.com

		Bench Top Tests Discharge Standards		Historical Sample Results			
Analyte	Units	Average Results	30 Day Avg	Daily Max	2023 Outfall Discharge	2023 Portal Discharge	
Arsenic, total recoverable	mg/L	ND	Report	-	0.001	-	
Cadmium, dissolved	mg/L	0.0004	0.00074	0.0022	0.000	0.00130525	
Cadmium, total	mg/L	ND	0.05	0.1	0.000	-	
Chromium, total recoverable	mg/L	ND	Report	-	ND	-	
Copper, dissolved	mg/L	0.0006	0.0125	Report	0.0008	0.00173	
Copper, total	mg/L	0.02	0.15	0.3	0.0012	-	
Cyanide, wad	mg/L	ND	-	0.0056	ND	-	
Iron, total recoverable	mg/L	0.3415	1.276	-	0.095	-	
Lead, dissolved	mg/L	0.0259	0.0026	0.1	0.001	0.0012525	
Lead, total	mg/L	0.0402	0.3	0.6	0.001	-	
Manganese, dissolved	mg/L	1.075	2.067	4.127	0.094	1.5395	
Mercury, total	mg/L	ND	0.001	0.002	ND	-	
рН	mg/L	7.655	Report	-	7.661	7.375	
Silver, dissolved	mg/L	ND	0.00008	Report	ND	ND	
Zinc, dissolved	mg/L	0.1035	0.126	0.166	0.075	0.4535	
Zinc, total	mg/L	0.08	0.75	1.5	0.072	-	
Residue, Filterable (TDS) @180C	mg/L	290	Report	-	199.333	221	
Residue, Non-Filterable (TSS) @105C	mg/L	17.5	20	-	ND	ND	

Attachment D – Updated Water Quality Table

Attachment E – Colorado Analytical Water Quality Reports



Analytical Results

TASK NO: 240206006

Report To: CJ Dickerson Company: Thorin Resources, LLC 1900 Main St Unit 1 Ouray CO 81427 Bill To: CJ Dickerson Company: Thorin Resources, LLC 1900 Main St Unit 1 Ouray CO 81427

Task No.: 240206006 Client PO: Client Project: Revenue - Virginius

Customer Sample ID BTT 0001

Date Received: 2/6/24 Date Reported: 2/13/24 Matrix: Wastewater

oustomer oumpie ib	B11_0001						
Sample Date/Time:	2/5/24 12:25 PM						
Lab Number:	240206006-01						
Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Cyanide-Weak Acid Dissociable	ND mg/L	ASTM 2036-09C	0.005	0.0005	2/9/24	QC71174	DPL
рН	7.65 units	SM 4500-H-B	0.01	0.01	2/6/24	-	ARH
Total Suspended Solids	7 mg/L	SM 2540-D	5	2	2/6/24	QC71087	ISG
Potentially Dissolved							
Cadmium	0.0002 mg/L	EPA 200.8	0.0001	0.000006	2/8/24	QC71144	MBN
Copper	ND mg/L	EPA 200.8	0.0008	0.00001	2/8/24	QC71144	MBN
Lead	0.0214 mg/L	EPA 200.8	0.0001	0.000006	2/8/24	QC71144	MBN
Manganese	1.15 mg/L	EPA 200.8	0.0008	0.00001	2/8/24	QC71144	MBN
Silver	ND mg/L	EPA 200.8	0.0005	0.000003	2/8/24	QC71144	MBN
Zinc	0.005 mg/L	EPA 200.8	0.001	0.00003	2/8/24	QC71144	MBN
<u>Total</u>							
Mercury	ND mg/L	EPA 245.7	0.0002	0.00002	2/8/24	QC71183	MBN
Lead	0.0222 mg/L	EPA 200.8	0.0001	0.000006	2/8/24	QC71144	MBN
<u>Total Recoverable</u>							
Iron	0.033 mg/L	EPA 200.7	0.005	0.0005	2/8/24	QC71140	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level MDL = Method Detection Limit mg/L = Milligrams Per Liter or PPM ug/L = Micrograms Per Liter or PPB mpn/100 mls = Most Probable Number Index/ 100 mls Date Analyzed = Date Test Completed (d) RPD acceptable due to low duplicate and sample concentrations.

(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313 Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 Page 1 of 4



Company: Thorin Resources, LLC

Report To: CJ Dickerson

Analytical QC Summary

TASK NO: 240206006

Receive Date: 2/6/24 Project Name: Revenue - Virginius

Test	QC Batch ID	QC Type	Result		Method	Prep Date	
Cyanide-Weak Acid Dissociable	QC71174	Blank	ND		ASTM 2036-09C	2/9/24	
Mercury	QC71183	Method Blank	ND		EPA 245.7	2/8/24	
Cadmium	QC71144	Method Blank	ND		EPA 200.8	2/6/24	
Copper	QC71144	Method Blank	ND		EPA 200.8	2/6/24	
Lead	QC71144	Method Blank	ND		EPA 200.8	2/6/24	
Vanganese	QC71144	Method Blank	ND		EPA 200.8	2/6/24	
Silver	QC71144	Method Blank	ND		EPA 200.8	2/6/24	
Zinc	QC71144	Method Blank	ND		EPA 200.8	2/6/24	
ron	QC71140	Method Blank	ND		EPA 200.7	2/6/24	
Total Suspended Solids	QC71087	Blank	ND		SM 2540-D	2/6/24	
Fest	QC Batch ID	QC Type	Limits	% Rec	RPD	Method	
Cyanide-Weak Acid Dissociable	QC71174	Duplicate	0 - 20	-	18.2	ASTM 2036-09C	
		LCS	90 - 110	100.3	-		
		MS	75 - 125	84.5	-		
Mercury	QC71183	Duplicate	0 - 20	-	0.0	EPA 245.7	
-		LCS	90 - 110	105.4	-		
		MS	80 - 120	98.0	-		
Cadmium	QC71144	LCS	90 - 110	93.1	-	EPA 200.8	
		MS	70 - 130	101.7	-		
		MSD	0 - 10	-	2.4		
Copper	QC71144	LCS	90 - 110	95.4	-	EPA 200.8	
		MS	70 - 130	97.8	-		
		MSD	0 - 10	-	1.1		
Lead	QC71144	LCS	90 - 110	93.8	_	EPA 200.8	
		MS	70 - 130	94.5	-		
		MSD	0 - 10	-	2.4		
Manganese	QC71144	LCS	90 - 110	98.9		EPA 200.8	
nanganooo		MS	70 - 130	108.8	-	217120010	
		MSD	0 - 10	-	0.0		
Silver	QC71144	LCS	90 - 110	91.4	-	EPA 200.8	
	QUITIT	MS	70 - 130	98.0	-	ET A 200.0	
		MSD	0 - 10		2.7		
Zinc	QC71144	LCS	90 - 110	100.1	-	EPA 200.8	
	QU/1144	MS	90 - 110 70 - 130	100.1	-	LI A 200.0	
		MSD	0 - 10		- 2.8		
	0071140			-		EPA 200.7	
Iron	QC71140	Duplicate	0 - 20		0.0	EPA 200.7	
		LCS	90 - 110 75 - 125	100.3	-		
Tatal Quere ende d.Q. II.	007/007	MS	75 - 125	90.9	-	014 05 40 5	
Total Suspended Solids	QC71087	Duplicate	0 - 10	-	2.1	SM 2540-D	
		LCS	90 - 110	102.3	-		

Abbreviations/ References:

- RL = Reporting Limit = Minimum Level
- MDL = Method Detection Limit mg/L = Milligrams Per Liter or PPM
- ug/L = Micrograms Per Liter or PPB

mpn/100 mls = Most Probable Number Index/ 100 mls

Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.

(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313 Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 Page 2 of 4

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.

DATA APPROVED FOR RELEASE BY

Abbreviations/ References:

RL = Reporting Limit = Minimum Level MDL = Method Detection Limit mg/L = Milligrams Per Liter or PPM ug/L = Micrograms Per Liter or PPB mpn/100 mls = Most Probable Number Index/ 100 mls Date Analyzed = Date Test Completed (d) RPD acceptable due to low duplicate and sample concentrations.
 (s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313 Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 Page 3 of 4

Chain of Custody Form

									Col					
Report To Information	Bill To Information (If different	from rep	ort to)		Proje	et Name	/ Numbe	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1					~	
Company Name: Thorm Resources	Company Name: Thorin	Res	our	<u>es</u>										
Contact Name: CJ Dickerson	Contact Name: <u>C5D</u> ic	ters	0/							10	<u>ommerc</u>)411 Hei	inz Wa	ay	
Address: 1900 Main St Unit 1 City Ourcup State CO Zip 81927	Address:					Number Jse Only					ommerc akewooc	•		
City Ourcup State Co Zip 81427	City State	Zip				_	ì			61	l0 Garri akewood	son St	treet,	Unit E
Phone: (970) 316 -2294 Email: Cidiclerione tharin restances.	Phone:	· · · · · · · · · · · · · · · · · · ·				CAL 1					hone: 30			
Email: cjdichzersone fhorin resources.	Email:				2	40206	5006							
Sample Collector: (JDickerson	_					RMB				w	<u>ww.colo</u>	<u>radol</u> a	ab.co	<u>m</u>
Sample Collector Phone: (602) 793-1321	PO No.:		<u>.</u>			·								
		1						Tes	ts Rec	queste	d			
Sample Matrix (Select On	e Only)	ý.		\$				T		<u> </u>				
Waste Water 🔀 🛛 Soil 🗌	Drinking Water 🗌	ers												
Ground Water 🗌 Sludge 🗋		ntain		Clie										
Surface Water 🗌		f Coi		neck oosite										
Date Time Sam		No. of Containers	Grab	Composite										
	ple ID	3		<u>, </u>		-			+			+		
215 12:25 BTT-0001		- 3			$\left - \right $				\vdash			+		
	<u> </u>				+ $+$				+					
									├ ───┼					
									\vdash			+		
		i		·	┼┼-					_	+ -	+		
	-1	;	+ -		↓	-					<u> </u>			
* rests based on	history (2)		_		_					_			<u> </u>	
and battles	red.	1	_											
Instructions: No return bottles requested	for this order C/S Info):		_				Seals Pr	esent Ye	s 🗌 No [
	Deliver		UPS		<u> </u>		Charge 🗖	Temp.	$\mathcal{C}_{\mathcal{C}}$	Ice	<u>/ Sample</u>	Pres. Ye Date		No 🔲
Relinquished By: Date/Time: Received	· · · · ·	1 1	uished	By:		Date/	Time:	Recei	ived By	y:	(Date	/Tinho	تر ا
	MINO DI 10Pa	e 4 of	4									L		

⁰¹⁵

1673 Terra Avenue Sheridan, WY 82801

ph: (307) 672-8945

Date: 4/11/2024

CASE NARRATIVE

CLIENT:Disa Technologies Inc.Project:Disa Total Metals + RadsLab Order:S2403158

Pace Analytical

Report ID: S2403158001

Entire Report Reviewed by:

Junion Callan

Jessica Gillan, Project Manager

Samples Process Water 1 and Process Water 2 were received on March 12, 2024.

All samples were received and analyzed within recommended holding times, except those noted below in this case narrative. Samples were analyzed using methods outlined in the following references:

Standard Methods for the Examination of Water and Wastewater, approved method versions EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, online versions EPA methods 40 CFR Parts 136 and 141EPA 600/2-78-054 methods NDEP Mining Methods 40 CFR Part 50, Appendices B, J, L, O and FEM EQL-0310-189 IO Compendium Methods Clean Water Act Methods Update Rule for the Analysis of Effluent, current version. ASTM approved and recognized standards ISO approved and recognized standards USDA Handbook 60 Soil Survey Laboratory Manual Ver 4.0 ASA/SSSA 9 Methods of Analysis Part 2, 1982 ASA/SSSA Methods of Analysis Book 5 Part 3, 1996 Other industry approved methods

All Quality Control parameters met the acceptance criteria defined by EPA and Pace Analytical except as indicated in this case narrative:

Material exported over a 3 year period. Updated permit from County At



1673 Terra Avenue Sheridan, WY 82801

ph: (307) 672-8945

Date: 4/11/2024

Definitions

RL **Reporting Limit**

Qualifiers

- * Value exceeds Maximum Contaminant Level
- A Check MSA specifications
- В Analyte detected in the associated Method Blank
- С Calculated Value
- D Report limit raised due to dilution
- Е Value above quantitation range
- G Analyzed at Pace Gillette, WY laboratory
- Н Holding times for preparation or analysis exceeded
- Analyte detected below quantitation limits J
- Analyzed by another laboratory L
- Μ Value exceeds Monthly Ave or MCL or is less than LCL
- Ν Sample analyzed outside of compliance requirements
- ND Not Detected at the Reporting Limit
- 0 Outside the Range of Dilutions
- Р Sample preserved in lab at time of receipt
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte below method detection limit
- Х Matrix Effect

1673 Terra Avenue Sheridan, WY 82801

ph: (307) 672-8945

Company:	Disa Technologies Inc 11005 N Dover St. Sui Westminster, CO 8002	te 500				e Reported ort ID	4/11/2024 S2403158001	
ProjectName: Lab ID: ClientSample ID: COC: PWS ID:	Disa Total Metals + F S2403158-001 Process Water 2	Rads			Coll Date	Received: dSampler:	S2403158 2/29/2024 10:00:00 AM 3/12/2024 10:38:00 AM Water	
Comments					wati	IX.	Water	
Analyses		Result	Units	Qual	RL	Method	Date Analyzed	/Init
Metals - Total								
Arsenic		ND	mg/L		0.005	EPA 200.8	03/15/2024 518	1
Barium		0.049	mg/L		0.005	EPA 200.8	03/15/2024 518	ľ
Cadmium		ND	mg/L		0.002	EPA 200.8	03/15/2024 518	ľ

Sample Analysis Report

Cadmium	ND	mg/L	0.002	EPA 200.8	03/15/2024 518	MS
Chromium	ND	mg/L	0.01	EPA 200.7	03/19/2024 1344	DG
Copper	0.02	mg/L	0.01	EPA 200.8	03/15/2024 518	MS
Lead	0.068	mg/L	0.001	EPA 200.8	03/15/2024 518	MS
Mercury	ND	mg/L	0.001	EPA 245.1	03/19/2024 1505	JGU
Molybdenum	ND	mg/L	0.02	EPA 200.8	03/15/2024 518	MS
Nickel	ND	mg/L	0.01	EPA 200.7	03/19/2024 1344	DG
Selenium	ND	mg/L	0.005	EPA 200.8	03/15/2024 518	MS
Silver	ND	mg/L	0.003	EPA 200.8	03/15/2024 518	MS
Thorium	ND	mg/L	0.05	EPA 200.7	03/19/2024 1344	DG
Uranium	0.0005	mg/L	0.0003	EPA 200.8	03/15/2024 518	MS
Zinc	0.08	mg/L	0.02	EPA 200.7	03/19/2024 1344	DG

MS MS

1673 Terra Avenue Sheridan, WY 82801

ph: (307) 672-8945

		Sample	Analysis Re	port					
Company:	11005 N Dover St. Suite 500 Westminster, CO 80021 tName: Disa Total Metals + Rads : S2403158-002 Sample ID: Process Water 1					te Reported port ID	4/11/2024 S2403158001		
ProjectName: Lab ID: ClientSample ID: COC: PWS ID: Comments					WorkOrder: CollectionDate: DateReceived: FieldSampler: Matrix:		S2403158 2/29/2024 10:02:00 AM 3/12/2024 10:38:00 AM Water		
Analyses		Result	Units	Qual	RL	Metho	b	Date Analyzed/I	nit
Radionuclides - Dis	ssolved								
Radium 226		ND	pCi/L		0.2	SM 7500 Ra	-В	04/09/2024 1555	WN
Radium 226 Precision	n (±)	NA	pCi/L			SM 7500 Ra	-В	04/09/2024 1555	WN
Radium 228		ND	pCi/L		1	Ga-Tech		04/05/2024 2026	WN
Radium 228 Precisio	n (±)	NA	pCi/L			Ga-Tech		04/05/2024 2026	WN
Thorium 228		ND	pCi/L		0.2	ACW10		03/21/2024 1537	AEF
Thorium 228 (Dissolv	ed) Precision (±)	NA	pCi/L			ACW10		03/21/2024 1537	AEF
Thorium 230		ND	pCi/L		0.2	ACW10		03/21/2024 1537	AEF
Thorium 230 Precisio	n (±)	NA	pCi/L			ACW10		03/21/2024 1537	AEF
Thorium 232		ND	pCi/L		0.2	ACW10		03/21/2024 1537	AEF
Thorium 232 (Dissolv	ed) Precision (±)	NA	pCi/L			ACW10		03/21/2024 1537	AEF
Thorium 229 Tracer (30-120)	88	%			ACW10		03/21/2024 1537	AEF

Material exported over a 3 year period. Updated permit from County Att

These results apply only to the samples tested.

1673 Terra Avenue Sheridan, WY 82801

ph: (307) 672-8945

LIENT: ork Orde	Disa Technologies Inc. sr: S2403158				1/11/2024		
roject:	Disa Total Metals + Rads			Report ID: S	5240315	8001	
-	m 228 by Ga/Tech	Sample Type MBLK		Units: pCi/L			
	MB-799 (04/04/24 14:02)	RunNo: 219819	Prep	Date: 03/19/24 0:00	Bato	hID: 21724	
	Analyte	Result	RL	Spike Ref Samp	%REC	% Rec Limits	Qual
	Radium 228 (Dissolved)	ND	1				
Radiu	m 228 by Ga/Tech	Sample Type LCS		Units: pCi/L			
	LCS-799 (04/04/24 17:05)	RunNo: 219819	Prep	Date: 03/19/24 0:00	Bato	hID: 21724	
	Analyte	Result	RL	Spike Ref Samp	%REC	% Rec Limits	Qual
	Radium 228 (Dissolved)	16	1	21.4	75.2	57 - 142	
Radiu	m 228 by Ga/Tech	Sample Type MS		Units: pCi/L			
	MS-799 (04/04/24 23:10)	RunNo: 219819	Prep	Date: 03/19/24 0:00	Bato	hID: 21724	
	Analyte	Result	RL	Spike Ref Samp	%REC	% Rec Limits	Qual
·	Radium 228 (Dissolved)	17	1	21.4 ND	79.5	62 - 137	
Radiu	m 228 by Ga/Tech	Sample Type MSD		Units: pCi/L			
	MSD-799 (04/05/24 02:12)	RunNo: 219819	Prep	Date: 03/19/24 0:00	Bato	hID: 21724	
	Analyte	Result	RL	Conc %RPD	%REC	% RPD Limits	Qual
	Radium 228 (Dissolved)	17	1	17 0.955	78.7	20	
Radiu	m 226 in Water - Dissolved	Sample Type MBLK		Units: pCi/L			
	MB-2610 (04/09/24 15:55)	RunNo: 219873	Prep	Date: 04/01/24 0:00	Bato	hID: 21719	
	Analyte	Result	RL	Spike Ref Samp	%REC	% Rec Limits	Qual
	Radium 226 (Dissolved)	ND	0.2				
Radiu	m 226 in Water - Dissolved	Sample Type LCS		Units: pCi/L			
	LCS-2610 (04/09/24 15:55)	RunNo: 219873	Prep	Date: 04/01/24 0:00	Bato	hID: 21719	
	Analyte	Result	RL	Spike Ref Samp	%REC	% Rec Limits	Qual
	Radium 226 (Dissolved)	7.3	0.2	7.74	93.6	78 - 117	
Radiu	m 226 in Water - Dissolved	Sample Type MS		Units: pCi/L			
	MS-2610 (04/09/24 15:55)	RunNo: 219873	Prep	Date: 04/01/24 0:00	Bato	hID: 21719	
	Analyte	Result	RL	Spike Ref Samp	%REC	% Rec Limits	Qual
	Radium 226 (Dissolved)	8.2	0.2	7.74 ND	106	66.8 - 130	
Radiu	m 226 in Water - Dissolved	Sample Type MSD		Units: pCi/L			
	MSD-2610 (04/09/24 15:55)	RunNo: 219873	Prep	Date: 04/01/24 0:00	Bato	hID: 21719	
	Analyte	Result	RL	Conc %RPD	%REC	% RPD Limits	Qual
	Radium 226 (Dissolved)	7.8	0.2	8.2 4.78	101	20	

1673 Terra Avenue Sheridan, WY 82801

ph: (307) 672-8945

CLIENT:	Disa Technologies Inc.				Date: 4	/11/2024	4	
Work Orde	r: S2403158			Re	port ID: S	5240315	8001	
Project:	Disa Total Metals + Rads				•			
Thoriu	m 230 in Water - Dissolved	Sample Type MBLK		Units	: pCi/L			
	MB-957 (03/21/24 15:37)	RunNo: 219399						
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
-	Thorium 228 (Dissolved)	ND	0.2					
	Thorium 230 (Dissolved)	ND	0.2					
	Thorium 232 (Dissolved)	ND	0.2					
Thoriu	m 230 in Water - Dissolved	Sample Type LCS		Units	: pCi/L			
	LCS-957 (03/21/24 15:37)	RunNo: 219399						
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
-	Thorium 230 (Dissolved)	12	0.2	12		98.1	75 - 139	
Ĩ	LCS-TH232-957 (03/21/24 15:37)	RunNo: 219399						
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
-	Thorium 228 (Dissolved)	11	0.2	11		96.9	50 - 150	
	Thorium 232 (Dissolved)	11	0.2	11		96.0	50 - 150	
Thoriu	m 230 in Water - Dissolved	Sample Type LCSD		Units	pCi/L			
	LCSD-957 (03/21/24 15:37)	RunNo: 219399						
	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
-	Thorium 230 (Dissolved)	14	0.2	12	9.76	108	20	
Total M	lercury by EPA 245.1 - Water	Sample Type MBLK		Units	: mg/L			
Ĩ	MB (03/19/24 15:03)	RunNo: 219278						
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
-	Mercury	ND	0.001					
Ĩ	MB (03/19/24 15:29)	RunNo: 219278						
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Mercury	ND	0.001					
	MB (03/19/24 16:33)	RunNo: 219278						
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
-	Mercury	ND	0.001					
Ι	MB (03/19/24 17:35)	RunNo: 219278						
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Mercury Material	exported over a 3 year per Sample Type LCS	~i@610,10,		cermit fror	m Coun	ty	
l otal l	LCS (03/19/24 15:01)	RunNo: 219278		onito	. mg/L			
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
<u> </u>	,				. tor outlip			Q
Т	Mercury	0.005	0.001	0.005		93.4	85 - 115	
	LCS (03/19/24 15:27)	RunNo: 219278		0. "	D.(C	0/ 050	0/ D	
	Analyte	Result	RL	•	Ref Samp	%REC	% Rec Limits	Qual
T	Mercury	0.005	0.001	0.005		97.2	85 - 115	
	LCS (03/19/24 16:31)	RunNo: 219278						
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Mercury	0.005	0.001	0.005		98.0	85 - 115	

1673 Terra Avenue Sheridan, WY 82801

ph: (307) 672-8945

IENT:	Disa Technologies Inc.				Date: 4	/11/2024	4	
ork Order	: S2403158			Re	port ID: S	240315	8001	
oject:	Disa Total Metals + Rads					240010	0001	
Total M	ercury by EPA 245.1 - Water	Sample Type LCS		Units	: mg/L			
Г	LCS (03/19/24 17:32)	RunNo: 219278						
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
L	Mercury	0.005	0.001	0.005		94.6	85 - 115	
Total M	ercury by EPA 245.1 - Water	Sample Type MS	0.001		: mg/L	04.0	00 110	
г	S2403158-001AS (03/19/24 15:10)	RunNo: 219278			5			
ľ	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
L	Mercury	0.005	0.001	0.005	ND	95.5	70 - 130	
Total M	ercury by EPA 245.1 - Water	Sample Type MSD	0.001		: mg/L	95.5	70 - 130	
г	S2403158-001ASD (03/19/24 15:12)	RunNo: 219278		Onito	. mg/L			
ľ	Analyte	Ruino. 219276 Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
L								Quui
	Mercury	0.005	0.001	0.005	0.973	94.5	20	
Г	ercury by EPA 245.1 - Water	Sample Type DUP		Units	: mg/L			
Ś	S2403158-001AD (03/19/24 15:08)	RunNo: 219278						0
L	Analyte	Result	RL	Ref Sam	p %RPD	%REC	% RPD Limits	Qual
	Mercury	ND	0.001	ND			20	
Total (2	00.2) Metals by EPA 200.7 ICP - Water	Sample Type MBLK			: mg/L			
I I	MB-21661 (03/19/24 13:33)	RunNo: 219257	•	Date: 03/1			hID: 21661	
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Chromium	ND	0.01					
	Nickel	ND	0.01					
	Thorium	ND	0.05					
г	Zinc	ND	0.02					
ľ	MB-21661 (03/19/24 15:57)	RunNo: 219257	•	Date: 03/1			hID: 21661	• •
L	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Chromium	ND	0.01					
	Nickel	ND	0.01					
	Thorium	ND	0.05					
Total (2	Zinc 00.2) Metals by EPA 200.7 ICP - Water	ND Sample Type LCS	0.02	Unite	: mg/L			
i i i i i i i i i i i i i i i i i i i			During		-	Dete		
¹	LCS-21661 (03/19/24 13:35) Analyte	RunNo: 219257 Result	Prep RL	Date: 03/1	4/24 9:42 Ref Samp		hID: 21661 % Rec Limits	Qual
	Analyte			•	Kei Sainp			Quai
	Chromium	0.20	0.01	0.2		101	85 - 115	
	Nickel	0.53	0.01	0.5		105	85 - 115	
Б	Zinc	0.21	0.02	0.2		105	85 - 115	
	LCS-21661 (03/19/24 13:38)	RunNo: 219257		Date: 03/1			hID: 21661 % Pool imite	Qual
L	Analyte	Result	RL		Ref Samp		% Rec Limits	Qual
-	Thorium	0.19	0.05	0.2		92.9	85 - 115	
l	LCS-21661 (03/19/24 16:00)	RunNo: 219257	Prep	Date: 03/1	4/24 9:42		hID: 21661	
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Chromium	0.20	0.01	0.2		98.0	85 - 115	
	Nickel	0.51	0.01	0.5		102	05 445	
	INICKEI	0.51	0.01	0.5		102	85 - 115	

1673 Terra Avenue Sheridan, WY 82801

ph: (307) 672-8945

CLIENT:	Disa Technologies Inc.				Date: 4	/11/2024	1	
Work Orde	er: S2403158			Re	port ID: S	240315	8001	
Project:	Disa Total Metals + Rads							
Total (200.2) Metals by EPA 200.7 ICP - Water	Sample Type LCS		Units	mg/L			
	LCS-21661 (03/19/24 16:02)	RunNo: 219257	PrepD	Date: 03/1	4/24 9:42	Bato	hID: 21661	
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
1	Thorium	0.19	0.05	0.2		92.4	85 - 115	
Total (200.2) Metals by EPA 200.7 ICP - Water	Sample Type MS		Units	mg/L			
	S2403158-001AS (03/19/24 13:47)	RunNo: 219257	PrepD	Date: 03/1	4/24 8:00	Bato	hID: 21661	
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
1	Thorium	0.20	0.05	0.2	ND	97.3	70 - 130	
	S2403166-002DS (03/19/24 14:46)	RunNo: 219257	' PrepD	Date: 03/1	4/24 8:00	Bato	hID: 21661	
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
1	Chromium	0.21	0.01	0.2	ND	103	70 - 130	
	Nickel	0.53	0.01	0.5	ND	106	70 - 130	
т	Zinc	0.22	0.02	0.2	ND	112	70 - 130	
	S2403178-002DS (03/19/24 15:44)	RunNo: 219257	PrepE	Date: 03/1	4/24 8:00	Bato	hID: 21661	
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Chromium	0.20	0.01	0.2	ND	97.6	70 - 130	
	Nickel	0.513	0.002	0.5	ND	103	70 - 130	
т	Zinc	0.205	0.009	0.2	ND	102	70 - 130	
	S2403183-002CS (03/19/24 16:13)	RunNo: 219257	PrepD	Date: 03/1/			hID: 21661	
	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Chromium	0.21	0.01	0.2	ND	104	70 - 130	
	Nickel	0.54	0.01	0.5	ND	107	70 - 130	
	Zinc	0.22	0.02	0.2	ND	110	70 - 130	
Total (200.2) Metals by EPA 200.7 ICP - Water	Sample Type MSD			mg/L			
	S2403158-001AMSD (03/19/24 13:49)	RunNo: 219257		Date: 03/1			hID: 21661	Qual
	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
т	Thorium	0.21	0.05	0.20	6.15	103	20	
	S2403166-002DMSD (03/19/24 14:48)	RunNo: 219257	•				hID: 21661	
	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
	Chromium	0.21	0.01	0.21	0.979	104	20	
	Nickel	0.54	0.01	0.53	1.43	108	20	
т	Zinc	0.23	0.02	0.22	1.23	113	20	
	S2403178-002DMSD (03/19/24 15:46)	RunNo: 219257	•	Date: 03/1			hID: 21661	
	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
	Chromium	0.20	0.01	0.20	0.160	97.4	20	
	Nickel	0.509	0.002	0.513	0.701	102	20	
т	Zinc	0.203	0.009	0.205	0.711	102	20	
	S2403183-002CMSD (03/19/24 16:15)	RunNo: 219257	•	Date: 03/1			hID: 21661	. ·
	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
	Chromium	0.21	0.01	0.21	1.37	103	20	
	Nickel	0.53	0.01	0.54	0.258	107	20	
	Zinc	0.22	0.02	0.22	0.894	109	20	

1673 Terra Avenue Sheridan, WY 82801

ph: (307) 672-8945

				-					
INT:	Disa Technologies Inc.					Date: 4	l/11/202	4	
k Orde	r: S2403158				Re	port ID: S	3240315	8001	
ect:	Disa Total Metals + Rads								
Total (2	200.2) Metals by EPA 200.7 ICP - Water	Sample Type DUP			Units:	mg/L			
Γ	S2403178-001DD (03/19/24 15:40)	RunNo	219257	Prep	Date: 03/14	/24 8:00	Bato	hID: 21661	
	Analyte	Re	esult	RL .	Ref Samp		%REC	% RPD Limits	Qu
ļ	Nieles I			0.000					
	Nickel Zinc			0.002 0.009	ND ND			20 20	
Total (Sample Type MBL		0.009	Units:	ma/l		20	
	200.2) Metals by EPA 200.8 - Water								
	MB-21661 (03/15/24 05:00)		219179		Date: 03/14			hID: 21661	0
Į	Analyte	Re	esult	RL	Spike	Ref Samp	%REC	% Rec Limits	Qu
	Arsenic	1	١D	0.005					
	Barium	1	١D	0.005					
	Cadmium	1	١D	0.002					
	Copper	1	1D	0.01					
	Lead			0.001					
	Molybdenum		1D	0.02					
	Selenium			0.005					
	Silver			0.003					
	Uranium		ND (0.0003					
Total (2	200.2) Metals by EPA 200.8 - Water	Sample Type LCS			Units:	mg/L			
	LCS-21661 (03/15/24 05:12)	RunNo	219179	•	Date: 03/14			hID: 21661	
	Analyte	Re	esult	RL	Spike	Ref Samp	%REC	% Rec Limits	Qu
-	Arsenic	0.	204	0.005	0.2		102	85 - 115	
	Barium	0.	206	0.005	0.2		103	85 - 115	
	Cadmium	0.	210	0.002	0.2		105	85 - 115	
	Copper	0	.22	0.01	0.2		109	85 - 115	
	Lead	0.	208	0.001	0.2		104	85 - 115	
	Molybdenum		.20	0.02	0.2		100	85 - 115	
	Selenium			0.005	0.4		98.6	85 - 115	
	Silver			0.003	0.1		104	85 - 115	
	Uranium		210	0.0003	0.2		105	85 - 115	
Total (2	200.2) Metals by EPA 200.8 - Water	Sample Type MS			Units:				
	S2403178-002DS (03/15/24 05:42)	RunNo	219179	Prep	Date: 03/14	/24 8:00	Bato	hID: 21661	
	Analyte	Re	esult	RL	Spike	Ref Samp	%REC	% Rec Limits	Qu
-	Arsenic	0.	202	0.001	0.2	ND	101	70 - 130	
	Barium			0.005	0.2	ND	103	70 - 130	
	Cadmium			0.0005	0.2	ND	106	70 - 130	
	Copper	0.	216	0.002	0.2	ND	108	70 - 130	
	Lead			0.0003	0.2	ND	97.1	70 - 130	
	Molybdenum	0	.20	0.02	0.2	ND	101	70 - 130	
	Selenium	0.	394	0.001	0.4	ND	98.5	70 - 130	
	Silver	0.	104	0.003	0.1	ND	104	70 - 130	
	Uranium	0.	212	0.001	0.2	ND	106	70 - 130	
		Sample Type MSD			Units:	mg/L			
Total (2	200.2) Metals by EPA 200.8 - Water								
Total (200.2) Metals by EPA 200.8 - Water S2403178-002DMSD (03/15/24 06:00)		219179	Prep	Date: 03/14	/24 8:00	Bato	hID: 21661	
Total (RunNo	219179 esult	Prep[RL	Date: 03/14 Conc	/24 8:00 %RPD	Bato %REC	hID: 21661 % RPD Limits	Qı
Total (/	S2403178-002DMSD (03/15/24 06:00) Analyte	RunNo Re	esult	RL	Conc	%RPD	%REC	% RPD Limits	Qu
Total (S2403178-002DMSD (03/15/24 06:00)	RunNo Re 0.	esult 202						Qu

1673 Terra Avenue Sheridan, WY 82801

ph: (307) 672-8945

ANALYTICAL QC SUMMARY REPORT

CLIENT: Disa Technologies Inc. Date: 4/11/2024 Work Order: S2403158 Report ID: S2403158001 Project: Disa Total Metals + Rads Total (200.2) Metals by EPA 200.8 - Water Sample Type MSD Units: mg/L S2403178-002DMSD (03/15/24 06:00) RunNo: 219179 PrepDate: 03/14/24 8:00 BatchID: 21661 RL %RPD %REC % RPD Limits Analyte Result Conc Qual Copper 0.216 0.002 0.216 0.184 108 20 Lead 0.199 0.0003 0.194 2.48 99.5 20 20 Molybdenum 0.19 0.02 0.20 3.65 96.9 Selenium 0.397 0.001 0.394 0.694 99.2 20 Silver 0.003 20 0.103 0.104 1.88 103 Uranium 0.194 0.001 0.212 9.01 97.0 20 Total (200.2) Metals by EPA 200.8 - Water Sample Type DUP Units: mg/L S2403178-001DD (03/15/24 05:30) RunNo: 219179 PrepDate: 03/14/24 8:00 BatchID: 21661 Analyte Result RL Ref Samp %RPD %REC % RPD Limits Qual Arsenic ND 0.001 ND 20 Cadmium ND 0.0005 ND 20 20 Copper ND 0.002 ND Lead ND 0.0003 ND 20 Selenium ND 0.001 ND 20

Pace [•]	Pace [®] Location Reque 1673 Terra Avenue Sheridan WY 82801	sted (City/Sta	te):		CHAIN-OF-			al Reques			t		079		LAB U	SEONLI	/- Affix Wo	rkorder/Lo	ogin Label Here
	307-672-8945											4		37-18 1					
	Disa Technologies, Inc				Contact/Report 1				96 1 · · · · · · · · · · · · · · · · ·				62	07-00	ġ				
	11005 N Dover st. suite westminster, co 80021	500			Phone #:	720-239							4	÷.6					
	westimister, to boozi				E-Mail:	laurel@	disausa.com	e na meno na meno e de avantese		STATISTICS.					2	Scan Q	R Code for	r instructi	ons
		1. M			Cc E-Mail:														
ustomer Project #:	24001	1994 (1971-1994) - N. 1995) - N												Sp	ecify Cont	ainer Size	** ,		**Container Size: (1) 1L, (2) 500mL, (3) 250
roject Name:	Thorin Resources				Invoice To:	John lee	9					1	3						 125mi, (5) 100mi, (6) 40mi, vial, (7) EnCore TerraCore, (9) 90mi, (10) Other
					Invoice E-Mail:	john@d	isausa.com							Identify C	ontainer P	eservativ	e Type***		*** Preservative Types: (1) None, (2) HNO3
ite Collection Info/Fi	acility ID (as applicable):				Purchase Order # applicable):	l (if						1	2		Analysis R				H2SO4, (4) HCl. (5) NaOH, (6) Zn Acetate, (7 NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic A
					Quote #:							<u> </u>		1		l	<u> </u>		MeOH, (11) Other
ime Zone Collected:	:[]AK []PT [x		r (16	т	County / State or	igin of sample	s): Colo	rado				-							Proj. Mgr.
ata Deliverables:	- 1 //// 1 /// 1 //				tc.) as applicable:	-	ole []Yes					4							AcctNum / Client ID:
			a ,	,, .															Accinium / Cliencio;
[]Level II []L	level III [] Level IV		Rus	h (Pre-ap	oproval required	i):	DW PV	SID # or WW P	ermit # as	applicab	le:	1				1			5 Table #:
		[]5 Day [] 1 Day [] 2 Day [] 3 Day [] Oth	er	_												Os and an
[] Other		Date Results Requested:					Analysis:	(if applicable):											S Profile / Template:
	rt in Matrix box below): Drir						P), Soil/Solid (S	5), Oil (OL), Wipe	e (WP), Th	ssue (TS),	, Bioassay	clides	lals						Preiog / Bottle Ord. ID:
3), Vapor (V), Surface	e Water (SW),Sediment (SE	D), Sludge (SL), Ca	iulk (CK), L	1	1							rci,	metals						
Ci	ustomer Sample ID		Matrix *	Comp / Grab	Composi	7		Composite Enc			hlorine	raidonuc	RCRA						Sample Comment
					Date	Time	Date	Time	Cont.	Results	Units	ē	<u> </u>						
Process water 1	1		ww	grab	2/29/2024	10:00				ļ	ļ	x							5740518 52903150
Process water 2	2		ww	grab	2/29/2024	10:02							x						
			1			1	1				1								
						1					1								
			1		<u> </u>				-					<u></u>					
			1																
			1																
	· · · · · · · · · · · · · · · · · · ·	2	1									$\left \right $			<u>.</u>				
			1							 		┞──┨				<u> </u>			
u de la companya Na companya de la c	al de la del	ана стана стана Изволят стана ст										$\left \right $							A Strange
dditional instruction	ns from Pace®:		1	1		Collected By: (Printed Nam		chael	Dunc	e l m		Custor	er Rema	arks / Spec	ial Conditi	ons / Poss	ible Hazards:		<u>I </u>
						Signature:	m. L.	1 h	E	0111		# Coo	lers:	Therm	ometer ID:	Co	rrection Factor	(°C): Ob	s. Temp. ("C) Corrected Temp. ("C)
						<u> </u>	inum	n XM				1			(T1				15.0
Ninquished building	(Signatura)			Date Time						~		<u>_</u>		Uate.	Time:			Tracid	ng Number:
stinguished by/dompan	: (Signature)	·····		Date/Time 3		12151	4		l	an	<u> </u>	SIM	P			2/14	1038	•	
	-			Date/Time 2 Date/Time		12151	4	ipany: (Signature)	l	an	<u>) </u>	<u> </u>	P		3/1 /Time:	7/14	1038	•	ared by: [] In- Person [] Courier
etinquished by/Company etinquished by/Company etinquished by/Company	-			3	:	12151	Received by/Con			an.	<u>×(</u>	<u> </u>	A	Date		2/14	(038	•	

۲۲	Sweep	٥þ

Pace Analytical[®]_____Pace Analytical

1673 Terra Avenue Sheridan, WY 82801

ph: (307) 672-8945

Quotation for Analytical Services

Prepared for:	Disa Technologies, INC Laurel Naser			<u>Submitted By:</u> Ian Scofield
	11005 N Dover St.		QuoteID:	3938
	Westminster, CO 82604 Phone: (720) 239-2463	Fax:	TAT:	35 Days
Draigat: Diag		T UX.	Expires:	5/19/2024

Project: Disa Total Metals + Rads

Parameter	Reporting Limit	Units	Method		er Sample ounted Price
Total (200.2) Metals by EPA 200.7 ICP - Water					\$44.00
Chromium	0.01	mg/L	EPA 200.7		• • • • • •
Nickel	0.01	mg/L	EPA 200.7		
Thorium	0.05	mg/L	EPA 200.7		
Zinc	0.02	mg/L	EPA 200.7		
Total (200.2) Metals by EPA 200.8 - Water		-			\$108.00
Arsenic	0.005	mg/L	EPA 200.8		
Barium	0.005	mg/L	EPA 200.8		
Cadmium	0.002	mg/L	EPA 200.8		
Copper	0.01	mg/L	EPA 200.8		
Lead	0.001	mg/L	EPA 200.8		
Molybdenum	0.02	mg/L	EPA 200.8		
Selenium	0.005	mg/L	EPA 200.8		
Silver	0.003	mg/L	EPA 200.8		
Uranium	0.0003	mg/L	EPA 200.8		
Total Mercury by EPA 245.1 - Water		-			\$30.80
Mercury	0.001	mg/L	EPA 245.1		-
200.2 Total Metals in Water - PREP					\$14.90
200.2 Total Metals in Water - PREP			Prep		
Radium 226 in Water - Dissolved					\$130.00
Radium 226 (Dissolved)	0.2	pCi/L	SM 7500 Ra-B		
Radium 228 by Ga/Tech					\$130.00
Radium 228 (Dissolved)	1	pCi/L	Ga-Tech		
Thorium 230 in Water - Dissolved					\$275.40
Thorium 228 (Dissolved)	0.2	pCi/L	ACW10		
Thorium 229 Tracer	-999	pCi/L	ACW10		
Thorium 230 (Dissolved)	0.2	pCi/L	ACW10		
Thorium 232 (Dissolved)	0.2	pCi/L	ACW10		
Radium 226 in Water - Prep					\$6.40
Radium 226 in Water - Prep			Prep		
Radium 226/228 Ga Tech Prep			·		\$6.40
Radium 226/228 Ga Tech Prep			Prep		
Misc Comments:				Total (List):	\$745.90
				Discount:	0%

NOTE: \$30.00 Environmental Impact Fee

\$7.00 Sample Disposal Fee per Sample

\$100.00 Minimum Order Fee

\$745.90

Discounted Price:

				Surve	y Meter #	Model 2241-2; SN 182119
						HC333774
						27130475
		Condition Upon	Receipt (At	tach to COC)	
<u>Sa</u>	mple Receipt	1				
1	Number of ice chests/pa Note as "OTC "	ckages received:	ROI? nter, unpackaged	Yes	(Ne)	
		amples. (If more than 8 coolers, c	obtain an additiona	al CUR form.)		
	Temps Observed (°C):			┢────┣─		
	Temps Corrected (°C):	for Bacteria; and 0.1° to 6°C for most	t other water parar	IL II neters. Samples m	av not have	had adequate time to cool
	•	ROI (Received on Ice) for iced sampl	•	•	•	•
	<u>Client conta</u>	ct for temperatures outside	method criter	ia must be do	cumente	d below.
3	Emission rate of samples	s for radiochemical analyses <	< 0.5mR/hr?	(Tes)	No	N/A
4	COC Number (If applical	ble):				
5	Do the number of bottles	agree with the COC?		Yes	No	NA
6	Were the samples receiv	ved intact? (no broken bottles, leak	ks, etc.)	(Yes)	No	N/A
7	Were the sample custod	y seals intact?		Yes	No	(N/A)
8	Is the COC properly com	pleted, legible, and signed?		Yes	No	
<u>Sa</u>	mple Verification, Label	ling & Distribution				
1	Were all requested analy	ses understood and appropria	ate?	Yes	No	
2	Did the bottle labels corr	espond with the COC information	tion?	Yes	No	
3	Samples collected in me	thod-prescribed containers?		Yes	No	
4	Sample Preservation:			\smile		
		inal pH (if added in lab):	Preservativ	/e/Lot#		Date/Time Added:
	pH at Receipt: F	inal pH (if added in lab): Total Metals	Preservativ HNO₃	/e/Lot#		Date/Time Added:
		,	HNO3	reserved in metals		Date/Time Added: ————————————————————————————————————
	- Total Metals	Total Metals	HNO ₃			
	Total Metals	Total Metals	HNO ₃ Filtered and pr H ₂ SO ₄	reserved in metals		
	Total Metals Diss Metals Nutrient	Total Metals Diss Metals Nutrient	HNO₃ Filtered and pr H₂SO₄ NaOH	reserved in metals		
	Total Metals Diss Metals Nutrient Cyanide	Total Metals Diss Metals Nutrient Cyanide	HNO ₃ Filtered and pr H₂SO₄ NaOH ZnAcet	reserved in metals		
	Total Metals Diss Metals Nutrient Cyanide Sulfide	Total Metals Diss Metals Nutrient Cyanide Sulfide	HNO ₃ Filtered and pr H₂SO₄ NaOH ZnAcet H₂SO₄	reserved in metals		
5	Total Metals Diss Metals Nutrient Cyanide Sulfide Phenol	Total Metals Total Metals Total Metals Total Metals Cyanide Sulfide Phenol SDWA Rads	HNO ₃ Filtered and pr H₂SO₄ NaOH ZnAcet H₂SO₄	reserved in metals	Νο	
	Total Metals Diss Metals Nutrient Cyanide Sulfide Phenol SDWA Rads VOA vials have <6mm h	Total Metals Total Metals Total Metals Total Metals Cyanide Sulfide Phenol SDWA Rads	HNO₃ Filtered and pr H₂SO₄ NaOH ZnAcet H₂SO₄ HNO₃	reserved in metals	No No	Filtered and preserved in metals
6	Total Metals Diss Metals Diss Metals Nutrient Cyanide Sulfide Phenol SDWA Rads VOA vials have <6mm h Were all analyses within	Total Metals Diss Metals Nutrient Cyanide Sulfide Phenol SDWA Rads eadspace?	HNO ₃ <i>Filtered and pr</i> H₂SO₄ NaOH ZnAcet H₂SO₄ HNO ₃ ceipt?	Yes		Filtered and preserved in metals
6 7	Total Metals Diss Metals Diss Metals Nutrient Cyanide Sulfide Phenol SDWA Rads VOA vials have <6mm h Were all analyses within	Total Metals Diss Metals Diss Metals Utrient Cyanide Sulfide Phenol SDWA Rads eadspace? holding time at the time of re dates been checked and accompare	HNO ₃ <i>Filtered and pr</i> H₂SO₄ NaOH ZnAcet H₂SO₄ HNO ₃ ceipt?	Yes	No	Filtered and preserved in metals
6 7	Total Metals Diss Metals Nutrient Cyanide Sulfide Phenol SDWA Rads VOA vials have <6mm h Were all analyses within Have rush or project due Do samples require subo	Total Metals Diss Metals Diss Metals Utrient Cyanide Sulfide Phenol SDWA Rads eadspace? holding time at the time of re dates been checked and accompare	HNO_3 Filtered and pr H_2SO_4 NaOH ZnAcet H_2SO_4 HNO_3 ceipt? epted?	Yes Yes Yes Yes Yes Yes	No No	Filtered and preserved in metals
6 7 8	Total Metals Diss Metals Nutrient Cyanide Sulfide Phenol SDWA Rads VOA vials have <6mm h Were all analyses within Have rush or project due Do samples require subo If "Yes", which type of su	Total Metals Diss Metals Diss Metals Cyanide Sulfide Sulfide SDWA Rads eadspace? holding time at the time of re dates been checked and accord contracted analyses?	HNO ₃ <i>Filtered and pr</i> H ₂ SO ₄ NaOH ZnAcet H ₂ SO ₄ HNO ₃ ceipt? epted? General	Yes Yes Yes Yes Customer-S	No No	Filtered and preserved in metals
6 7 8 Sa	Total Metals Diss Metals Nutrient Cyanide Sulfide Phenol SDWA Rads VOA vials have <6mm h Were all analyses within Have rush or project due Do samples require subo If "Yes", which type of su mple Receipt, Verification	Total Metals Diss Metals Diss Metals Utrient Cyanide Sulfide Phenol SDWA Rads eadspace? holding time at the time of re dates been checked and acce contracted analyses? ubcontracting is required?	HNO ₃ <i>Filtered and pr</i> H₂SO₄ NaOH ZnAcet H₂SO₄ HNO₃ ceipt? epted? General n completed by	Yes Yes Yes Yes Yes Customer-S y (initials) :	No No	Filtered and preserved in metals
6 7 8 Sa <u>Dis</u>	Total Metals Diss Metals Diss Metals Nutrient Cyanide Sulfide Phenol SDWA Rads VOA vials have <6mm h Were all analyses within Have rush or project due Do samples require subo If "Yes", which type of su mple Receipt, Verification	Total Metals Diss Metals Diss Metals Nutrient Cyanide Sulfide Phenol SDWA Rads eadspace? holding time at the time of re dates been checked and accor contracted analyses? <i>ibcontracting is required</i> ? h, Login, Labeling & Distributio	HNO ₃ Filtered and pr H ₂ SO ₄ NaOH ZnAcet H ₂ SO ₄ HNO ₃ ceipt? ceipt? cepted? General n completed by tes on discrept	Yes Yes Yes Yes Customer-S y (initials) :	No No pecified Set ID:	Filtered and preserved in metals
6 7 8 Sa <u>Dis</u>	Total Metals Diss Metals Diss Metals Nutrient Cyanide Sulfide Phenol SDWA Rads VOA vials have <6mm h Were all analyses within Have rush or project due Do samples require subo If "Yes", which type of su mple Receipt, Verification	Total Metals Diss Metals Diss Metals Nutrient Cyanide Sulfide Phenol SDWA Rads eadspace? holding time at the time of re e dates been checked and accor contracted analyses? ubcontracting is required? h, Login, Labeling & Distributio <u>on</u> (use back of sheet for no th a response of "No" or do	HNO ₃ Filtered and pr H ₂ SO ₄ NaOH ZnAcet H ₂ SO ₄ HNO ₃ ceipt? ceipt? cepted? General n completed by tes on discrep <u>not meet spec</u> Metho	Yes Yes Yes Yes Customer-S y (initials) :	No No Pecified Set ID: st be rese	Filtered and preserved in metals
6 7 8 Sa <u>Dis</u>	Total Metals Diss Metals Diss Metals Nutrient Cyanide Sulfide Phenol SDWA Rads VOA vials have <6mm h Were all analyses within Have rush or project due Do samples require subo If "Yes", which type of su mple Receipt, Verification crepancy Documentation y items listed above with	Total Metals Diss Metals Diss Metals Nutrient Cyanide Sulfide Phenol SDWA Rads eadspace? holding time at the time of re e dates been checked and acce contracted analyses? <i>ibcontracting is required</i> ? h, Login, Labeling & Distributio on (use back of sheet for no th a response of "No" or do	HNO ₃ Filtered and pr H ₂ SO ₄ NaOH ZnAcet H ₂ SO ₄ HNO ₃ ceipt? ceipt? cepted? General n completed by tes on discrep <u>not meet spec</u> Metho	Yes Yes Yes Yes Customer-S y (initials) :	No No pecified Set ID: st be rese Phone:	Filtered and preserved in metals

Resolution:



Analytical Results

TASK NO: 240809025

Report To: CJ Dickerson Company: Thorin Resources, LLC 1900 Main St Unit 1 Ouray CO 81427

Task No.: 240809025 Client PO: Client Project: CDPS Bi Monthly WW

Customer Sample ID BTT_0003

Bill To: CJ Dickerson Company: Thorin Resources, LLC 1900 Main St Unit 1 Ouray CO 81427

Date Received: 8/9/24 Date Reported: 8/20/24 Matrix: Wastewater

Sample Date/Time:	8/8/24 3:00 PM						
Lab Number:	240809025-01						
Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Cyanide-Weak Acid Dissociable	ND mg/l	ASTM 2036-09C	0.005	0.0005	8/15/24	QC75433	KRB
рН	7.66 units	SM 4500-H-B	0.01	0.01	8/9/24	-	ARH
Total Dissolved Solids	290 mg/l	SM 2540-C	5	2	8/14/24	QC75399	ISG
Total Suspended Solids	28 mg/l	SM 2540-D	5	2	8/12/24	QC75353	RLP
Potentially Dissolved							
Cadmium	0.0006 mg/L	EPA 200.8	0.0001	0.000006	8/14/24	QC75401	MBN
Copper	0.0012 mg/L	EPA 200.8	0.0008	0.00001	8/14/24	QC75401	MBN
Lead	0.0304 mg/L	EPA 200.8	0.0001	0.000006	8/14/24	QC75401	MBN
Manganese	1.00 mg/L	EPA 200.8	0.0008	0.00001	8/14/24	QC75401	MBN
Silver	ND mg/l	EPA 200.8	0.0005	0.000003	8/14/24	QC75401	MBN
Zinc	0.202 mg/L	EPA 200.8	0.001	0.00003	8/14/24	QC75401	MBN
<u>Total</u>							
Mercury	ND mg/l	EPA 245.7	0.0002	0.00002	8/15/24	QC75483	JJA
Lead	0.0304 mg/l	EPA 200.8	0.0001	0.000006	8/14/24	QC75401	MBN
Total Recoverable							
Iron	0.650 mg/l	EPA 200.7	0.005	0.0005	8/13/24	QC75374	JJA

Abbreviations/ References:

RL = Reporting Limit = Minimum Level MDL = Method Detection Limit mg/L = Milligrams Per Liter or PPM ug/L = Micrograms Per Liter or PPB mpn/100 mls = Most Probable Number Index/ 100 mls Date Analyzed = Date Test Completed (d) RPD acceptable due to low duplicate and sample concentrations.

(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313 Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 Page 1 of 4



Analytical QC Summary

TASK NO: 240809025

Report To: CJ Dickerson Company: Thorin Resources, LLC

Receive Date: 8/9/24 Project Name: CDPS Bi Monthly WW

Test	QC Batch II	D QC Type	Result		Method	Prep Date
Cyanide-Weak Acid Dissociable	QC75433	Blank	ND	A	STM 2036-09C	8/14/24
Mercury	QC75483	Method Blank	ND		EPA 245.7	8/15/24
Cadmium	QC75401	Method Blank	ND		EPA 200.8	8/9/24
Copper	QC75401	Method Blank	ND		EPA 200.8	8/9/24
Lead	QC75401	Method Blank	ND		EPA 200.8	8/9/24
Manganese	QC75401	Method Blank	ND		EPA 200.8	8/9/24
Silver	QC75401	Method Blank	ND		EPA 200.8	8/9/24
Zinc	QC75401	Method Blank	ND		EPA 200.8	8/9/24
ron	QC75374	Method Blank	ND		EPA 200.7	8/9/24
Total Dissolved Solids	QC75399	Blank	ND		SM 2540-C	8/13/24
Total Suspended Solids	QC75353	Blank	ND		SM 2540-D	8/12/24
Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC75433	Duplicate -240808082-01	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	93.5	-	
		MS -240808018-04C	75 - 125	119.5	-	
Mercury	QC75483	Duplicate -240808091-01	0 - 20	-	0.0	EPA 245.7
-		LCS	90 - 110	105.6	-	
		MS -240808091-01B	80 - 120	94.0	-	
Cadmium	QC75401	LCS	90 - 110	97.2	-	EPA 200.8
		MS -240809003-01	70 - 130	98.4	-	
		MSD -240809003-01	0 - 10	-	0.9	
Copper	QC75401	LCS	90 - 110	101.3	_	EPA 200.8
		MS -240809003-01	70 - 130	106.3	-	
		MSD -240809003-01	0 - 10	-	2.6	
Lead	QC75401	LCS	90 - 110	98.0	_	EPA 200.8
		MS -240809003-01	70 - 130	80.3	-	
		MSD -240809003-01	0 - 10	-	2.7	
Manganese	QC75401	LCS	90 - 110	104.7	_	EPA 200.8
		MS -240809003-01	70 - 130	122.0	-	
		MSD -240809003-01	0 - 10	_	2.6	
Silver	QC75401	LCS	90 - 110	98.5		EPA 200.8
	0.010101	MS -240809003-01	70 - 130	82.8	-	2.7.200.0
		MSD -240809003-01	0 - 10	-	4.5	
Zinc	QC75401	LCS	90 - 110	99.7	-	EPA 200.8
	2010101	MS -240809003-01	70 - 130	104.0	-	2.7.200.0
		MSD -240809003-01	0 - 10	-	6.6	
Iron	QC75374	Duplicate -240809030-01	0 - 20	-	2.1	EPA 200.7
	Q0/00/4	LCS	90 - 110	106.8	-	LI A 200.1
		MS -240809049-01	75 - 125	94.9	-	
Total Dissolved Solids	QC75399	Duplicate -240808158-03	0 - 10	57.5	1.0	SM 2540-C
	QC10099	Dupilcale -240000 130-03	0 - 10	-	1.0	SIVI 2040-0

Abbreviations/ References:

RL = Reporting Limit = Minimum Level

MDL = Method Detection Limit mg/L = Milligrams Per Liter or PPM ug/L = Micrograms Per Liter or PPB

mpn/100 mls = Most Probable Number Index/ 100 mls

Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.

(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313 Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 Page 2 of 4

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		LCS	85 - 115	104.2	-	
Total Suspended Solids	QC75353	Duplicate -240809001-01	0 - 10	-	9.3	SM 2540-D
		LCS	90 - 110	103.7	-	

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.

me Tielso

DATA APPROVED FOR RELEASE BY

Abbreviations/ References:

RL = Reporting Limit = Minimum Level MDL = Method Detection Limit mg/L = Milligrams Per Liter or PPM ug/L = Micrograms Per Liter or PPB mpn/100 mls = Most Probable Number Index/ 100 mls Date Analyzed = Date Test Completed (d) RPD acceptable due to low duplicate and sample concentrations.
 (s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313 Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 Page 3 of 4

Chain of Custody Form

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Thorin Resources	Company Name:	
Contact Name: CJ Dickerson	Contact Name:	
Address: 1900 Main St Unit (Address:	Task Number (Lab Use Only)
City Ourcase State CO Zip 81427	City State Zip	
Phone: (602) 753-1821	Phone:	CAL Task
Emails Cickeron ethrin resources. con	Email:	240809025
Sample Collector:		RMB
Sample Collector Phone:	PO No.:	



<u>Commerce City Lab</u> 10411 Heinz Way Commerce City CO 80640

Lakewood Service Center 610 Garrison Street, Unit E Lakewood CO 80215

Phone: 303-659-2313

www.coloradolab.com

														Te	sts R	eque	ested						
المستعقر للمستحدين		San	nple Matrix	(Select One Onl	y)			ý.															
Waste Groun	Water 🛛	-	Soil		Drinking Water 🗌	toitore	01 CONTAINETS	or (Check One Only) Composite	08023110133														
	e Water [<u></u>					r (Check omposite	18023									ŕ					
Date	Time			Sample II									_				<u> </u>	· ·					
8/8	3:00		Br	T_0003		3	3 ,	2	*	•							1			1			
<i>[V</i>		†																	-				
. <u> </u>																		-				-	
										+	_			_		<u> </u> '						-+	
														_									
																				1			
			<u> </u>	<u> </u>						1					• • • •		· ·		_				
	NC 11	A Rich	14 10	ntaine		-)			<u> </u>	+												-+	
	TK I	O CXTI		n officer	2	/									<u> </u>								
	í í	grona	ed to	DR TUS	4 (]					ł					1								
		10 0	IC LOS	ntainer Dr TDS DHHE RU	nd				1														
	I		19 00							+			+		+							-+	
					C/6	info:								Seals P			No	<u> </u>					
Instructi	ons: Rea	use Retu	n Bottler	•		5 1110;							5					, ,					
	•				Del	liver Via:		NP.	5		C/S`C	Charge 🕻		Temp.		C/Ice	_>	San	iple Pi	r <u>es. Y</u> e Date/		lo 🗖	
Relinquis	shed By:	Date	/Time:	Received By:	Date/Time:	Relin	quish	ed By:			Date/	Time:	~ ·	Rece	ived	By:				Date/	Time	ų.	
SD	icherton	8/8	Time: 3 4:50P			Page 4 of	4							A	(Al	U	M	A		8	191	\mathcal{Y}	4
				-										- (J							1	D.

Г

Attachment F – Additional Bonding Calcs Personnel and Equipment Cost Assumptions:

I cisoinici and	Equipment Cost Assumptions.			
Label	Description - RS Means	unit	cost	Hrly Rate
Laborer	Field Personnel, general Purpose Laborer, Average	\$/week	\$ 1,600.00	\$ 40.00
Front-End Loader	Rent front end loader, 4WD, art. Frame, diesel, 4-4.5 CY 185 HP	\$/day	\$ 787.60	\$ 98.45
Skid Steer	Rent Loader, skid steer, wheeled 1 CY 78 HP, diesel	\$/day	\$ 511.80	\$ 63.98
Equipment Operator	Deconstruction process support equipment, as needed, daily use, backhoe, includes operator	\$/day	\$ 410.00	\$ 51.25

Additional Bonding Calculations - Personnel, Equipment & Hours

	F	Personr	el & Equipm	ent Rec	uired				Cost (\$/hr)			
Structure or Item Description	Personnel 1	Num	Personnel 2	Num	Equipment	Num	Pers	sonnel 1	Personnel 2	Eq	uipment	Duration (hrs)
Remove Ball Mill Feed Hopper	Laborer	1					\$	40.00	\$-	\$	-	3.2
Remove Ball Mill Feed Hopper	Equipment Operator	1			Front-End Loader	1	\$	51.25	\$-	\$	98.45	1.1
Remove Ball Mill - Trailer Mounted	Equipment Operator	1			Front-End Loader	1	\$	51.25	\$-	\$	98.45	0.7
Remove Ball Mill Collection Tank	Equipment Operator	1			Skid Steer	1	\$	51.25	\$-	\$	63.98	0.5
Remove Conditioning Tank 01 - Table Feed	Equipment Operator	1	Laborer	1	Front-End Loader	1	\$	51.25	\$ 40.00) \$	98.45	1.3
Remove Deister Table 01 & Steel Frame	Equipment Operator	1	Laborer	2	Front-End Loader	1	\$	51.25	\$ 80.00) \$	98.45	5.3
Remove Deister Table 01 Heavy Collection Box	Laborer	1					\$	40.00	\$-	\$	-	0.2
Remove Deister Table 01 Mids Collection Box	Laborer	1					\$	40.00	\$-	\$	-	0.2
Remove Deister Table 01 Lows Collection Box	Laborer	1					\$	40.00	\$-	\$	-	0.4
Remove Deister Table 01 Tails Collection Box	Laborer	1					\$	40.00	\$-	\$	-	0.4
Remove Deister Table 02 & Steel Frame	Equipment Operator	1	Laborer	2	Front-End Loader	1	\$	51.25	\$ 80.00) \$	98.45	5.3
Remove Deister Table 02 Heavy Collection Box	Laborer	1					\$	40.00	\$-	\$	-	0.2
Remove Deister Table 02 Mids Collection Box	Laborer	1					\$	40.00	\$-	\$	-	0.2
Remove Deister Table 02 Lows Collection Box	Laborer	1					\$	40.00	\$-	\$	-	0.4
Remove Deister Table 02 Tails Collection Box	Laborer	1					\$	40.00	\$-	\$	-	0.4
Remove Deister Table 03 & Steel Frame	Equipment Operator	1	Laborer	2	Front-End Loader	1	\$	51.25	\$ 80.00) \$	98.45	5.3
Remove Deister Table 03 Heavy Collection Box	Laborer	1					\$	40.00	\$-	\$	-	0.2
Remove Deister Table 03 Mids Collection Box	Laborer	1					\$	40.00	\$-	\$	-	0.2
Remove Deister Table 03 Lows Collection Box	Laborer	1					\$	40.00	\$-	\$	-	0.4
Remove Deister Table 03 Tails Collection Box	Laborer	1					\$	40.00	\$-	\$	-	0.4
Remove Conditioning Tank 02 - Concentrate Conditioning	Equipment Operator	1			Front-End Loader	1	\$	51.25	\$-	\$	98.45	1.6
Remove Concentrate Dewatering Press	Equipment Operator	1	Laborer	2	Front-End Loader	1	\$	51.25	\$ 80.00) \$	98.45	3.5
Remove Conditioning Tank 03 - Tailings Conditioning	Equipment Operator	1	Laborer	1	Front-End Loader	1	\$	51.25	\$ 40.00) \$	98.45	4.3
Remove Tailings Dewatering Press	Equipment Operator	1	Laborer	2	Front-End Loader	1	\$	51.25	\$ 80.00) \$	98.45	3.5
Remove Process Water Tank	Equipment Operator	1			Front-End Loader	1	\$	51.25	\$-	\$	98.45	5.5
Remove Ball Mill Containment	Equipment Operator	1	Laborer	1	Front-End Loader	1	\$	51.25	\$ 40.00) \$	98.45	1.2
Remove Deister Table 01 Containment	Equipment Operator	1	Laborer	1	Front-End Loader	1	\$	51.25	\$ 40.00) \$	98.45	0.7
Remove Deister Table 02 Containment	Equipment Operator	1	Laborer	1	Front-End Loader	1	\$	51.25	\$ 40.00) \$	98.45	0.6
Remove Deister Table 03 Containment	Equipment Operator	1	Laborer	1	Front-End Loader	1	\$	51.25	\$ 40.00) \$	98.45	0.6
Remove Concentrate Conditioning/Press Containment	Equipment Operator	1	Laborer	1	Front-End Loader	1	\$	51.25	\$ 40.00) \$	98.45	0.9
Remove Process Water & Tailings Conditioning/Press Containment	Equipment Operator	1	Laborer	2	Front-End Loader	1	\$	51.25	\$ 80.00) \$	98.45	4.0

Attachment G – Special Use Permit - Hauling Material: Camp Bird to Revenue



RIGHT-OF-WAY PERMIT APPLICATION

Road & Bridge Department Physical Address: 111 Mall Road, Ridgway CO 970.626.5391 Mailing Address: PO Box 28, Ridgway CO 81432

The Right-of-Way Permit is for construction in or improvement to Ouray County rights-of-way. A permit is required to construct driveways, install telephone, electric, gas, sewer, water and other utility wires, pipelines, or the like, along, across, upon and under any road right-of-way which is owned or controlled by Ouray County.

Permittee	Contractor
Name Chris Skerik	Name
Company Thorin Resources, LLC	Company
Address 1900 Main St, Unit 1, PO Box 1030	Address
City Ouray State CO Zip 81427	City StateZip
Business Phone 970-316-2294	Business Phone
Fax No.	Fax No.
Email cskerik@thorinresources.com	Email
Insurance Carrier Imperium Insurance Company	Limits: \$2,000,000 / \$5,000,000
Location/Description of Construction: CR_361 and 26at the following location	ns: Camp Bird and Revenue Mine sites

Address 4936 CR-361, Ouray, CO 81427 Subdivision Legal Desc.

HOW MANY FEET ARE YOU DISTURBING IN THE RIGHT-OF-WAY: No disturbance required PLANS REQUIRED WITH APPLICATION

Type of Work:

D TV Cable	🗆 Main	□ Service		Phone	🗆 Main	□ Service
Gas	🗆 Main	□ Service		🗆 Water	🗆 Main	□ Service
Electric	🗆 Main	□ Service	Set Pole	□ Sewer	🗆 Main	□ Service
Culvert	inc	h by	foot long con	rugated pipe (0.	16 gauge) with	annular ends.
			6" cover - 3	4 "compacted ro	oad base.	

To Other Request access to haul material from Camp Bird to Revenue Mine, from 6:00AM to 9:30AM, Monday through Friday.

Cut Pavement (Repair must be completed in 15 days)

Include sketch showing excavation(s) with dashed line in relation to road, house and driveway

Construction Schedule and Submittal Questions – All permit holders must request inspection 24 hours in advance of work commencing. Please call 970.626.5391 for inspection request.

Planned Start Date	TO BE DETERM	INED		Daily Work Hours 6:00AM to 9:30AM	
Planned Finish Date	OPEN-ENDED	INDEFI	NITE	Weekend Work Hours NOT APPLICABLE	
Does project disturb 1	more than	acre?	Yes	No NO DISTURBANCE	
Tformer a Dame		A Cont	1 D1-	and the second mainteend with an alteration	

If yes, a Revegetation and Weed Control Plan needs to be submitted with application

READ CAREFULLY

Job must be finished and right-of-way restored to its original condition by expiration date. Failure to do so is a violation of state and local regulations and new permits may not be issued until the job is complete. Permit extensions may be granted by calling the road inspector.

Applicant shall be responsible for confirming all utility locations within public rights-of-way prior to any excavation. Call UNCC: 1.800.922.1987.

A minimum of three working days is required to process this application.

The owner of the private improvements under this permit shall promptly relocate or remove such improvements from the Ouray County right-of-way at his own expense upon written request from Ouray County. By requiring or approving this permit, Ouray County makes no warranty of title or interest in any property or right-of-way. By submitting this application, applicant agrees to indemnify Ouray County for all claims against Ouray County arising out of, caused by or related to the work contemplated by this application, including all reasonable attorney's fees. Nothing herein shall be construed as a waiver of any right by Ouray County or an admission that any use in the right-of-way is adverse.

APPLICANT GUARANTEES ALL WORK FOR TWO YEARS FROM FINAL INSPECTION DATE

By accepting this permit, the undersigned Permittee or agent, under penalty of perjury, verifies that they have received all pages of the permit application; they have read and understood all of the permit requirements and provisions set forth on all pages; that they have the authority to sign for and bind the Permittee; and that by virtue of their signature, the Permittee is bound by and agrees to comply with all said permit requirements and provisions, all Ouray County regulations, ordinances or state laws regarding facilities construction.

Date July 30th, 2024

Chris Skrik

Permittee or agent signature

Office Use Only:

 THIS PERMIT EXPIRES SIX MONTHS AFTER DATE APPROVED. MAY BE REIS

• FEES WAIVED.

- WORK IN THE RIGHT-OF-WAY IS ONLY ALLOWED BETWEEN 6:00AM AND 9:30AM. WORK MAY NOT BE SCHEDULED DURING WEEKENDS (SATURDAY OR SUNDAY), STATE HOLIDAYS, OR WITHIN TWO DAYS OF A STATE HOLIDAY.
- PILOT CAR AND FLAGGERS REQUIRED FOR ALL MOVEMENTS.
- ANY MODIFICATIONS TO THE DESCRIBED ACTIVITY MUST BE COORDINATED IN ADVANCE
 WITH THE OURAY COUNTY ROAD & BRIDGE SUPERINTENDENT.

1			
T. L. BARGER Permit Approved – Ouray County	7/30/2024 Date	Final Inspection Approval	Date
Approved for Construction	Date		
			2 of

- <u>Cost to Ouray County</u>. Permittee fully understands that all line installation and/or construction will be performed at no expense whatsoever to Ouray County.
- Stop Work. Ouray County shall have the right to order Permittee to stop work anytime Ouray County believes that a violation of this permit has occurred or if there is a danger to the public safety if the work continues.
- 3. <u>Revocability.</u> Ouray County reserves the right to revoke this permit at any time should Permittee fail to comply with any of the requirements of this permit. Should this permit be revoked, Permittee must obtain a new permit and pay all required fees in order to continue with the project contemplated herein. Any lines or materials installed by Permittee prior to the revocation of the permit remain the responsibility of Permittee and shall be maintained or removed by Permittee at the discretion of Ouray County.
- <u>Warranty of Right-of-Way</u>. Ouray County does not warrant the right-of-way by the issuance of this
 permit. Permittee is responsible for determining the ownership of properties traversed by its lines, the
 location of all property boundary lines, and the ownership of all rights-of way.
- Commencement of construction prior to payment of fees and granting of approvals will result in applicable fees being doubled. Construction without inspection is subject to rejection.
- Traffic shall be maintained on all rights-of-way. Flaggers shall be provided at any locations where the orderly flow of traffic is interrupted.
- Permittee shall provide all necessary signs and barricades in accordance with the Manual on Uniform Traffic Control Devices and its latest Colorado Supplement in order to warn oncoming motorists of any installation or construction work.
- 8. In the event any changes are made in the future to the roadway or its appurtenances within the right-ofway contemplated herein that would necessitate removal or relocation of the lines installed or constructed herein, Permittee shall do so promptly at its own expense upon the written request from Ouray County, Colorado.
- A copy of this permit shall be maintained on-site at all times until the work has been completed and inspected.
- 10. Permittee shall furnish all labor and materials, perform all work, and pay all costs in connection with the construction of the driveway(s) and its appurtenances on the right-of-way. All work shall be completed in an expeditious and safe manner and shall be finished within three months of the permit date.
- This permit does not allow any damage to occur on the existing County right-of-way. If Permittee
 causes damage to the County road, Permittee shall repair road to the County's satisfaction.
- This permit is valid only for the work described on page one. Any additional work shall require a separate application and permit.
Attachment H – Tailings Material – Net Acid Generating & Net Neutralizing Potential Sum Table

Non-Units MDL Analyte Minimum Maximum Average Sample Count Detect Count Acid Generation Potential (calc on Pyritic Sulfur) t CaCO3/Kt 11.6 11.6 11.60000 1 0.31 -Acid Neutralization Potential (calc) t CaCO3/Kt 46 46 46 1 -1 Acid-Base Potential (calc on Pyritic Sulfur) t CaCO3/Kt 34.4 34.4 34.4 1 -0.225 Aluminum (1312) mg/L 0.225 0.225 1 -0.07 0.00474 0.00474 0.00474 Antimony (1312) mg/L 1 0.0004 -0.00229 Arsenic (1312) mg/L 0.00229 0.00229 1 0.0002 -0.0473 Barium (1312) mg/L 0.0473 0.0473 1 0.0005 -Beryllium (1312) mg/L 1 1 0.0001 -Bicarbonate as CaCO3 mg/L 44 44 44 1 -2 0.03 Boron (1312) mg/L ---1 1 Bromide (1312-DI) mg/L ---1 1 0.25 0.00005 Cadmium (1312) mg/L 1 1 --Calcium (1312) mg/L 12.3 12.3 12.3 1 0.1 -Carbon, total organic (TOC) (1312-DI) mg/L 3 3 3 1 1 -2 Carbonate as CaCO3 mg/L ---1 1 0.4 Chloride (1312-DI) 1 mg/L 1 ---0.0005 Chromium (1312) 1 1 mg/L Cobalt (1312) 0.000069 0.000069 0.000069 1 0.00005 mg/L -Conductivity @25C (1312-DI) umhos/cm 80 80 80 1 -0.0008 Copper (1312) 1 mg/L 1 Fluoride (1312 DI) 0.31 0.15 mg/L 0.31 0.31 1 -Hardness as CaCO3 (1312) 32 32 0.2 mg/L 32 1 _ Hydroxide as CaCO3 mg/L 1 ---1 2 0.06 Iron (1312) mg/L 1 1 Lead (1312) 0.01 0.0001 0.01 0.01 1 mg/L -0.008 Lithium (1312) 1 mg/L 1 -Magnesium (1312) 0.4 0.4 0.4 mg/L 1 0.2 -Manganese (1312) 0.0433 0.0433 0.0433 1 0.0004 mg/L -1 0.0002 Mercury (1312) mg/L 1 Molybdenum (1312) 0.0262 0.0262 0.0262 1 0.0002 mg/L -Neutralization Potential as CaCO3 4.6 4.6 4.6 1 0.1 % -0.00042 Nickel (1312) 0.00042 0.00042 1 0.0004 mg/L -Nitrate (1312 DI) 0.079 0.079 0.079 1 0.02 mg/L -Nitrate/Nitrite as N (1312-DI) mg/L 0.079 0.079 0.079 1 0.02 Nitrite as N (1312-DI) mg/L 1 1 0.01 Nitrogen, ammonia (1312-DI) 0.329 0.329 0.329 mg/L 1 0.1 pН Units 8.5 8.5 8.5 1 0.1 Phosphorus, ortho dissolved (1312-DI) mg/L 1 1 0.01 --0.01 Phosphorus, Total (1312-DI) mg/L 1 1 2.89 2.89 0.5 Potassium (1312) mg/L 2.89 1 Residue, Filterable (TDS) @180C (1312) 20 mg/L 44 44 44 1 Residue, Non-Filter (TSS) @180C (1312-DI) mg/L 1 1 5 1 0.0001 Selenium (1312) mg/L 1 Silica (1312) mg/L 2.3 2.3 2.3 1 0.2 Silver (1312) 1 1 0.0001 mg/L Sodium (1312) 0.98 0.98 0.98 1 0.2 mg/L Strontium (1312) 0.195 0.195 0.195 1 0.009 mg/L Sulfate (1312-DI) 8.45 8.45 8.45 1 0.9 mg/L Temperature Units 20.9 20.9 20.9 1 0.1 0.0001 Thallium (1312) 1 mg/L 1 Tin (1312) 1 1 0.04 mg/L _ Total Alkalinity 44 44 44 1 mg/L Uranium (1312) mg/L 1 1 0.0001 Vanadium (1312) mg/L 0.00053 0.00053 0.00053 1 0.0005

mg/L

Zinc (1312)

New Table: Summary of SPLP & ABA - Camp Bird Tailings Material

0.006

1

1

Analyte	Units	Num	Sample Count	Non- Detect Count	MDL
Acid Generation Potential (calc on Pyritic Sulfur)	t CaCO3/Kt	11.6	1	0	0.31
Acid Neutralization Potential (calc)	t CaCO3/Kt	46	1	0	1
Acid-Base Potential (calc on Pyritic Sulfur)	t CaCO3/Kt	34.4	1	0	0
Neutralization Potential as CaCO3	%	4.6	1	0	0.1
Neutralization Potential Ratio		4.0	1	0	

New Table: Acid Generation Vs Acid Neutralizing Potential – Camp Bird Tailings Material

Non-Units MDL Analyte Minimum Maximum Average Sample Count Detect Count 33.30000 Acid Generation Potential (calc on Pyritic Sulfur) t CaCO3/Kt 31.9 34.7 2 0.31 -Acid Neutralization Potential (calc) t CaCO3/Kt 74 75 74.5 2 -1 Acid-Base Potential (calc on Pyritic Sulfur) t CaCO3/Kt 40.3 42.1 41.2 2 -0.1535 Aluminum (1312) mg/L 0.147 0.16 2 -0.07 0.00788 0.007945 Antimony (1312) mg/L 0.00801 2 0.0004 -0.00299 Arsenic (1312) mg/L 0.00296 0.00302 2 0.0002 -0.0568 Barium (1312) mg/L 0.0554 0.0582 2 0.0005 -Beryllium (1312) mg/L 2 2 0.0001 **Bicarbonate as CaCO3** mg/L 49.3 50.2 49.75 2 -2 2 0.03 Boron (1312) mg/L ---2 Bromide (1312-DI) 2 0.25 mg/L ---2 2 2 0.00005 Cadmium (1312) mg/L ---Calcium (1312) 2 mg/L 14.8 15 14.9 0.1 -Carbon, total organic (TOC) (1312-DI) 3.2 3.8 mg/L 3.5 2 1 -2 Carbonate as CaCO3 2 mg/L ---2 0.4 2 Chloride (1312-DI) 2 mg/L ---2 2 0.0005 Chromium (1312) mg/L Cobalt (1312) 0.000065 0.000071 0.000068 2 0.00005 mg/L -Conductivity @25C (1312-DI) 2 umhos/cm 99 101 100 -0.0008 Copper (1312) 2 2 mg/L ---Fluoride (1312 DI) 2 0.15 mg/L 2 -_ 0.2 Hardness as CaCO3 (1312) 2 mg/L 39 40 39.5 -Hydroxide as CaCO3 2 mg/L 2 ---2 2 0.06 Iron (1312) mg/L 2 Lead (1312) 0.0171 0.01735 2 0.0001 0.0176 mg/L -Lithium (1312) 0.0103 0.0121 0.0112 2 0.008 mg/L -Magnesium (1312) 0.49 0.54 0.515 2 0.2 mg/L -0.0004 Manganese (1312) mg/L 0.0498 0.0601 0.05495 2 Mercury (1312) 2 2 0.0002 mg/L Molybdenum (1312) mg/L 0.0243 0.0257 0.025 2 0.0002 Neutralization Potential as CaCO3 7.4 7.5 7.45 2 0.1 % 0.0004 Nickel (1312) mg/L 2 2 Nitrate (1312 DI) mg/L 0.248 0.253 0.2505 2 0.02 Nitrate/Nitrite as N (1312-DI) mg/L 0.248 0.253 0.2505 2 0.02 Nitrite as N (1312-DI) 2 2 0.01 mg/L Nitrogen, ammonia (1312-DI) 0.568 0.712 0.64 2 0.1 mg/L 8.25 2 0.1 bН Units 8 8.5 Phosphorus, ortho dissolved (1312-DI) mg/L 2 2 0.01 -Phosphorus, Total (1312-DI) 2 2 0.01 mg/L _ Potassium (1312) 5.12 5.19 5.155 2 0.5 mg/L Residue, Filterable (TDS) @180C (1312) 54 56 55 2 20 mg/L Residue, Non-Filter (TSS) @180C (1312-DI) mg/L -2 2 5 Selenium (1312) 2 2 0.0001 mg/L _ Silica (1312) mg/L 2.1 2.1 2.1 2 0.2 Silver (1312) 2 2 0.0001 mg/L Sodium (1312) 0.78 0.79 0.785 2 0.2 mg/L Strontium (1312) 0.29 0.302 0.296 2 0.009 mg/L Sulfate (1312-DI) mg/L 13 13.2 13.1 2 0.9 Temperature Units 21 21.6 21.3 2 0.1 0.00013 0.0001 Thallium (1312) mg/L 0.00014 0.000135 2 Tin (1312) mg/L 2 2 0.04 **Total Alkalinity** mg/L 49.3 50.2 49.75 2 Uranium (1312) mg/L 2 2 0.0001 Vanadium (1312) mg/L _ --2 2 0.0005

mg/L

_

_

_

New Table: Summary of SPLP & ABA - Revenue Tailings Material

Zinc (1312)

0.006

2

2

Analyte	Units	Num	Sample Count	Non- Detect Count	MDL
Acid Generation Potential (calc on Pyritic Sulfur)	t CaCO3/Kt	33.3	2	0	0.31
Acid Neutralization Potential (calc)	t CaCO3/Kt	74.5	2	0	1
Acid-Base Potential (calc on Pyritic Sulfur)	t CaCO3/Kt	41.2	2	0	0
Neutralization Potential as CaCO3	%	7.45	2	0	0.1
Neutralization Potential Ratio		2.2	2	0	

New Table: Acid Generation Vs Acid Neutralizing Potential – Tailings Material

Attachment I – ACZ Report Tailings SPLP/ABA w/ Acid Generating & Neutralizing Potential



September 25, 2024

Report to: CJ Dickerson Thorin Resources 105 Meadow Estates Dr.

Ridgway, CO 81432

cc: Accounts Payable

Bill to: Accounts Payable Thorin Resources 1900 Main St Unit #1 Ouray, CO 81427

Project ID: ACZ Project ID: L89863

CJ Dickerson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 29, 2024. This project has been assigned to ACZ's project number, L89863. 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 L89863. 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 October 25, 2024. 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.

Mark Mellel

Mark McNeal has reviewed and approved this report.



September 25, 2024

Project ID: ACZ Project ID: L89863

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 3 miscellaneous samples from Thorin Resources on August 29, 2024. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L89863. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

Any analyses not performed within EPA recommended holding times have been qualified with an "H" flag.

Sample Analysis

These samples were analyzed for inorganic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures. In addition the following has been noted with this specific project:

1. The below is from WG597078 Qualifier: H1 Applies to: L89863-01/ANTIMONY L89863-01/ARSENIC L89863-01/BARIUM L89863-01/BERYLLIUM L89863-01/CADMIUM L89863-01/CHROMIUM L89863-01/COBALT L89863-01/COPPER L89863-01/LEAD L89863-01/MANGANESE L89863-01/MOLYBDENUM L89863-01/NICKEL L89863-01/SELENIUM L89863-01/THALLIUM L89863-01/URANIUM L89863-01/VANADIUM L89863-01/ZINC L89863-02/ANTIMONY L89863-02/ARSENIC L89863-02/BARIUM L89863-02/BERYLLIUM L89863-02/CADMIUM L89863-02/CHROMIUM L89863-02/COBALT L89863-02/COPPER L89863-02/LEAD L89863-02/MANGANESE L89863-02/MOLYBDENUM L89863-02/NICKEL L89863-02/SELENIUM L89863-02/THALLIUM L89863-02/URANIUM L89863-02/VANADIUM L89863-02/ZINC L89863-03/ANTIMONY L89863-03/ARSENIC L89863-03/BARIUM L89863-03/BERYLLIUM L89863-03/CADMIUM

L89863-2409251614



L89863-03/CHROMIUM L89863-03/COBALT L89863-03/COPPER L89863-03/LEAD L89863-03/MANGANESE L89863-03/MOLYBDENUM L89863-03/NICKEL L89863-03/SELENIUM L89863-03/THALLIUM L89863-03/VANADIUM L89863-03/VANADIUM L89863-03/ZINC

Sample analysis performed past holding time. Samples logged in with insufficient time remaining in 180 day hold period for 1312 extraction, hot block digestion, and ICPMS analysis.

2. The below is from WG597262 Qualifier: H1 Applies to: L89863-01/SILVER L89863-02/SILVER L89863-03/SILVER

Sample analysis performed past holding time. Samples were received with insufficient time to prep and analyze before 180 day Hold period expired.

3. The below is from WG597330 Qualifier: H1 Applies to: L89863-01/ALUMINUM L89863-01/BORON L89863-01/CALCIUM L89863-01/IRON L89863-01/LITHIUM L89863-01/MAGNESIUM L89863-01/POTASSIUM L89863-01/SODIUM L89863-01/STRONTIUM L89863-01/TIN L89863-02/ALUMINUM L89863-02/BORON L89863-02/CALCIUM L89863-02/IRON L89863-02/LITHIUM L89863-02/MAGNESIUM L89863-02/POTASSIUM L89863-02/SODIUM L89863-02/STRONTIUM L89863-02/TIN L89863-03/ALUMINUM L89863-03/BORON L89863-03/CALCIUM L89863-03/IRON L89863-03/LITHIUM L89863-03/MAGNESIUM L89863-03/POTASSIUM L89863-03/SODIUM L89863-03/STRONTIUM L89863-03/TIN

Sample analysis performed past holding time. Samples logged in with insufficient time remaining in 180 day hold period for 1312 extraction, hotblock digestion, and ICP analysis.

^{4.} The below is from WG598011



Qualifier: H1 Applies to: L89863-01/SILICA L89863-02/SILICA L89863-03/SILICA

Sample analysis performed past holding time. Samples logged in with insufficient time remaining in 180 day hold period for 1312 extraction, hotblock digestion, and ICP analysis.



Project ID:

Sample ID: RV SPLP TAILS

Inorganic Analytical Results

ACZ Sample ID: **L89863-01** Date Sampled: 03/04/24 09:40 Date Received: 08/29/24 Sample Matrix: Soil

Inorganic Prep										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date A	Analyst
Phosphorus, Total (1312-DI)	EPA 365.1								09/23/24 12:00	mrd
Total Hot Plate Digestion (1312)	EPA 3010A								09/09/24 19:21	jrj
Total Hot Plate Digestion (1312)	EPA 3010A								09/24/24 11:42	smw
Metals Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date A	Analyst
Aluminum (1312)	EPA 6010D	1	0.147	BH	*	mg/L	0.07	0.25	09/16/24 14:17	msp
Antimony (1312)	EPA 6020B	1	0.00788	Н	*	mg/L	0.0004	0.002	09/11/24 19:50	jrj
Arsenic (1312)	EPA 6020B	1	0.00296	Н	*	mg/L	0.0002	0.001	09/11/24 19:50	jrj
Barium (1312)	EPA 6020B	1	0.0554	Н	*	mg/L	0.0005	0.0025	09/11/24 19:50	jrj
Beryllium (1312)	EPA 6020B	1	<0.0001	UH	*	mg/L	0.0001	0.00025	09/11/24 19:50	jrj
Boron (1312)	EPA 6010D	1	<0.03	UH	*	mg/L	0.03	0.1	09/16/24 14:17	msp
Cadmium (1312)	EPA 6020B	1	<0.00005	UH	*	mg/L	0.00005	0.00025	09/11/24 19:50	jrj
Calcium (1312)	EPA 6010D	1	15.0	Н	*	mg/L	0.1	0.5	09/16/24 14:17	msp
Chromium (1312)	EPA 6020B	1	<0.0005	UH	*	mg/L	0.0005	0.002	09/11/24 19:50	jrj
Cobalt (1312)	EPA 6020B	1	0.000071	BH	*	mg/L	0.00005	0.00025	09/11/24 19:50	jrj
Copper (1312)	EPA 6020B	1	<0.0008	UH	*	mg/L	0.0008	0.002	09/11/24 19:50	jrj
Iron (1312)	EPA 6010D	1	<0.06	UH	*	mg/L	0.06	0.15	09/16/24 14:17	msp
Lead (1312)	EPA 6020B	1	0.0176	Н	*	mg/L	0.0001	0.0005	09/11/24 19:50	jrj
Lithium (1312)	EPA 6010D	1	0.0103	BH	*	mg/L	0.008	0.04	09/16/24 14:17	msp
Magnesium (1312)	EPA 6010D	1	0.54	BH	*	mg/L	0.2	1	09/16/24 14:17	msp
Manganese (1312)	EPA 6020B	1	0.0601	н	*	mg/L	0.0004	0.002	09/11/24 19:50	jrj
Mercury (1312)	EPA 7470A	1	<0.0002	U	*	mg/L	0.0002	0.001	09/12/24 15:15	aew
Molybdenum (1312)	EPA 6020B	1	0.0243	н	*	mg/L	0.0002	0.0005	09/11/24 19:50	jrj
Nickel (1312)	EPA 6020B	1	<0.0004	UH	*	mg/L	0.0004	0.001	09/11/24 19:50	jrj
Potassium (1312)	EPA 6010D	1	5.12	н	*	mg/L	0.5	1	09/16/24 14:17	msp
Selenium (1312)	EPA 6020B	1	<0.0001	UH	*	mg/L	0.0001	0.00025	09/11/24 19:50	jrj
Silica (1312)	EPA 6010D	1	2.1	н	*	mg/L	0.2	1	09/25/24 13:38	wtc
Silver (1312)	EPA 6020B	1	<0.0001	UH	*	mg/L	0.0001	0.0005	09/15/24 13:52	jrj
Sodium (1312)	EPA 6010D	1	0.78	BH	*	mg/L	0.2	1	09/16/24 14:17	msp
Strontium (1312)	EPA 6010D	1	0.290	н	*	mg/L	0.009	0.045	09/16/24 14:17	msp
Thallium (1312)	EPA 6020B	1	0.00014	BH	*	mg/L	0.0001	0.0005	09/11/24 19:50	jrj
Tin (1312)	EPA 6010D	1	<0.04	UH	*	mg/L	0.04	0.2	09/16/24 14:17	msp
Uranium (1312)	EPA 6020B	1	<0.0001	UH	*	mg/L	0.0001	0.0005	09/11/24 19:50	jrj
Vanadium (1312)	EPA 6020B	1	<0.0005	UH	*	mg/L	0.0005	0.002	09/11/24 19:50	jrj
Zinc (1312)	EPA 6020B	1	<0.006	UH	*	mg/L	0.006	0.015	09/11/24 19:50	jrj



Project ID: Sample ID: RV SPLP TAILS

Inorganic Analytical Results

ACZ Sample ID: **L89863-01** Date Sampled: 03/04/24 09:40 Date Received: 08/29/24 Sample Matrix: Soil

Soil Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Pyritic Sulfur)	EPA 600/2-78-054 3.2.6		34.7			t CaCO3/Kt	0.31	3.1	09/25/24 0:00	calc
Acid Neutralization Potential (calc)	EPA 600/2-78-054 1.3		75.0			t CaCO3/Kt	1	5	09/25/24 0:00	calc
Acid-Base Potential (calc on Pyritic Sulfur)	EPA 600/2-78-054 1.3		40.3			t CaCO3/Kt			09/25/24 0:00	calc
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	<1	U	*	Kg H2SO4/t	1	1	09/18/24 0:00	bdc
pH After Oxidation		1	9.5		*	units	0.1	0.1	09/18/24 0:00	bdc
Net Neutralization Potential	***Error***		0			t CaCO3/Kt			09/25/24 0:00	calc
Neutralization Potential as CaCO3	EPA 600/2-78-054 3.2.3 Modified (No Heat)	1	7.5		*	%	0.1	0.5	09/18/24 3:13	bdc
pH, (1312)	EPA 9045D/9040C									
рН			8			Units	0.1	0.1	09/25/24 0:00	LFP
Temperature			21.6			Units	0.1	0.1	09/25/24 0:00	LFP
pH, Saturated Paste	EPA 600/2-78-054 3.2.2									
Max Particle Size		1	250		*	um			09/21/24 0:00	kmb
pН		1	7.7		*	units	0.1	0.1	09/21/24 0:00	kmb
Sulfur Forms	EPA 600/2-78-054 3.2.4 Modified									
Sulfur HCI Residue		1	1.16		*	%	0.01	0.1	09/20/24 0:00	kmb
Sulfur HNO3 Residue		1	0.05	В	*	%	0.01	0.1	09/20/24 0:00	kmb
Sulfur Organic Residual		1	0.05	В	*	%	0.01	0.1	09/20/24 0:00	kmb
Sulfur Pyritic Sulfide		1	1.11			%	0.01	0.1	09/20/24 0:00	kmb
Sulfur Sulfate		1	0.12			%	0.01	0.1	09/20/24 0:00	kmb
Sulfur Total		1	1.28		*	%	0.01	0.1	09/20/24 0:00	kmb
Total Sulfur minus Sulfate		1	1.16			%	0.01	0.1	09/20/24 0:00	kmb
Soil Preparation										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees	USDA No. 1, 1972								00/04/24 8:48	iea

						,
Air Dry at 34 Degrees C	USDA No. 1, 1972				09/04/24 8:48	jsa
Crush and Pulverize (Ring & Puck)	EPA 600/2-78-054 3.1.3				09/11/24 9:00	jsa
Saturated Paste Extraction	USDA No. 60 (2)				09/20/24 9:03	lfp
Synthetic Precip. Leaching Procedure	EPA 1312				09/06/24 1:26	lfp
Synthetic Precip. Leaching Procedure	EPA 1312				09/05/24 23:26	6 lfp



Project ID: Sample ID: RV SPLP TAILS

Inorganic Analytical Results

ACZ Sample ID: **L89863-01** Date Sampled: 03/04/24 09:40 Date Received: 08/29/24 Sample Matrix: Soil

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (1312 DI)	SM 2320 B-2011									
Bicarbonate as CaCO3		1	50.2	Н	*	mg/L	2	20	09/16/24 0:00	asn
Carbonate as CaCO3	3	1	<2	UH	*	mg/L	2	20	09/16/24 0:00	asn
Hydroxide as CaCO3		1	<2	UH	*	mg/L	2	20	09/16/24 0:00	asn
Total Alkalinity		1	50.2	н	*	mg/L	2	20	09/16/24 0:00	asn
Bromide (1312-DI)	EPA 300.0	5	<0.25	U	*	mg/L	0.25	1.25	09/16/24 16:16	bls
Carbon, total organic (TOC) (1312-DI)	SM 5310 B-2011/2014	1	3.8	В	*	mg/L	1	5	09/13/24 12:06	6 ems
Chloride (1312-DI)	EPA 300.0	1	<0.4	U	*	mg/L	0.4	2	09/13/24 14:07	' bls
Conductivity @25C (1312-DI)	SM 2510 B-2011	1	101	Н	*	umhos/cm	1	10	09/16/24 11:43	3 asn
Fluoride (1312 DI)	SM 4500-F C-2011	1	<0.15	UH	*	mg/L	0.15	0.35	09/14/24 17:57	′ jck
Hardness as CaCO3 (1312)	Calculation (SM 2340 B-2011)		40			mg/L	0.2	5	09/25/24 0:00	calc
Nitrate (1312 DI)	Calculation (NO3NO2-NO2)		0.253			mg/L	0.02	0.1	09/25/24 0:00	calc
Nitrate/Nitrite as N (1312-DI)	EPA 353.2	1	0.253		*	mg/L	0.02	0.1	09/07/24 0:55	pjb
Nitrite as N (1312-DI)	EPA 353.2	1	<0.01	U	*	mg/L	0.01	0.05	09/07/24 0:55	pjb
Nitrogen, ammonia (1312-DI)	EPA 350.1	1	0.712		*	mg/L	0.1	0.2	09/11/24 15:02	2 mrd
Phosphorus, ortho dissolved (1312-DI)	EPA 365.1	1	<0.01	U	*	mg/L	0.01	0.05	09/07/24 1:12	pjb
Phosphorus, Total (1312-DI)	EPA 365.1	1	<0.01	U	*	mg/L	0.01	0.05	09/23/24 16:20) gfm
Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011	1	56	Н	*	mg/L	20	40	09/18/24 21:42	2 jck
Residue, Non-Filter (TSS) @180C (1312- DI)	SM 2540 D-2011/2015	1	<5	UH	*	mg/L	5	20	09/09/24 11:42	2 cob
Sulfate (1312-DI)	EPA 300.0	1	13.0		*	mg/L	0.9	2	09/13/24 14:07	bls



Project ID:

Sample ID: RV ABA TAILS

Inorganic Analytical Results

ACZ Sample ID: **L89863-02** Date Sampled: 03/04/24 09:40 Date Received: 08/29/24 Sample Matrix: Soil

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual X	Q Units	MDL	PQL	Date /	Analyst
Phosphorus, Total (1312-DI)	EPA 365.1							09/23/24 12:40	mrd
Total Hot Plate Digestion (1312)	EPA 3010A							09/24/24 12:34	smw
Total Hot Plate Digestion (1312)	EPA 3010A							09/09/24 20:07	jrj
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual X	Q Units	MDL	PQL	Date /	Analyst
Aluminum (1312)	EPA 6010D	1	0.160	BH *	mg/L	0.07	0.25	09/16/24 14:21	msp
Antimony (1312)	EPA 6020B	1	0.00801	Н *	mg/L	0.0004	0.002	09/11/24 19:53	jrj
Arsenic (1312)	EPA 6020B	1	0.00302	Н *	mg/L	0.0002	0.001	09/11/24 19:53	jrj
Barium (1312)	EPA 6020B	1	0.0582	Н *	mg/L	0.0005	0.0025	09/11/24 19:53	jrj
Beryllium (1312)	EPA 6020B	1	<0.0001	UH *	mg/L	0.0001	0.00025	09/11/24 19:53	jrj
Boron (1312)	EPA 6010D	1	<0.03	UH *	mg/L	0.03	0.1	09/16/24 14:21	msp
Cadmium (1312)	EPA 6020B	1	<0.00005	UH *	mg/L	0.00005	0.00025	09/11/24 19:53	jrj
Calcium (1312)	EPA 6010D	1	14.8	H *	mg/L	0.1	0.5	09/16/24 14:21	msp
Chromium (1312)	EPA 6020B	1	<0.0005	UH *	mg/L	0.0005	0.002	09/11/24 19:53	jrj
Cobalt (1312)	EPA 6020B	1	0.000065	BH *	mg/L	0.00005	0.00025	09/11/24 19:53	jrj
Copper (1312)	EPA 6020B	1	<0.0008	UH *	mg/L	0.0008	0.002	09/11/24 19:53	jrj
Iron (1312)	EPA 6010D	1	<0.06	UH *	mg/L	0.06	0.15	09/16/24 14:21	msp
Lead (1312)	EPA 6020B	1	0.0171	H *	mg/L	0.0001	0.0005	09/11/24 19:53	jrj
Lithium (1312)	EPA 6010D	1	0.0121	BH *	mg/L	0.008	0.04	09/16/24 14:21	msp
Magnesium (1312)	EPA 6010D	1	0.49	BH *	mg/L	0.2	1	09/16/24 14:21	msp
Manganese (1312)	EPA 6020B	1	0.0498	H *	mg/L	0.0004	0.002	09/11/24 19:53	jrj
Mercury (1312)	EPA 7470A	1	<0.0002	U *	mg/L	0.0002	0.001	09/12/24 15:16	aew
Molybdenum (1312)	EPA 6020B	1	0.0257	Н *	mg/L	0.0002	0.0005	09/11/24 19:53	jrj
Nickel (1312)	EPA 6020B	1	<0.0004	UH *	mg/L	0.0004	0.001	09/11/24 19:53	jrj
Potassium (1312)	EPA 6010D	1	5.19	Н *	mg/L	0.5	1	09/16/24 14:21	msp
Selenium (1312)	EPA 6020B	1	<0.0001	UH *	mg/L	0.0001	0.00025	09/11/24 19:53	jrj
Silica (1312)	EPA 6010D	1	2.1	Н *	mg/L	0.2	1	09/25/24 13:42	wtc
Silver (1312)	EPA 6020B	1	<0.0001	UH *	mg/L	0.0001	0.0005	09/15/24 13:54	jrj
Sodium (1312)	EPA 6010D	1	0.79	BH *	mg/L	0.2	1	09/16/24 14:21	msp
Strontium (1312)	EPA 6010D	1	0.302	Н *	mg/L	0.009	0.045	09/16/24 14:21	msp
Thallium (1312)	EPA 6020B	1	0.00013	BH *	mg/L	0.0001	0.0005	09/11/24 19:53	jrj
Tin (1312)	EPA 6010D	1	<0.04	UH *	mg/L	0.04	0.2	09/16/24 14:21	msp
Uranium (1312)	EPA 6020B	1	<0.0001	UH *	mg/L	0.0001	0.0005	09/11/24 19:53	jrj
Vanadium (1312)	EPA 6020B	1	<0.0005	UH *	mg/L	0.0005	0.002	09/11/24 19:53	jrj
Zinc (1312)	EPA 6020B	1	<0.006	UH *	mg/L	0.006	0.015	09/11/24 19:53	jrj



Project ID: Sample ID: RV ABA TAILS

Inorganic Analytical Results

ACZ Sample ID: **L89863-02** Date Sampled: 03/04/24 09:40 Date Received: 08/29/24 Sample Matrix: Soil

Soil Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Pyritic Sulfur)	EPA 600/2-78-054 3.2.6		31.9			t CaCO3/Kt	0.31	3.1	09/25/24 0:00	calc
Acid Neutralization Potential (calc)	EPA 600/2-78-054 1.3		74.0			t CaCO3/Kt	1	5	09/25/24 0:00	calc
Acid-Base Potential (calc on Pyritic Sulfur)	EPA 600/2-78-054 1.3		42.1			t CaCO3/Kt			09/25/24 0:00	calc
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	<1	U	*	Kg H2SO4/t	1	1	09/18/24 0:00	bdc
pH After Oxidation		1	9.4		*	units	0.1	0.1	09/18/24 0:00	bdc
Net Neutralization Potential	***Error***		0			t CaCO3/Kt			09/25/24 0:00	calc
Neutralization Potential as CaCO3	EPA 600/2-78-054 3.2.3 Modified (No Heat)	1	7.4		*	%	0.1	0.5	09/18/24 12:05	bdc
pH, (1312)	EPA 9045D/9040C									
pН			8.5			Units	0.1	0.1	09/25/24 0:00	LFP
Temperature			21			Units	0.1	0.1	09/25/24 0:00	LFP
pH, Saturated Paste	EPA 600/2-78-054 3.2.2									
Max Particle Size		1	250		*	um			09/21/24 0:00	kmb
рН		1	7.8		*	units	0.1	0.1	09/21/24 0:00	kmb
Sulfur Forms	EPA 600/2-78-054 3.2.4 Modified									
Sulfur HCI Residue		1	1.08		*	%	0.01	0.1	09/20/24 0:00	kmb
Sulfur HNO3 Residue		1	0.06	В	*	%	0.01	0.1	09/20/24 0:00	kmb
Sulfur Organic Residual		1	0.06	В	*	%	0.01	0.1	09/20/24 0:00	kmb
Sulfur Pyritic Sulfide		1	1.02			%	0.01	0.1	09/20/24 0:00	kmb
Sulfur Sulfate		1	0.08	В		%	0.01	0.1	09/20/24 0:00	kmb
Sulfur Total		1	1.16		*	%	0.01	0.1	09/20/24 0:00	kmb
Total Sulfur minus Sulfate		1	1.08			%	0.01	0.1	09/20/24 0:00	kmb
Soil Preparation										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees	USDA No. 1, 1972								09/04/24 8:54	jsa

i ulullotol		Bhation	Result	Guun	AG	onito		Bate	Analyse
Air Dry at 34 Degrees C	USDA No. 1, 1972							09/04/24 8:54	jsa
Crush and Pulverize (Ring & Puck)	EPA 600/2-78-054 3.1.3							09/11/24 9:12	jsa
Saturated Paste Extraction	USDA No. 60 (2)							09/20/24 9:07	lfp
Synthetic Precip. Leaching Procedure	EPA 1312							09/06/24 3:20	lfp
Synthetic Precip. Leaching Procedure	EPA 1312							09/06/24 0:30	lfp



Project ID: Sample ID: RV ABA TAILS

Inorganic Analytical Results

ACZ Sample ID: **L89863-02** Date Sampled: 03/04/24 09:40 Date Received: 08/29/24 Sample Matrix: Soil

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (1312 DI)	SM 2320 B-2011									
Bicarbonate as CaCO3		1	49.3	Н	*	mg/L	2	20	09/16/24 0:00	asn
Carbonate as CaCO3	3	1	<2	UH	*	mg/L	2	20	09/16/24 0:00	asn
Hydroxide as CaCO3		1	<2	UH	*	mg/L	2	20	09/16/24 0:00	asn
Total Alkalinity		1	49.3	н	*	mg/L	2	20	09/16/24 0:00	asn
Bromide (1312-DI)	EPA 300.0	5	<0.25	U	*	mg/L	0.25	1.25	09/16/24 16:33	bls
Carbon, total organic (TOC) (1312-DI)	SM 5310 B-2011/2014	1	3.2	В	*	mg/L	1	5	09/13/24 12:19) ems
Chloride (1312-DI)	EPA 300.0	1	<0.4	U	*	mg/L	0.4	2	09/13/24 14:25	5 bls
Conductivity @25C (1312-DI)	SM 2510 B-2011	1	99	н	*	umhos/cm	1	10	09/16/24 11:48	3 asn
Fluoride (1312 DI)	SM 4500-F C-2011	1	<0.15	UH	*	mg/L	0.15	0.35	09/14/24 18:01	jck
Hardness as CaCO3 (1312)	Calculation (SM 2340 B-2011)		39.0			mg/L	0.2	5	09/25/24 0:00	calc
Nitrate (1312 DI)	Calculation (NO3NO2-NO2)		0.248			mg/L	0.02	0.1	09/25/24 0:00	calc
Nitrate/Nitrite as N (1312-DI)	EPA 353.2	1	0.248		*	mg/L	0.02	0.1	09/07/24 0:57	pjb
Nitrite as N (1312-DI)	EPA 353.2	1	<0.01	U	*	mg/L	0.01	0.05	09/07/24 0:57	pjb
Nitrogen, ammonia (1312-DI)	EPA 350.1	1	0.568		*	mg/L	0.1	0.2	09/11/24 15:05	5 mrd
Phosphorus, ortho dissolved (1312-DI)	EPA 365.1	1	<0.01	U	*	mg/L	0.01	0.05	09/07/24 1:14	pjb
Phosphorus, Total (1312-DI)	EPA 365.1	1	<0.01	U	*	mg/L	0.01	0.05	09/23/24 16:21	gfm
Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011	1	54	н	*	mg/L	20	40	09/18/24 21:48	3 jck
Residue, Non-Filter (TSS) @180C (1312- DI)	SM 2540 D-2011/2015	1	<5	UH	*	mg/L	5	20	09/09/24 11:48	3 cob
Sulfate (1312-DI)	EPA 300.0	1	13.2		*	mg/L	0.9	2	09/13/24 14:25	5 bls



Project ID:

Sample ID: CBW SPLP TAILS

Inorganic Analytical Results

ACZ Sample ID: **L89863-03** Date Sampled: 03/04/24 09:40 Date Received: 08/29/24 Sample Matrix: Soil

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual X	Q Unit	s MDL	PQL	Date /	Analyst
Phosphorus, Total (1312-DI)	EPA 365.1							09/23/24 13:00	mrd
Total Hot Plate Digestion (1312)	EPA 3010A							09/09/24 22:24	jrj
Total Hot Plate Digestion (1312)	EPA 3010A							09/24/24 13:25	smw
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual X	Q Unit	s MDL	PQL	Date A	Analyst
Aluminum (1312)	EPA 6010D	1	0.225	BH *	ʻ mg/l	0.07	0.25	09/16/24 14:29	msp
Antimony (1312)	EPA 6020B	1	0.00474	Н *	′ mg/l	0.0004	0.002	09/11/24 20:02	jrj
Arsenic (1312)	EPA 6020B	1	0.00229	Н *	′ mg/l	0.0002	0.001	09/11/24 20:02	jrj
Barium (1312)	EPA 6020B	1	0.0473	Н *	ʻ mg/l	0.0005	0.0025	09/11/24 20:02	jrj
Beryllium (1312)	EPA 6020B	1	<0.0001	UH *	ʻ mg/l	0.0001	0.00025	09/11/24 20:02	jrj
Boron (1312)	EPA 6010D	1	<0.03	UH *	ʻ mg/l	0.03	0.1	09/16/24 14:29	msp
Cadmium (1312)	EPA 6020B	1	<0.00005	UH *	ʻ mg/l	0.00005	0.00025	09/11/24 20:02	jrj
Calcium (1312)	EPA 6010D	1	12.3	Н *	mg/l	0.1	0.5	09/16/24 14:29	msp
Chromium (1312)	EPA 6020B	1	<0.0005	UH *	ʻ mg/l	0.0005	0.002	09/11/24 20:02	jrj
Cobalt (1312)	EPA 6020B	1	0.000069	BH *	ʻ mg/l	0.00005	0.00025	09/11/24 20:02	jrj
Copper (1312)	EPA 6020B	1	<0.0008	UH *	mg/l	.0008	0.002	09/11/24 20:02	jrj
Iron (1312)	EPA 6010D	1	<0.06	UH *	mg/l	0.06	0.15	09/16/24 14:29	msp
Lead (1312)	EPA 6020B	1	0.01000	Н *	mg/l	0.0001	0.0005	09/11/24 20:02	jrj
Lithium (1312)	EPA 6010D	1	<0.008	UH *	mg/l	0.008	0.04	09/16/24 14:29	msp
Magnesium (1312)	EPA 6010D	1	0.40	BH *	mg/l	0.2	1	09/16/24 14:29	msp
Manganese (1312)	EPA 6020B	1	0.0433	Н *	ʻ mg/l	0.0004	0.002	09/11/24 20:02	jrj
Mercury (1312)	EPA 7470A	1	<0.0002	U *	^r mg/l	0.0002	0.001	09/12/24 15:17	aew
Molybdenum (1312)	EPA 6020B	1	0.0262	Н *	^r mg/l	0.0002	0.0005	09/11/24 20:02	jrj
Nickel (1312)	EPA 6020B	1	0.00042	BH *	ʻ mg/l	0.0004	0.001	09/11/24 20:02	jrj
Potassium (1312)	EPA 6010D	1	2.89	Н '	ʻ mg/l	0.5	1	09/16/24 14:29	msp
Selenium (1312)	EPA 6020B	1	<0.0001	UH *	ʻ mg/l	0.0001	0.00025	09/11/24 20:02	jrj
Silica (1312)	EPA 6010D	1	2.3	Н *	′ mg/l	0.2	1	09/25/24 13:46	wtc
Silver (1312)	EPA 6020B	1	<0.0001	UH *	ʻ mg/l	0.0001	0.0005	09/15/24 13:59	jrj
Sodium (1312)	EPA 6010D	1	0.98	BH *	ʻ mg/l	0.2	1	09/16/24 14:29	msp
Strontium (1312)	EPA 6010D	1	0.195	Н *	ʻ mg/l	0.009	0.045	09/16/24 14:29	msp
Thallium (1312)	EPA 6020B	1	<0.0001	UH *	ʻ mg/l	0.0001	0.0005	09/11/24 20:02	jrj
Tin (1312)	EPA 6010D	1	<0.04	UH *	ʻ mg/l	0.04	0.2	09/16/24 14:29	msp
Uranium (1312)	EPA 6020B	1	<0.0001	UH *	ʻ mg/l	0.0001	0.0005	09/11/24 20:02	jrj
Vanadium (1312)	EPA 6020B	1	0.00053	BH *	mg/l		0.002	09/11/24 20:02	jrj
Zinc (1312)	EPA 6020B	1	<0.006	UH *	r mg/l	0.006	0.015	09/11/24 20:02	jrj



Project ID: Sample ID: CBW SPLP TAILS ACZ Sample ID: **L89863-03** Date Sampled: 03/04/24 09:40 Date Received: 08/29/24 Sample Matrix: Soil

Soil Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Pyritic Sulfur)	EPA 600/2-78-054 3.2.6		11.6			t CaCO3/Kt	0.31	3.1	09/25/24 0:00	calc
Acid Neutralization Potential (calc)	EPA 600/2-78-054 1.3		46.0			t CaCO3/Kt	1	5	09/25/24 0:00	calc
Acid-Base Potential (calc on Pyritic Sulfur)	EPA 600/2-78-054 1.3		34.4			t CaCO3/Kt			09/25/24 0:00	calc
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	<1	U	*	Kg H2SO4/t	1	1	09/18/24 0:00	bdc
pH After Oxidation		1	9.9		*	units	0.1	0.1	09/18/24 0:00	bdc
Net Neutralization Potential	***Error***		0			t CaCO3/Kt			09/25/24 0:00	calc
Neutralization Potential as CaCO3 pH, (1312)	EPA 600/2-78-054 3.2.3 Modified (No Heat) EPA 9045D/9040C	1	4.6		*	%	0.1	0.5	09/18/24 15:02	2 bdc
pH, (1012)			8.5			Units	0.1	0.1	09/25/24 0:00	LFP
Temperature			20.9			Units	0.1	0.1	09/25/24 0:00	LFP
pH, Saturated Paste	EPA 600/2-78-054 3.2.2		20.0			<u>e</u>	0.1	011	00,20,2 . 0.00	
Max Particle Size		1	250		*	um			09/21/24 0:00	kmb
pH		1	8.1		*	units	0.1	0.1	09/21/24 0:00	kmb
Sulfur Forms	EPA 600/2-78-054 3.2.4 Modified	•					0.1		00/2 //2 / 0/00	
Sulfur HCI Residue		1	0.44		*	%	0.01	0.1	09/20/24 0:00	kmb
Sulfur HNO3 Residue		1	0.07	в	*	%	0.01	0.1	09/20/24 0:00	kmb
Sulfur Organic Residual		1	0.07	В	*	%	0.01	0.1	09/20/24 0:00	kmb
Sulfur Pyritic Sulfide		1	0.37			%	0.01	0.1	09/20/24 0:00	kmb
Sulfur Sulfate		1	0.10			%	0.01	0.1	09/20/24 0:00	kmb
Sulfur Total		1	0.54		*	%	0.01	0.1	09/20/24 0:00	kmb
Total Sulfur minus Sulfate		1	0.44			%	0.01	0.1	09/20/24 0:00	kmb
Soil Preparation										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees	USDA No. 1, 1972								09/04/24 9:00	jsa

Air Dry at 34 Degrees C	USDA No. 1, 1972	09/04/24 9:00	jsa
Crush and Pulverize (Ring & Puck)	EPA 600/2-78-054 3.1.3	09/11/24 9:25	jsa
Saturated Paste Extraction	USDA No. 60 (2)	09/20/24 9:11	lfp
Synthetic Precip. Leaching Procedure	EPA 1312	09/06/24 3:41	lfp
Synthetic Precip. Leaching Procedure	EPA 1312	09/06/24 5:13	lfp



Project ID: Sample ID: CBW SPLP TAILS

Inorganic Analytical Results

ACZ Sample ID: **L89863-03** Date Sampled: 03/04/24 09:40 Date Received: 08/29/24 Sample Matrix: Soil

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (1312 DI)	SM 2320 B-2011									
Bicarbonate as CaCO3		1	44.0	Н	*	mg/L	2	20	09/16/24 0:00	asn
Carbonate as CaCO3	3	1	<2	UH	*	mg/L	2	20	09/16/24 0:00	asn
Hydroxide as CaCO3		1	<2	UH	*	mg/L	2	20	09/16/24 0:00	asn
Total Alkalinity		1	44.0	н	*	mg/L	2	20	09/16/24 0:00	asn
Bromide (1312-DI)	EPA 300.0	5	<0.25	U	*	mg/L	0.25	1.25	09/16/24 17:27	/ bls
Carbon, total organic (TOC) (1312-DI)	SM 5310 B-2011/2014	1	3.0	В	*	mg/L	1	5	09/13/24 13:08	8 ems
Chloride (1312-DI)	EPA 300.0	1	<0.4	U	*	mg/L	0.4	2	09/13/24 15:19) bls
Conductivity @25C (1312-DI)	SM 2510 B-2011	1	80	н	*	umhos/cm	1	10	09/16/24 11:53	3 asn
Fluoride (1312 DI)	SM 4500-F C-2011	1	0.31	BH	*	mg/L	0.15	0.35	09/14/24 18:06	6 jck
Hardness as CaCO3 (1312)	Calculation (SM 2340 B-2011)		32			mg/L	0.2	5	09/25/24 0:00	calc
Nitrate (1312 DI)	Calculation (NO3NO2-NO2)		0.079	В		mg/L	0.02	0.1	09/25/24 0:00	calc
Nitrate/Nitrite as N (1312-DI)	EPA 353.2	1	0.079	В	*	mg/L	0.02	0.1	09/07/24 0:59	pjb
Nitrite as N (1312-DI)	EPA 353.2	1	<0.01	U	*	mg/L	0.01	0.05	09/07/24 0:59	pjb
Nitrogen, ammonia (1312-DI)	EPA 350.1	1	0.329		*	mg/L	0.1	0.2	09/11/24 15:07	' mrd
Phosphorus, ortho dissolved (1312-DI)	EPA 365.1	1	<0.01	U	*	mg/L	0.01	0.05	09/07/24 1:16	pjb
Phosphorus, Total (1312-DI)	EPA 365.1	1	<0.01	U	*	mg/L	0.01	0.05	09/23/24 16:22	2 gfm
Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011	1	44	Н	*	mg/L	20	40	09/18/24 21:54	l jck
Residue, Non-Filter (TSS) @180C (1312- DI)	SM 2540 D-2011/2015	1	<5	UH	*	mg/L	5	20	09/09/24 11:54	cob
Sulfate (1312-DI)	EPA 300.0	1	8.45		*	mg/L	0.9	2	09/13/24 15:19) bls



Inorganic Reference

Batch	r Explanations A distinct set of samples analyzed at a specific time		
Found	Value of the QC Type of interest		
Limit	Upper limit for RPD, in %.		
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)		
MDL	Method Detection Limit. Same as Minimum Reporting Limit ur	nless omitted or e	qual to the POL (see comment #5)
MDL	Allows for instrument and annual fluctuations.		
PCN/SCN	A number assigned to reagents/standards to trace to the man	ufacturer's certific	ate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "		
QC	True Value of the Control Sample or the amount added to the		
Rec	Recovered amount of the true value or spike added, in % (exc		/Kq)
RPD	Relative Percent Difference, calculation used for Duplicate QC		
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)		
Sample	Value of the Sample of interest		
0l- T -			
Sample Ty AS	Analytical Spike (Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicat
ASD	Analytical Spike (Post Digestion) Duplicate	LFB	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank
ICB	Initial Calibration Blank	MS	Matrix Spike
ICV	Initial Calibration Verification standard	MS MSD	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	PBW	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	PQV	•
		FUV	Practical Quantitation Verification standard
		SDL	Practical Quantitation Verification standard Serial Dilution
LCSW	Laboratory Control Sample - Water		
<i>LCSW</i> Sample Ty	Laboratory Control Sample - Water	SDL	Serial Dilution
<i>LCSW</i> Sample Ty Blanks	Laboratory Control Sample - Water ype Explanations Verifies that there is no or minimal co	SDL	Serial Dilution e prep method or calibration procedure.
LCSW Sample Ty Blanks Control Sa	Laboratory Control Sample - Water	SDL ontamination in the including the prep	Serial Dilution e prep method or calibration procedure. o procedure.
LCSW Sample Ty Blanks Control Sa Duplicates	Laboratory Control Sample - Water The Explanations Verifies that there is no or minimal comples Verifies the accuracy of the method, Verifies the precision of the instrume	SDL ontamination in the including the prep nt and/or method	Serial Dilution e prep method or calibration procedure. o procedure.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For	Laboratory Control Sample - Water	SDL ontamination in the including the prep nt and/or method ces, if any.	Serial Dilution e prep method or calibration procedure. o procedure.
LCSW Sample Ty Blanks Control Sa Duplicates	Laboratory Control Sample - Water The Explanations Verifies that there is no or minimal comples Verifies the accuracy of the method, Verifies the precision of the instrume	SDL ontamination in the including the prep nt and/or method ces, if any.	Serial Dilution e prep method or calibration procedure. o procedure.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For	Laboratory Control Sample - Water rpe Explanations weifies that there is no or minimal comples Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix Determines sample matrix interferen Verifies the validity of the calibration.	SDL ontamination in the including the prep nt and/or method ces, if any.	Serial Dilution e prep method or calibration procedure. o procedure.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard	Laboratory Control Sample - Water rpe Explanations weifies that there is no or minimal comples Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix Determines sample matrix interferen Verifies the validity of the calibration.	SDL ontamination in the including the prep nt and/or method ces, if any.	Serial Dilution e prep method or calibration procedure. o procedure.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers	Laboratory Control Sample - Water	SDL ontamination in the including the prep nt and/or method ces, if any.	Serial Dilution e prep method or calibration procedure. o procedure. ted value is an estimated quantity.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B	Laboratory Control Sample - Water rpe Explanations weifies that there is no or minimal comples Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix Determines sample matrix interferen Verifies the validity of the calibration. s (Qual) Analyte concentration detected at a value between MDL and F	SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa n immediate hold	Serial Dilution e prep method or calibration procedure. o procedure. ted value is an estimated quantity.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H	Laboratory Control Sample - Water rpe Explanations with the explanations with explanations	SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa n immediate hold gative threshold.	Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L	Laboratory Control Sample - Water vpe Explanations with the explanation of the explanation with the explanation of the explanation s (Qual) Analysis exceeded method hold time. pH is a field test with an Target analyte response was below the laboratory defined negative explanation.	SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa n immediate hold gative threshold. e level of the assoc	Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time. pciated value.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L	Laboratory Control Sample - Water vpe Explanations with the explanations	SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa n immediate hold gative threshold. e level of the assoc	Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time. pciated value.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U	Laboratory Control Sample - Water vpe Explanations with the explanations	SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa n immediate hold gative threshold. e level of the associate the sample detect	Serial Dilution e prep method or calibration procedure. procedure. ted value is an estimated quantity. time. pociated value. tion limit.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U	Laboratory Control Sample - Water rpe Explanations mples Verifies that there is no or minimal comples tifies Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix Determines sample matrix interferent Verifies the validity of the calibration. s (Qual) Analyte concentration detected at a value between MDL and F Analyte concentration detected at a value between MDL and F Analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the	SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa n immediate hold gative threshold. e level of the associate the sample detection and Wastes, Marc	Serial Dilution e prep method or calibration procedure. p procedure. to procedure. ted value is an estimated quantity. time. botiated value. tion limit. ch 1983.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U	Laboratory Control Sample - Water rpe Explanations Werifies that there is no or minimal comples Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix Determines sample matrix interferent Verifies the validity of the calibration. s (Qual) Analyte concentration detected at a value between MDL and F Analyte concentration detected at a value between MDL and F Analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the EPA 600/4-83-020. Methods for Chemical Analysis of Water and	SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa in immediate hold gative threshold. e level of the associa the sample detect and Wastes, Marc in Substances in	Serial Dilution e prep method or calibration procedure. procedure. ted value is an estimated quantity. time. bciated value. tion limit. ch 1983. Environmental Samples, August 1993.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U U thod Refere (1) (2)	Laboratory Control Sample - Water ype Explanations with the explanation of the instrume with the explanation of the instrume with the explanation of the instrume with the explanation of the exploration. state with the exploration of the exploration. state state with the exploration of the exploration. state with the exploration of the exploration. state with the exploration of the exploration. with the exploration. <t< td=""><td>SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa in immediate hold gative threshold. e level of the associa the sample detect and Wastes, Marc in Substances in</td><td>Serial Dilution e prep method or calibration procedure. p procedure. to procedure. ted value is an estimated quantity. time. bciated value. tion limit. bch 1983. Environmental Samples, August 1993.</td></t<>	SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa in immediate hold gative threshold. e level of the associa the sample detect and Wastes, Marc in Substances in	Serial Dilution e prep method or calibration procedure. p procedure. to procedure. ted value is an estimated quantity. time. bciated value. tion limit. bch 1983. Environmental Samples, August 1993.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U U thod Reference (1) (2) (3)	Laboratory Control Sample - Water vpe Explanations Werifies that there is no or minimal comples Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix Determines sample matrix interferent Verifies the validity of the calibration. s (Qual) Analyte concentration detected at a value between MDL and F Analyte sexceeded method hold time. pH is a field test with ar Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the ences EPA 600/R-83-020. Methods for Chemical Analysis of Water at EPA 600/R-94-111. Methods for the Determination of Inorgan EPA 600/R-94-111. Methods for the Determination of Metals in	SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa in immediate hold gative threshold. e level of the assoc the sample detect and Wastes, Marca nic Substances in in Environmental	Serial Dilution e prep method or calibration procedure. procedure. ted value is an estimated quantity. time. bciated value. tion limit. ch 1983. Environmental Samples, August 1993.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U U thod Reference (1) (2) (3) (4) (5)	Laboratory Control Sample - Water rpe Explanations Imples Verifies that there is no or minimal comples Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix Determines sample matrix interferent Verifies the validity of the calibration. s (Qual) Analyte concentration detected at a value between MDL and F Analyte concentration detected at a value between MDL and F Analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the ences EPA 600/R-93-100. Methods for Chemical Analysis of Water at EPA 600/R-94-111. Methods for the Determination of Inorgan EPA 600/R-94-111. Methods for Evaluating Solid Waste.	SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa n immediate hold gative threshold. e level of the assoc the sample detect and Wastes, Marca nic Substances in in Environmental	Serial Dilution e prep method or calibration procedure. procedure. ted value is an estimated quantity. time. bciated value. tion limit. ch 1983. Environmental Samples, August 1993.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U thod Referent (1) (2) (3) (4) (5) mments	Laboratory Control Sample - Water rpe Explanations Werifies that there is no or minimal comples Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix Determines sample matrix interferen Verifies the validity of the calibration. s (Qual) Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with an Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the A600/R-93-100. Methods for Chemical Analysis of Water an EPA 600/R-93-100. Methods for the Determination of Inorgan EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wasteward	SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa in immediate hold gative threshold. e level of the associa the sample detect and Wastes, Marc in Environmental ater.	Serial Dilution e prep method or calibration procedure. procedure. to procedure. ted value is an estimated quantity. time. botated value. tion limit. ch 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U thod Reference (1) (2) (3) (4) (5) mments (1)	Laboratory Control Sample - Water rpe Explanations Werifies that there is no or minimal comples Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix Determines sample matrix interferent Verifies the validity of the calibration. s (Qual) Analyte concentration detected at a value between MDL and F Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with and Target analyte response was below the laboratory defined nego The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the ences EPA 600/R-93-100. Methods for Chemical Analysis of Water at EPA 600/R-94-111. Methods for the Determination of Inorgant EPA SW-846. Test Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wasteward QC results calculated from raw data. Results may vary slightly	SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa n immediate hold gative threshold. e level of the association the sample detection and Wastes, Marco nic Substances in in Environmental ater.	Serial Dilution e prep method or calibration procedure. p procedure. to procedure. ted value is an estimated quantity. time. bciated value. tion limit. ch 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. alues are used in the calculations.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U thod Reference (1) (2) (3) (4) (5) mments (1) (2)	Laboratory Control Sample - Water rpe Explanations Werifies that there is no or minimal comples Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix Determines sample matrix interferen Verifies the validity of the calibration. s (Qual) Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with an Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the ences EPA 600/R-93-100. Methods for Chemical Analysis of Water at EPA 600/R-94-111. Methods for the Determination of Inorgan EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wasteward QC results calculated from raw data. Results may vary slightly Soil, Sludge, and Plant matrices for Inorganic analyses are reported.	SDL ontamination in the including the prep int and/or method ces, if any. PQL. The associa in immediate hold gative threshold. e level of the associa the sample detect and Wastes, Marco in Environmental ater.	Serial Dilution e prep method or calibration procedure. p procedure. to procedure. ted value is an estimated quantity. time. bciated value. tion limit. ch 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. alues are used in the calculations.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U thod Reference (1) (2) (3) (4) (5) mments (1) (2) (3) (3)	Laboratory Control Sample - Water rpe Explanations Werifies that there is no or minimal comples Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix Determines sample matrix interferent Verifies the validity of the calibration. s (Qual) Analyte concentration detected at a value between MDL and F Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with ar Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the ences EPA 600/R-93-100. Methods for the Determination of Inorganic EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastewa QC results calculated from raw data. Results may vary slightly Soil, Sludge, and Plant matrices for Inorganic analyses are reported on an "as	SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa n immediate hold gative threshold. e level of the association the sample detection and Wastes, Marca in Environmental ater.	Serial Dilution e prep method or calibration procedure. procedure. to procedure. ted value is an estimated quantity. time. bciated value. tion limit. ch 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. alues are used in the calculations. eight basis.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U thod Reference (1) (2) (3) (4) (5) mments (1) (2)	Laboratory Control Sample - Water rpe Explanations Imples Verifies that there is no or minimal comples Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix Determines sample matrix interferen Verifies the validity of the calibration. s (Qual) Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with an Target analyte response was below the laboratory defined neg. The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the associated value is either the sample quantitation limit or the EPA 600/R-93-100. Methods for Chemical Analysis of Water and EPA 600/R-93-100. Methods for the Determination of Inorgani EPA 600/R-94-111. Methods for the Determination of Metals is EPA SW-846. Test Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wasteward QC results calculated from raw data. Results may vary slightly Soil, Sludge, and Plant matrices for Inorganic analyses are reported on an "as An asterisk in the "XQ" column indicates there is an extended	SDL ontamination in the including the prep nt and/or method ces, if any. PQL. The associa n immediate hold gative threshold. e level of the association the sample detection and Wastes, Marca in Environmental ater.	Serial Dilution e prep method or calibration procedure. procedure. to procedure. ted value is an estimated quantity. time. bciated value. tion limit. ch 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. alues are used in the calculations. eight basis.
LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U thod Reference (1) (2) (3) (4) (5) mments (1) (2) (3) (3)	Laboratory Control Sample - Water rpe Explanations Werifies that there is no or minimal comples Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix Determines sample matrix interferent Verifies the validity of the calibration. s (Qual) Analyte concentration detected at a value between MDL and F Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with ar Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the ences EPA 600/R-93-100. Methods for the Determination of Inorganic EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastewa QC results calculated from raw data. Results may vary slightly Soil, Sludge, and Plant matrices for Inorganic analyses are reported on an "as	SDL ontamination in the including the prep int and/or method ces, if any. PQL. The associa in immediate hold gative threshold. e level of the association the sample detect and Wastes, Marco in Environmental ater. y if the rounded va- ported on a dry we received" basis. qualifier and/or ca	Serial Dilution e prep method or calibration procedure. p procedure. to procedure. ted value is an estimated quantity. time. botated value. tion limit. ch 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. alues are used in the calculations. eight basis. ertification qualifier

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

REP001.03.15.02

OURAYSM

ACZ Project ID: L89863

Alkalinity as CaC	:03		SM2320E	3 - Titration									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597299													
WG597299PBW	PBW	09/16/24 11:21				15.1	mg/L		-20	20			
WG597299LCSW2	LCSW	09/16/24 11:30	WC240814-1	820.0001		792.2	mg/L	97	90	110			
WG596691PBS	PBS	09/16/24 11:38				12.9	mg/L		-20	20			
L89863-03DUP1	DUP	09/16/24 11:58			44	51.4	mg/L				16	20	
L89863-03DUP2	DUP	09/16/24 12:03			44	50.3	mg/L				13	20	
WG597299LCSW4	LCSW	09/16/24 12:11	WC240814-1	820.0001		795.9	mg/L	97	90	110			
Aluminum (1312)		EPA 601	0D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597330													
WG597330ICV	ICV	09/16/24 13:42	II240829-1	2		1.993	mg/L	100	90	110			
WG597330ICB	ICB	09/16/24 13:45				U	mg/L		-0.15	0.15			
WG596687PBS	PBS	09/16/24 14:10				U	mg/L		-0.15	0.15			
WG596687LFB1	LFB	09/16/24 14:14	II240808-3	1.0025		1.036	mg/L	103	80	120			
L89863-03MS	MS	09/16/24 14:33	11240808-3	1.0025	.225	1.271	mg/L	104	75	125			
L89863-03MSD	MSD	09/16/24 14:36	II240808-3	1.0025	.225	1.282	mg/L	105	75	125	1	20	
L89863-03DUP	DUP	09/16/24 14:40			.225	.243	mg/L				8	20	RA
Antimony (1312)			EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597078													
WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.02002		.01891	mg/L	94	90	110			
WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.0012	0.0012			
WG596687PBS	PBS	09/11/24 19:46				U	mg/L		-0.0012	0.0012			
WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.01		.00989	mg/L	99	80	120			
L89863-02MS	MS	09/11/24 19:55	MS240613-7	.01	.00801	.01816	mg/L	102	75	125			
L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.01	.00801	.01831	mg/L	103	75	125	1	20	
L89863-03DUP	DUP	09/11/24 20:04			.00474	.00515	mg/L				8	20	
Arsenic (1312)			EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597078													
WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.04998	mg/L	100	90	110			
WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.0006	0.0006			
WG596687PBS	PBS	09/11/24 19:46				U	mg/L		-0.0006	0.0006			
WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.0501		.04955	mg/L	99	80	120			
L89863-02MS	MS	09/11/24 19:55	MS240613-7	.0501	.00302	.05375	mg/L	101	75	125			
				0504							•	00	
L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.0501	.00302	.05364	mg/L	101	75	125	0	20	

OURAYSM

ACZ Project ID: L89863

Barium (1312)			EPA 6020	В									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597078													
WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.05125	mg/L	103	90	110			
WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.0015	0.0015			
WG596687PBS	PBS	09/11/24 19:46				U	mg/L		-0.0015	0.0015			
WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.05005		.04907	mg/L	98	80	120			
L89863-02MS	MS	09/11/24 19:55	MS240613-7	.05005	.0582	.10895	mg/L	101	75	125			
L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.05005	.0582	.11049	mg/L	104	75	125	1	20	
L89863-03DUP	DUP	09/11/24 20:04			.0473	.04639	mg/L				2	20	
Beryllium (1312))		EPA 6020	В									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597078													
WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.050825	mg/L	102	90	110			
WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.00024	0.00024			
WG596687PBS	PBS	09/11/24 19:46				U	mg/L		-0.00024	0.00024			
WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.05005		.049582	mg/L	99	80	120			
L89863-02MS	MS	09/11/24 19:55	MS240613-7	.05005	U	.051585	mg/L	103	75	125			
L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.05005	U	.049972	mg/L	100	75	125	3	20	
L89863-03DUP	DUP	09/11/24 20:04			U	U	mg/L		10	.20	0	20	RA
Boron (1312)			EPA 6010	D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597330				_					_				
WG597330ICV	ICV	09/16/24 13:42	II240829-1	2		2.069	mg/L	103	90	110			
WG597330ICB	ICB	09/16/24 13:45	1240020 1	2		2.003 U	mg/L	105	-0.09	0.09			
WG596687PBS	PBS	09/16/24 14:10				U	mg/L		-0.09	0.09			
WG596687LFB1	LFB	09/16/24 14:10	11240808-3	.5005		.539	mg/L	108	-0.09 80	120			
L89863-03MS	MS	09/16/24 14:33	11240808-3	.5005	U	.538	mg/L	107	75	125			
L89863-03MSD	MSD	09/16/24 14:36	11240808-3	.5005	U	.537	mg/L	107	75	125	0	20	
L89863-03DUP	DUP	09/16/24 14:40	112400000	.5005	U	.557 U	mg/L	107	75	125	0	20	RA
Bromide (1312-I	ור		EPA 300.0	า									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597114	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,											
WG597114ICV	ICV	09/09/24 14:47	WI240909-10	4.004		4.018	mg/L	100	90	110			
WG597114ICB	ICB	09/09/24 15:05				U	mg/L		-0.05	0.05			
WG597296													
	I FR	09/16/24 15:40	WI240708-2	15		1 478	ma/L	99	90	110			
WG597296LFB	LFB PBS	09/16/24 15:40 09/16/24 15:58	WI240708-2	1.5		1.478 U	mg/L mg/L	99	90 -0.05	110 0.05			
WG597296LFB WG596691PBS	PBS	09/16/24 15:58			11	U	mg/L		-0.05	0.05			
WG597296LFB			WI240708-2 WI240708-2 WI240708-2	1.5 7.5 7.5	U U			99 94 97			2	20	

OURAYSM

ACZ Project ID: L89863

Cadmium (1312))		EPA 6020	ОB									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597078													
WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.051238	mg/L	102	90	110			
WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.00015	0.00015			
WG596687PBS	PBS	09/11/24 19:46				U	mg/L		-0.00015	0.00015			
WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.05005		.048374	mg/L	97	80	120			
L89863-02MS	MS	09/11/24 19:55	MS240613-7	.05005	U	.049344	mg/L	99	75	125			
L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.05005	U	.049315	mg/L	99	75	125	0	20	
L89863-03DUP	DUP	09/11/24 20:04			U	U	mg/L				0	20	RA
Calcium (1312)			EPA 601	DD									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597330													
WG597330ICV	ICV	09/16/24 13:42	II240829-1	100		98	mg/L	98	90	110			
WG597330ICB	ICB	09/16/24 13:45				U	mg/L		-0.3	0.3			
WG596687PBS	PBS	09/16/24 14:10				U	mg/L		-0.3	0.3			
WG596687LFB1	LFB	09/16/24 14:14	11240808-3	67.91666		68.86	mg/L	101	80	120			
_89863-03MS	MS	09/16/24 14:33	11240808-3	67.91666	12.3	81.17	mg/L	101	75	125			
L89863-03MSD	MSD	09/16/24 14:36	11240808-3	67.91666	12.3	81.52	mg/L	102	75	125	0	20	
_89863-03DUP	DUP	09/16/24 14:40			12.3	12.27	mg/L				0	20	
Carbon, total or	ganic (T	OC) (1312-DI)	SM 5310	B-2011/20	14								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG596844													
WG596844ICV	ICV	09/13/24 10:54	WI240821-3	100		99.2	mg/L	99	90	110			
WG596844ICB	ICB	09/13/24 11:07				U	mg/L		-2.5	2.5			
WG596844LFB	LFB	09/13/24 11:38	WI240821-4	50		50.1	mg/L	100	85	115			
WG596691PBS	PBS	09/13/24 11:53				U	mg/L		-2.5	2.5			
L89863-02AS	AS	09/13/24 12:34	WI240821-4	50	3.2	53.9	mg/L	101	85	115			
L89863-02ASD	ASD	09/13/24 12:52	WI240821-4	50	3.2	54	mg/L	102	85	115	0	15	
L89863-03DUP	DUP	09/13/24 13:20		00	3	3	mg/L	102	00	110	0	15	RA
Chloride (1312-I	DI)		EPA 300.	.0									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG594885													
WG594885ICV	ICV	08/06/24 17:10	WI240806-11	19.98		20.07	mg/L	100	90	110			
WG594885ICB	ICB	08/06/24 17:28				U	mg/L		-0.4	0.4			
WG597226						30.22	mg/L	101	90	110			
	LFB	09/13/24 13:31	WI240708-2	30		30.22							
WG597226 WG597226LFB WG596691PBS	LFB PBS	09/13/24 13:31 09/13/24 13:49	WI240708-2	30									
WG597226LFB WG596691PBS	PBS	09/13/24 13:49			U	U	mg/L		-0.4	0.4			
			WI240708-2 WI240708-2 WI240708-2	30 30 30	U U			103 97			5	20	

OURAYSM

ACZ Project ID: L89863

Chromium (1312)		EPA 6020	B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597078													
WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.05087	mg/L	102	90	110			
WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.0015	0.0015			
WG596687PBS	PBS	09/11/24 19:46				U	mg/L		-0.0015	0.0015			
WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.05005		.04968	mg/L	99	80	120			
L89863-02MS	MS	09/11/24 19:55	MS240613-7	.05005	U	.04952	mg/L	99	75	125			
L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.05005	U	.0503	mg/L	100	75	125	2	20	
L89863-03DUP	DUP	09/11/24 20:04			U	U	mg/L				0	20	RA
Cobalt (1312)			EPA 6020)B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597078													
WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.050889	mg/L	102	90	110			
WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.00015	0.00015			
WG596687PBS	PBS	09/11/24 19:46				U	mg/L		-0.00015	0.00015			
WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.05005		.050284	mg/L	100	80	120			
L89863-02MS	MS	09/11/24 19:55	MS240613-7	.05005	.000065	.049963	mg/L	100	75	125			
L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.05005	.000065	.04934	mg/L	98	75	125	1	20	
L89863-03DUP	DUP	09/11/24 20:04			.000069	.000064	mg/L				8	20	RA
Conductivity @2	5C (131	2-DI)	SM 2510 I	B-2011									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597299													
WG597299PBW	PBW	09/16/24 11:21				1	umhos/cm		-10	10			
WG597299LCSW1	LCSW	09/16/24 11:28	PCN627186	1410		1421	umhos/cm	101	90	110			
WG596691PBS	PBS	09/16/24 11:38				2	umhos/cm		-4	4			
L89863-03DUP1	DUP	09/16/24 11:58			80	79	umhos/cm				1	20	
L89863-03DUP2	DUP	09/16/24 12:03			80	79	umhos/cm				1	20	
WG597299LCSW3	LCSW	09/16/24 12:08	PCN627186	1410		1421	umhos/cm	101	90	110			
Copper (1312)			EPA 6020)B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597078													
WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.05162	mg/L	103	90	110			
WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.0024	0.0024			
WG596687PBS	PBS	09/11/24 19:46				U	mg/L		-0.0024	0.0024			
WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.05005		.05025	mg/L	100	80	120			
L89863-02MS	MS	09/11/24 19:55	MS240613-7	.05005	U	.0504	mg/L	101	75	125			
200000-02100													
L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.05005	U	.05096	mg/L	102	75	125	1	20	

OURAYSM

ACZ Project ID: L89863

VGS97257 Vic Vi	Fluoride (1312 [DI)		SM 4500-	F C-2011									
WG897257ICV ICV 09/14/24 17.35 00/14/24 17.35 00/14/24 17.31 WG896801PBS WG24011-1 PB 2 2.13 U mpl U 107 U 90 U 110 U U U MB< U 0.3 U 0.3 U U 0.3 U 0.3 U <th< th=""><th>ACZ ID</th><th>Туре</th><th>Analyzed</th><th>PCN/SCN</th><th>QC</th><th>Sample</th><th>Found</th><th>Units</th><th>Rec%</th><th>Lower</th><th>Upper</th><th>RPD</th><th>Limit</th><th>Qual</th></th<>	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WGS972571CB ICB 09/14/24 17.31 VC20011-1 5 JU mpl. 101 90. 101 90. 101 90. 101 90. 101 90. 101 90. 101 90. 101 90. 101 90. 101 90. 101 90. 101 90. 101 90. 101 90. 101 90. 101 90. 101 90. 100 101 90. 100 100 101 90. 90. 100 </td <td>WG597257</td> <td></td>	WG597257													
WGS97257LFB WGS989104PS BAS LFB 09/14/24 17:43 09/14/24 17:43 09/14/24 18:21 WC240411:1 WC304911 5 5.07 U 3.1 mgL 5.26 .31 101 mgL 5.26 90 09 90 09 10 0.3 U 0.3 0.3 0.3 L88883-03.DUP DUP 09/14/24 18:21 WC240411:1 5 3.1 3.8 mgL 99 90 10 0.3 0.3 L88883-03.DUP OP/14/24 18:21 WC240411:1 5 3.1 3.8 mgL 99 90 10 10 0.3 10 L88883-03.DUP OP/14/24 18:21 WC240411:1 5 3.1 3.8 mgL Intert U 10	WG597257ICV	ICV	09/14/24 17:25	WC240914-1	2		2.13	mg/L	107	90	110			
NGS96691PBS PBS 09/14/24 18:14 WC24041:1 5 3.1 5.26 mpl. 9.01 9.01 10.0 20 20 RA B8883-03DVP 0P/14/24 18:14 WC24041:1 5 3.1 3.3 mpl. 9.01 9.01 10.0 20 RA Ibera (1312) Type Analyzed PCNSON QC Sample Found Units Rec.% Lower Upper RPD Linit Qual WGS97330ICV ICV 09/16/24 14:32 11240805-3 1.003 U mgl. -0.18 0.18 Linit Qual mgl. -0.18 0.18 Linit Qual mgl. -0.18 0.18 Linit Qual MGS963031 NGL MGL MGL 1.01 NGL 1.01	WG597257ICB	ICB	09/14/24 17:33				U	mg/L		-0.3	0.3			
L88883-03AN AS 09/14/24 18:14 WC240411-1 5 3.1 5.28 mgL 99 90 110 20 20 RA L89883-03ADUP MD Analyzed PCN/SCN QC Sample Ford Units Rec.% Lower Uper RP Limit Qual VG597330CW ICS 09/16/24 13:45 II240829-1 2. 1.943 mgL 97 90 110 U MGS VG597330CW ICS 09/16/24 13:45 II240829-1 1.034 mgL 1.03 0.18 0.18 U U mgL -0.18 0.18 U U 1.004 mgL 0.18 0.18 U U MGS 1.003 U 1.014 mgL 1.014 0.18 0.18 U U 1.014 mgL 1.014 0.18 0.18 U MGS 1.003 U 1.014 mgL 1.014 mgL 1.02 0.0 1.00 U	WG597257LFB	LFB	09/14/24 17:43	WC240411-1	5		5.07	mg/L	101	90	110			
L88883-30DUP DUP 09/14/24 18:21	WG596691PBS	PBS	09/14/24 17:51				U	mg/L		-0.3	0.3			
Iron (1312) EPA 6010D Aczi D Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Qual WG597330/CV ICV 09/16/24 13:42 III246829-1 2 1.943 mg/L 97 90 110 - - - - 1.0 0.18 0.18 - - - 0.18 0.18 0.18 - - - 0.18 0.18 0.18 - - 0.18 0.18 0.18 0.01602414:3 II240808-3 1.003 U 1.041 mg/L 103 8.0 1.20 - 0 2.0 RA L88683-03MSD MSD 09/16/24 14:36 II240908-3 1.003 U U U mg/L 103 75 125 L L L L 20 RA L89863-03MSD MSD 09/16/24 14:43 III24098-3 1.003 U U	L89863-03AS	AS	09/14/24 18:14	WC240411-1	5	.31	5.26	mg/L	99	90	110			
CAZ ID Type Analyzed PCN/SCN QC Sample Found Units Rac% Lower Upper RPD Limit Qual WGS97330 WGS97330 ICV 0.9/16/24 13.42 II240829-1 2 1.943 mgL 97 90 110	L89863-03DUP	DUP	09/14/24 18:21			.31	.38	mg/L				20	20	RA
WGS97330 Vick	Iron (1312)			EPA 6010)D									
Victor ICV 09/16/24 13:42 II240829-1 2 1.943 mg/L 97 90 110 WGS97330ICB ICB 09/16/24 13:45 U mg/L -0.18 0.18 0.18 WGS96887PBS PBS 09/16/24 14:34 II240808-3 1.003 U ng/L 104 75 125 1 20 RA L89863-03MS MS 09/16/24 14:34 II240808-3 1.003 U 1.041 mg/L 103 75 125 1 20 RA L89863-03MS MSD 09/16/24 14:43 II240808-3 1.003 U 1.031 mg/L 103 75 125 1 20 RA L89863-03MS MSD 09/16/24 14:43 II240808-3 1.003 U 1.031 mg/L 103 75 125 1 20 RA L89863-02MS MSD 09/11/24 19:45 MS240613-12 .05 .05098 mg/L 102 90 110 1	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WGS973301CB ICB 09/16/24 13.45 U mg/L -0.18 0.18 U mg/L -0.18 0.18 U U U mg/L -0.18 0.18 0.18 U <td>WG597330</td> <td></td>	WG597330													
WGS96887PLS ICB 09/16/24 13:45 U mg/L -0.18 0.18 U 5.5 WGS96887PLS PBS 09/16/24 14:10 11240808-3 1.003 1.034 mg/L 103 800 1.20 1.25	WG597330ICV	ICV	09/16/24 13:42	II240829-1	2		1.943	mg/L	97	90	110			
WGS96687PBS PBS 09/16/24 14:10 III240808-3 1.003 U 1.034 mg/L 103 80 120 L89863.03MS MS 09/16/24 14:33 III240808-3 1.003 U 1.041 mg/L 104 75 125 1 20 L89863.03MSD DD 09/16/24 14:38 III240808-3 1.003 U 1.041 mg/L 104 75 125 1 20 RA L89863.03MSD DD/H0/24 14:48 III240808-3 1.003 U 1.031 mg/L 103 75 125 1 20 RA Lead (1312) DUP 09/16/24 14:35 MS240613-12 .05 Sample Found Unit Rec* Lower Upper RPD Linit Qual WGS970780C ICV 09/11/24 19:35 MS240613-7 .05005 .0495 mg/L .0003 0.0003	WG597330ICB							-	-					
WGS96687LFB1 LFB 09/16/24 14:31 II240808-3 1.003 U 1.014 mg/L 103 80 120 L89863-03MSD MSD 09/16/24 14:30 II240808-3 1.003 U 1.011 mg/L 103 75 125 1 20 L89863-03MSD DUP 09/16/24 14:40 II240808-3 1.003 U 1.01 mg/L 103 75 125 1 20 RA L89863-03DUP O9/16/24 14:40 II240808-3 1.003 U 1.003 mg/L 103 75 125 1 20 RA Lead (1312) Typ Analyzod PCN/SCN QC Sample Foun Units Rec' Lower Upper RPD Linit Qual WGS97078CV ICV 09/11/24 19:47 MS240613-72 .05005 .04957 mg/L 90 80 120 V B7 WGS96867PBS PBS 09/11/24 19:47 MS240613-7 .05005 .0171 .06732 mg/L 90 80 120 V B7	WG596687PBS	PBS	09/16/24 14:10				U	mg/L			0.18			
LasgeG3-03MS MS 09/16/24 14:33 II/240808-3 1.003 U 1.041 mg/L 104 75 125 1 20 LasgeG3-03MSD DUP 09/16/24 14:40 11/240808-3 1.003 U 1.031 mg/L 103 75 125 1 20 RA LasgeG3-03DUP DUP 09/16/24 14:40 PCN/SCN QC Sample Found Units Rec.* Lower Upper RPD Linit Qual KG597078 Type Analyzed PCN/SCN QC Sample Mos mg/L 102 90 110 V MG/L MG/L MG/L MG/L MG/L MG/L 0.0003 0.0003 V MG/L	WG596687LFB1			II240808-3	1.003			mg/L	103					
L89863-03MSD L89863-03DUP MSD UP 09/16/24 14:40 II240808-3 1.003 U 1.031 mg/L 103 75 125 1 20 20 RA L89863-03DUP UP 09/16/24 14:40 III240808-3 1.003 U 1.031 mg/L 1003 75 125 1 20 20 RA L89863-03DUP Type Analyzed PCN/SCN QC Sample Found Inits Rec% Lower Uper RPD Limit Qual WG597078 US 09/11/24 19:35 MS240613-12 .05 .05098 mg/L 0.00 0.0003 0.0003 . For B7 WG597078 US 09/11/24 19:35 MS240613-7 .05005 .011 0.005 mg/L 0.0 0.003 0.003 . E7 WG597078 US 09/11/24 19:45 MS240613-7 .05005 .0171 .0673 mg/L 100 75 125 2 2 2<	L89863-03MS			II240808-3		U		-						
L88863-03DUP DUP 09/16/24 14:40 U U u mg/L U 0 20 RA Lead (1312) EPA 6020B ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Linit Qual WGS97078 UV 09/11/24 19:35 MS240613-12 .05 .05098 mg/L 0.0003 0.0003 .0013 .0013 .00	L89863-03MSD	MSD	09/16/24 14:36	II240808-3	1.003	U	1.031	mg/L	103	75	125	1	20	
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Qual WG597078 WG597078 U 0.0003 0.00	L89863-03DUP							mg/L						RA
WG597078 WS597078 WS597078 WS597078 U ng/L 102 90 110 J J J WS597078 WS597078 U ng/L -0.0003 0.0003 U NS< 0.0003 U MS240613-12 .05 .05098 mg/L -0.0003 0.0003 .0003 <td>Lead (1312)</td> <td></td> <td></td> <td>EPA 6020</td> <td>)B</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Lead (1312)			EPA 6020)B									
WG597078ICV WG597078ICB WG597078ICB WG596687PBS ICV DGB 09/11/24 19:35 D9/11/24 19:37 MS240613-12 D505 .0.5 .0.5098 mg/L mg/L 102 90 110 102 90 110 WG597078ICB WG596687PBS PBS 09/11/24 19:37 MS240613-7 .05005 .04957 mg/L 99 80 120 102 125	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG\$5970781CB ICB 09/11/24 19:37 U mg/L -0.0003 0.0003 U B7 WG\$596687PBS PBS 09/11/24 19:46 MS240613-7 .05005 .04957 mg/L 99 80 120 E7 B7 L89863-02MS MS 09/11/24 19:55 MS240613-7 .05005 .0171 .06732 mg/L 100 75 125 2 20 <td>WG597078</td> <td></td>	WG597078													
WG 65970781CB ICB 09/11/24 19:37 U mg/L -0.0003 0.0003 U B7 WG 6596687PBS PBS 09/11/24 19:46 MS240613-7 .05005 .04957 mg/L 99 80 120 E7 B7 U863902MSD MS 09/11/24 19:48 MS240613-7 .05005 .0171 .06732 mg/L 100 75 125 2 20 <td>WG597078ICV</td> <td>ICV</td> <td>09/11/24 19:35</td> <td>MS240613-12</td> <td>.05</td> <td></td> <td>.05098</td> <td>mg/L</td> <td>102</td> <td>90</td> <td>110</td> <td></td> <td></td> <td></td>	WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.05098	mg/L	102	90	110			
WG596687PBS PBS 09/11/24 19:46	WG597078ICB	ICB	09/11/24 19:37				U	mg/L			0.0003			
WG596687LFB2 L89863-02MS L89863-02MSD LFB MS MSD 09/11/24 19:85 MS2 09/11/24 19:57 MS240613-7 MS240613-7 MS240613-7 0.5005 0.5005 .0171 0.6732 .06973 mg/L mg/L 99 80 100 125 125 2 2 2 20 200 L89863-02MSD L89863-03DUP MSD 09/11/24 19:57 MS240613-7 MS240613-7 .05005 .05005 .0171 .0105 .06596 mg/L mg/L 98 .98 .75 125 .22 .20 20 .20 L89863-03DUP DUP 09/11/24 19:57 MS240613-7 .05005 .05005 .0171 .0171 .06596 .06596 .98/L 98 .75 125 .22 .20 20 .20 L1thium (1312) EPA 6010D EPA 6010D Rec% Lower Upper RPD Limit Qual WG597330 V Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Qual WG597330 ICV 09/16/24 13:42 II/240829-1 2 1.941 mg/L 97 90 110 1 1 1 1 1 1 1 1	WG596687PBS	PBS	09/11/24 19:46				.0005	mg/L		-0.0003	0.0003			B7
L89863-02MSD L89863-03DUP MSD DUP 09/11/24 19:57 09/11/24 20:04 MS240613-7 NMSD .05005 .0171 .06596 .01 mg/L 98 75 125 2 20 L89863-03DUP DUP 09/11/24 20:04 MS240613-7 .05005 .0171 .06596 .01055 mg/L 98 75 125 2 20 Lithium (1312) EPA 6010D ACZ ID Malyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Qual WG597330 ICV 09/16/24 13:42 Il240829-1 2 1.941 mg/L 97 90 110 10 97 900 110 10	WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.05005			mg/L	99					
L89863-02MSD L89863-03DUP MSD DUP 09/11/24 19:57 09/11/24 20:04 MS240613-7 NMSD .05005 .0171 .06596 .01 mg/L 98 75 125 2 20 L89863-03DUP DUP 09/11/24 20:04 MS240613-7 .05005 .0171 .06596 .01055 mg/L 98 75 125 2 20 Lithium (1312) EPA 6010D ACZ ID Malyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Qual WG597330 ICV 09/16/24 13:42 Il240829-1 2 1.941 mg/L 97 90 110 10 97 900 110 10	L89863-02MS	MS	09/11/24 19:55	MS240613-7	.05005	.0171	.06732	mg/L	100	75	125			
Lithium (1312) EPA 6010D AcZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Qual WG597330 WG597330ICV ICV 09/16/24 13:42 II240829-1 2 1.941 mg/L 97 90 110 - - - - 0.024 - - - 0.024 0.024 - - - 0.024 - - - - 0.024 - - - - 0.024 - - - 0.024 - - - 0.024 - - - 0.024 - - - 0.024 - - - 0.024 - - - 0.024 - - - 0.024 - - - 0.024 - - 0.024 - - - 0.024 - - 0.024 - - </td <td>L89863-02MSD</td> <td>MSD</td> <td>09/11/24 19:57</td> <td>MS240613-7</td> <td>.05005</td> <td>.0171</td> <td>.06596</td> <td>mg/L</td> <td>98</td> <td>75</td> <td>125</td> <td>2</td> <td>20</td> <td></td>	L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.05005	.0171	.06596	mg/L	98	75	125	2	20	
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Qual WG597330 WG597330ICV ICV 09/16/24 13:42 II240829-1 2 1.941 mg/L 97 90 110 - - - - 0.024 0.024 - - - 0.024 0.024 - - - 0.024 0.024 - - - 0.024 - - - 0.024 0.024 - - - 0.024 0.024 - - - 0.024 0.024 - - - 0.024 - - 0.024 0.024 - - - 0.024 0.024 - - 0.059 mg/L 96 80 120 - - 0.024 - - 0.024 - - 0.024 - - 0.024 0.024 - 1	L89863-03DUP	DUP	09/11/24 20:04			.01	.01055	mg/L				5	20	
WG597330 WG597330ICV ICV 09/16/24 13:42 II240829-1 2 1.941 mg/L 97 90 110 WG597330ICB ICB 09/16/24 13:45 U mg/L -0.024 0.024 WG59687PBS PBS 09/16/24 14:10 U mg/L -0.024 0.024 WG596687LFB1 LFB 09/16/24 14:14 II240808-3 1.001 .9659 mg/L 96 80 120 L89863-03MSD MSD 09/16/24 14:36 II240808-3 1.001 U .9637 mg/L 96 75 125 L89863-03MSD MSD 09/16/24 14:36 II240808-3 1.001 U .9637 mg/L 96 75 125 1 20	Lithium (1312)			EPA 6010)D									
WG597330ICV ICV 09/16/24 13:42 II240829-1 2 1.941 mg/L 97 90 110 WG597330ICB ICB 09/16/24 13:45 U mg/L -0.024 0.024 WG596687PBS PBS 09/16/24 14:10 U mg/L -0.024 0.024 WG596687LFB1 LFB 09/16/24 14:14 II240808-3 1.001 .9659 mg/L 96 80 120 L89863-03MSD MSD 09/16/24 14:36 II240808-3 1.001 U .9637 mg/L 96 75 125	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597330ICB ICB 09/16/24 13:45 U mg/L -0.024 0.024 WG596687PBS PBS 09/16/24 14:10 U mg/L -0.024 0.024 WG596687LFB1 LFB 09/16/24 14:14 II240808-3 1.001 .9659 mg/L 96 80 120 L89863-03MS MS 09/16/24 14:33 II240808-3 1.001 U .9539 mg/L 95 75 125 L89863-03MSD MSD 09/16/24 14:36 II240808-3 1.001 U .9637 mg/L 96 75 125 1 20	WG597330													
WG596687PBS PBS 09/16/24 14:10 U mg/L -0.024 0.024 WG596687LFB1 LFB 09/16/24 14:14 II240808-3 1.001 .9659 mg/L 96 80 120 L89863-03MSD MSD 09/16/24 14:36 II240808-3 1.001 U .9539 mg/L 95 75 125 L89863-03MSD MSD 09/16/24 14:36 II240808-3 1.001 U .9637 mg/L 96 75 125 1 20	WG597330ICV	ICV	09/16/24 13:42	II240829-1	2		1.941	mg/L	97	90	110			
WG596687LFB1 LFB 09/16/24 1240808-3 1.001 .9659 mg/L 96 80 120 L89863-03MS MS 09/16/24 14:33 11240808-3 1.001 U .9539 mg/L 95 75 125 L89863-03MSD MSD 09/16/24 14:36 11240808-3 1.001 U .9637 mg/L 96 75 125	WG597330ICB	ICB	09/16/24 13:45				U	mg/L		-0.024	0.024			
L89863-03MS MS 09/16/24 14:33 II240808-3 1.001 U .9539 mg/L 95 75 125 L89863-03MSD MSD 09/16/24 14:36 II240808-3 1.001 U .9637 mg/L 96 75 125 1 20	WG596687PBS	PBS	09/16/24 14:10				U	mg/L		-0.024	0.024			
L89863-03MSD MSD 09/16/24 14:36 II240808-3 1.001 U .9637 mg/L 96 75 125 1 20	WG596687LFB1	LFB	09/16/24 14:14	II240808-3	1.001		.9659	mg/L	96	80	120			
	L89863-03MS	MS	09/16/24 14:33	II240808-3	1.001	U	.9539	mg/L	95	75	125			
L89863-03DUP DUP 09/16/24 14:40 U .0088 mg/L 200 20 RA	L89863-03MSD	MSD	09/16/24 14:36	II240808-3	1.001	U	.9637	mg/L	96	75	125	1	20	
	L89863-03DUP	DUP	09/16/24 14:40			U	.0088	mg/L				200	20	RA

OURAYSM

ACZ Project ID: L89863

CGS97330 Control Section <	Magnesium (13 [,]	12)		EPA 601	0D									
CGS97330LV ICV 09/1624 13.42 10.0 98.44 mpL 98 90 110 10.8 10.8 GGS9730LCB ICB 09/1624 13.45 00/1624 14.10 0 0 myL 10.3 80 120 10.8 00 10.8 00 10.8 0.6 10.8 0.6 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.8 0.0 10.9 0.0	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
GSGP37080CB ICB OPH1624 113.45 U mpL -0.6 0.6 U mpL -0.6 0.6 GSGP807FB1 LFB OPH1624 141.3 11240008-3 50.04719 4 51.39 mpL 103 75 125 0 20 S980530350D DUP OPH1624 141.43 11240008-3 50.04719 4 51.76 mpL 103 75 125 0 20 70 S980530350D DUP OPH1624 141.43 11240008-3 50.04719 4 44 mpL 103 75 125 0 20 RA S980530350D DUP OPH1624 1424 36.00717 A 50.00718 Units Rec/ Lower Uppe RP Linit Cause VGS977071CV ICV OPH1124 1925 MS240013-7 0.501 0.6986 mpL 104 80 102 10 20 10 10 10 12 12 12 1 20 1	WG597330													
VGS9887PS PBS 09/16/24 14:14 Mit2000-3 50/04719 A 51:39 mpL 103 R0 R0 <td>WG597330ICV</td> <td>ICV</td> <td>09/16/24 13:42</td> <td>II240829-1</td> <td>100</td> <td></td> <td>98.44</td> <td>mg/L</td> <td>98</td> <td>90</td> <td>110</td> <td></td> <td></td> <td></td>	WG597330ICV	ICV	09/16/24 13:42	II240829-1	100		98.44	mg/L	98	90	110			
CGS96837LB31 LFB 09/16/24 14:14 1024080-3 50.04719 4 51.39 mgL 103 80 120 S9883-303DU DUP 09/16/24 14:30 1024080-3 50.04719 4 51.75 mgL 103 75 125 0 20 S9883-303DU DUP 09/16/24 14:40 10 0.0171 4 44 mgL 10 20 RA S9883-303DU DUP 09/16/24 14:40 10 CC Sample Found Inits Rac/L Lower Upper RPD LInit Care VCSS97078 CC Malyzed PCNISCN CC Sample Found Inits Rac/L Loss Loss Linit Care VGSS970781CV ICV 09/11/24 19:45 MS240813-7 .0501 .06980 mgL 0.001 2.0012 Loss T25 5 125 12 1 2.0 VC Sample 90 75 125 12 1<	WG597330ICB	ICB	09/16/24 13:45				U	mg/L		-0.6	0.6			
BBBBB 303MS MS 09/16/24 14.33 12/04/98-3 50.04719 4 51.75 mpl 103 75 125 0 20 BBBB 3030MS DU 09/16/24 14.43 11/2008-3 50.04719 4	WG596687PBS	PBS	09/16/24 14:10				U	mg/L		-0.6	0.6			
BBBBS-303118D MSD Diff	WG596687LFB1	LFB	09/16/24 14:14	II240808-3	50.04719		51.39	mg/L	103	80	120			
Segard 3-03DUP DUP 09/16/24 14:40 A A A4 mgL 10 20 RA Ianganese (1312) EPA 6020B EPA 6020B No 0.0 0.0 RA A4 44 mgL 10 20 RA VG5970781/C8 ICC Op/11/24 19:35 M5240613-12 0.5 .0.0508 mgL 0.0012 0.0012 0.0012 0.0012 0.0012 0.0012 0.0012 0.0012 IIII 0.0012	L89863-03MS	MS	09/16/24 14:33	II240808-3	50.04719	.4	51.75	mg/L	103	75	125			
Imaganese (1312) EPA 6020B C2 ID Type Analyzed PO/NSCN QC Sample Found Units Rec% Lower Upper RPD Limit Quart VGS97078LV ICV 09/11/24 19.35 MS240613-12 .05 .05098 mgL 102 90 110	L89863-03MSD	MSD	09/16/24 14:36	II240808-3	50.04719	.4	51.92	mg/L	103	75	125	0	20	
C2 ID Type Analyzed PCN/SCN QC Sample Found Units Reck' Lower Upper RPD Limit Quarter VGS97078 ICV 09/11/24 19.35 MS340613-12 .05 .05698 mgit. 102 90 110	L89863-03DUP	DUP	09/16/24 14:40			.4	.44	mg/L				10	20	RA
Construct Construct <t< td=""><td>Manganese (131</td><td>12)</td><td></td><td>EPA 602</td><td>0B</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Manganese (131	12)		EPA 602	0B									
RGS970781CV ICV 09/11/24 19:35 MS240813-12 .0.5 .0.5096 mgL 102 90 110 100 90 100 <th< td=""><td>ACZ ID</td><td>Туре</td><td>Analyzed</td><td>PCN/SCN</td><td>QC</td><td>Sample</td><td>Found</td><td>Units</td><td>Rec%</td><td>Lower</td><td>Upper</td><td>RPD</td><td>Limit</td><td>Qual</td></th<>	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
RGS970781CB ICB 09/11/24 19.37 V U mg/L -0.0012 0.0012 V B7 GGS96867PES PBS 09/11/24 19.46 MS240813-7 .0501 .0498 .09929 mg/L 99 75 125 1 20 S9863-02MSD MSD 09/11/24 19.55 MS240813-7 .0501 .0498 09929 mg/L 98 75 125 1 20	WG597078													
rG396687PBS PBS 09/11/24 19:46 MS240613-7 0.501 0.0153 mg/L 104 80 120 104 80 120 S8683-02MS MS 09/11/24 19:55 MS240613-7 0.501 0.0498 0.09987 mg/L 199 75 125 1 20 S8683-02MD DUP 09/11/24 19:55 MS240613-7 0.501 0.498 0.9987 mg/L 99 75 125 1 20 S8683-02MD DUP 09/11/24 19:57 MS240613-7 0.501 0.498 0.9987 mg/L 99 75 125 1 20 7 <	WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.05098	mg/L	102	90	110			
RG596887LFB2 LFB 09/11/24 19:48 MS240613-7 .0501 .0501 .0488 .0929 mgL 104 80 120	WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.0012	0.0012			
Bases-ozMSD Bases-ozMSD DUP MS 09/11/24 19:57 09/11/24 20:04 MS240613-7 MS240613-7 0.0501 0.0501 0.498 0.9929 0.9929 mg/L mg/L mg/L 99 98 75 75 125 125 1 1 20 20 7 20 Itercury (1312) EPA 7470A CZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Quar GS597016// (GS597016/CS ICB 09/12/24 12:13 HG240819-3 .00501 .00485 mg/L 97 95 105 V V GGS97016// (GS597016/CS ICB 09/12/24 15:15 HG24099-3 .002002 U mg/L 97 95 105 V V GGS97016// (GS96867/LFB LFB 09/12/24 15:15 HG24099-3 .002002 U .00227 mg/L 103 85 115 J 20 B GS96863-03MSD MSD 09/12/24 15:19 HG24099-3 .002002 U .002215 mg/L 107 85	WG596687PBS	PBS	09/11/24 19:46				.00153	mg/L		-0.0012	0.0012			B7
B3883-02MSD MSD 09/11/24 19:57 MS240613-7 0.501 0.498 0.9987 mg/L 98 75 125 1 20 B3863-03DUP DUP 09/11/24 20:04 EPA 7470A EEA 7470A EEA 7470A Count Units Rec% Lower Upper RPD Limit Quar VG597016 CV 09/12/24 12:13 HG240819-3 .00501 .00485 mg/L 97 95 105 V V V V V MS2 0.0002 .00000 .00	WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.0501		.05186	mg/L	104	80	120			
393863-03DUP DUP 09/11/24 20:04 .0433 .04031 mg/L 7 20 Incrury (1312) EPA 7470A C Same Analyzed PCN/SCN QC Same Analyzed Found Units Rec% Lower Upper RPD Limit Quar VG5970161CV ICV 09/12/24 12:13 HG240819-3 .00501 .00485 mg/L 97 95 105	L89863-02MS	MS	09/11/24 19:55	MS240613-7	.0501	.0498	.09929	mg/L	99	75	125			
Lercury (1312) EPA 7470A C2 /D Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Quastic VG5970161/CV ICV 09/12/24 12:13 HG240819-3 .00501 .00485 mg/L 97 95 105 .	L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.0501	.0498	.09867	mg/L	98	75	125	1	20	
CS10 Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Que VG597016 //G597016///CS ICV 09/12/24 12:13 H6240819-3 .00501 .00485 mg/L 97 95 105 ////////////////////////////////////	L89863-03DUP	DUP	09/11/24 20:04			.0433	.04031	mg/L				7	20	
VGS97016 VGS97011/24 15:20 VGS9702 U U mg/L 101 78 115 1 20 VGS97078 VGS97078 VGS97078 VGS97078 VGS97078 VGS97078 VGS97078 VGS97078 VGS97078 VGS97011/24 19:35 MS240613-7 .05005 .0257 .0764 mg/L 101 75 125 VGS966	Mercury (1312)			EPA 747	0A									
Construction ICV 09/12/24 12:13 HG240819-3 .00501 .00485 mg/L 97 95 105 IG597016ICB ICB 09/12/24 12:14 U mg/L -0.0002 0.0002 .	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
RGS97016ICB ICB 09/12/24 12:14 U mg/L -0.0002 0.0002 U MCS97088 VGS97088 PBS 09/12/24 15:15 HG240909-3 .002002 .00227 mg/L 113 85 115 U mg/L 90006 0.0006 .0006<	WG597016													
RGS97016ICB ICB 09/12/24 12:14 U mg/L -0.0002 0.0002 U MCS97088 VGS97088 PBS 09/12/24 15:15 HG240909-3 .002002 .00227 mg/L 113 85 115 U mg/L 90006 0.0006 .0006<	WG597016ICV	ICV	09/12/24 12:13	HG240819-3	.00501		.00485	mg/L	97	95	105			
G596687PBS (G596687LFB1 (G596687LFB1 LFB PBS 09/12/24 15:15 09/12/24 15:15 H6240909-3 002002 H6240909-3 0.00202 0.00227 mg/L mg/L 113 13 13 B5 0.0006 115 115 0.0006 115 89863-03MS B9863-03MSD MS D9/12/24 15:19 DUP 09/12/24 15:19 H6240909-3 H6240909-3 .002002 .002012 U mg/L D0 106 D17 85 115 1 1 20 D0 B9863-03MSD B9863-03DUP MSD DUP 09/12/24 15:19 D9/12/24 15:20 FEPA 6020B U 000215 mg/L mg/L 107 107 B5 115 1 1 20 20 RA CZ ID Tppe Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Que VG597078 ICS MS240613-12 .02004 .01961 mg/L 98 90 110 10 20 110 10 20 110 10 20 10 20 100 10 10 10 10 10 10 10 10 20 10 20 10 <th< td=""><td>WG597016ICB</td><td></td><td>09/12/24 12:14</td><td></td><td></td><td></td><td>U</td><td>mg/L</td><td></td><td>-0.0002</td><td>0.0002</td><td></td><td></td><td></td></th<>	WG597016ICB		09/12/24 12:14				U	mg/L		-0.0002	0.0002			
G596687PBS (G596687LFB1 (G596687LFB1 LFB PBS 09/12/24 15:15 09/12/24 15:15 H6240909-3 002002 H6240909-3 0.00202 0.00227 mg/L mg/L 113 13 13 B5 0.0006 115 115 0.0006 115 89863-03MS B9863-03MSD MS D9/12/24 15:19 DUP 09/12/24 15:19 H6240909-3 H6240909-3 .002002 .002012 U mg/L D0 106 D17 85 115 1 1 20 D0 B9863-03MSD B9863-03DUP MSD DUP 09/12/24 15:19 D9/12/24 15:20 FEPA 6020B U 000215 mg/L mg/L 107 107 B5 115 1 1 20 20 RA CZ ID Tppe Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Que VG597078 ICS MS240613-12 .02004 .01961 mg/L 98 90 110 10 20 110 10 20 110 10 20 10 20 100 10 10 10 10 10 10 10 10 20 10 20 10 <th< td=""><td>WG597088</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	WG597088													
RG596687LFB1 LFB 09/12/24 15:15 HG240909-3 .002002 U .00227 mg/L 113 85 115 89863-03MS MS 09/12/24 15:18 HG240909-3 .002002 U .00213 mg/L 106 85 115 1 20 89863-03MSD MSD 09/12/24 15:19 HG240909-3 .002002 U .00215 mg/L 107 85 115 1 20 RA 89863-03DUP DUP 09/12/24 15:20 EPA 6020B U U mg/L 107 85 110 1 20 RA CZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Que VG597078ICV ICV 09/11/24 19:35 MS240613-12 .02004 .01961 mg/L 98 90 110 .02066 .00006 .00006 .00006 .00006 .00006 .00006 .00006 .00006 .00006 .00006 .00006 .00006 .00006 .00006		PBS	09/12/24 15:14				U	ma/L		-0.0006	0.0006			
Bases3-03MS Bases3-03MSD MS MSD 09/12/24 15:18 09/12/24 15:09 HG240909-3 HG240909-3 .002002 .002002 U .00213 .00215 mg/L 106 85 115 1 20 .00 20 RA Base3-03MSD Base3-03DUP DUP 09/12/24 15:00 09/12/24 15:00 .002002 U .00215 mg/L 107 85 115 1 20 RA Base3-03DUP DUP 09/12/24 15:20 EPA 6020B E				HG240909-3	002002				113					
B8863-03MSD MSD 09/12/24 15:19 HG240909-3 .002002 U .00215 mg/L 107 85 115 1 20 B9863-03DUP DUP 09/12/24 15:20 U U U mg/L 107 85 115 1 20 RA B9863-03DUP DUP 09/12/24 15:20 EPA 6020B EPA 6020B V V V MSD 110 1 20 RA C2 ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Que VG597078 ICV 09/11/24 19:35 MS240613-12 .02004 .01961 mg/L 98 90 110 01961 mg/L -0.0006 0.0006 . <td< td=""><td></td><td></td><td></td><td></td><td></td><td>U</td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>						U		-						
B9863-03DUP DUP 09/12/24 15:20 U U mg/L 0 20 RA Iolybdenum (1312) EPA 6020B CZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Que VG597078 ICV 09/11/24 19:35 MS240613-12 .02004 . .01961 mg/L 98 90 110 L L L Image VG597078 VG597078 ICV 09/11/24 19:35 MS240613-12 .02004 . .01961 mg/L 98 90 110 L L L L U mg/L -0.0006 0.0006 . L <thl< th=""> L L</thl<>								-				1	20	
CZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Quadratic VG597078 //G597078ICV ICV 09/11/24 19:35 MS240613-12 .02004 .01961 mg/L 98 90 110 ////////////////////////////////////	L89863-03DUP							-						RA
CZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Quadratic VG597078 //G597078ICV ICV 09/11/24 19:35 MS240613-12 .02004 .01961 mg/L 98 90 110 ////////////////////////////////////	Molyhdenum (1)	312)		FPA 602	0B									
VG597078 V(G597078ICV ICV 09/11/24 19:35 MS240613-12 .02004 .01961 mg/L 98 90 110 V(G597078ICB ICB 09/11/24 19:35 MS240613-12 .02004 .01961 mg/L -0.0006 0.0006 V(G597078ICB ICB 09/11/24 19:37 U mg/L -0.0006 0.0006 0.0006 V(G596687LFB2 LFB 09/11/24 19:48 MS240613-7 .05005 .0257 .0764 mg/L 101 75 125 89863-02MS MS 09/11/24 19:55 MS240613-7 .05005 .0257 .0764 mg/L 101 75 125 89863-02MSD MSD 09/11/24 19:57 MS240613-7 .05005 .0257 .07727 mg/L 103 75 125 1 20 89863-03DUP DUP 09/11/24 20:04 Single NAG - EGI 2002 1 20 1 20 Single NAG - EGI 2002 CZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec	ACZ ID	,	Analyzed			Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
/(G597078ICV ICV 09/11/24 19:35 MS240613-12 .02004 .01961 mg/L 98 90 110 /(G597078ICB ICB 09/11/24 19:37														
//G5970781CB ICB 09/11/24 19:37 U mg/L -0.0006 0.0006 //G596687PBS PBS 09/11/24 19:46 U mg/L -0.0006 0.0006 //G596687LFB2 LFB 09/11/24 19:48 MS240613-7 .05005 .0489 mg/L 98 80 120 //G596687LFB2 LFB 09/11/24 19:55 MS240613-7 .05005 .0257 .0764 mg/L 101 75 125 89863-02MS MS 09/11/24 19:57 MS240613-7 .05005 .0257 .0764 mg/L 101 75 125 89863-02MSD MSD 09/11/24 19:57 MS240613-7 .05005 .0257 .07727 mg/L 103 75 125 1 20 89863-03DUP DUP 09/11/24 20:04 .0262 .02584 mg/L 1 20 Single NAG - EGI 2002 CZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Quartereeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee		ICV	09/11/24 10:35	MS240613-12	02004		01961	ma/L	QR	90	110			
VG5996687PBS PBS 09/11/24 19:46 U mg/L -0.0006 0.0006 VG596687LFB2 LFB 09/11/24 19:48 MS240613-7 .05005 .0489 mg/L 98 80 120 89863-02MS MS 09/11/24 19:55 MS240613-7 .05005 .0257 .0764 mg/L 101 75 125 89863-02MSD MSD 09/11/24 19:57 MS240613-7 .05005 .0257 .07727 mg/L 103 75 125 1 20 89863-02MSD MSD 09/11/24 19:57 MS240613-7 .05005 .0257 .07727 mg/L 103 75 125 1 20 89863-03DUP DUP 09/11/24 20:04 .0262 .02584 mg/L 103 75 125 1 20 1et Acid Generation Single NAG - EGI 2002 CZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Quartification VG597549					.02007				50					
//G596687LFB2 LFB 09/11/24 19:48 MS240613-7 .05005 .0489 mg/L 98 80 120 89863-02MS MS 09/11/24 19:55 MS240613-7 .05005 .0257 .0764 mg/L 101 75 125 89863-02MSD MSD 09/11/24 19:57 MS240613-7 .05005 .0257 .0764 mg/L 101 75 125 1 20 89863-02MSD MSD 09/11/24 19:57 MS240613-7 .05005 .0257 .07727 mg/L 103 75 125 1 20 89863-03DUP DUP 09/11/24 20:04 .05005 .0257 .07727 mg/L 103 75 125 1 20 1et Acid Generation Single NAG - EGI 2002 CZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Quartification VG597549														
Bayesis-02MS MS 09/11/24 19:55 MS240613-7 .05005 .0257 .0764 mg/L 101 75 125 Bayesis-02MSD MSD 09/11/24 19:57 MS240613-7 .05005 .0257 .07727 mg/L 103 75 125 1 20 Bayesis-03DUP DUP 09/11/24 20:04 MS240613-7 .05005 .0257 .07727 mg/L 103 75 125 1 20 Bayesis-03DUP DUP 09/11/24 20:04 Single NAG - EGI 2002 1 20 1 20 Single NAG - EGI 2002 CZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Quartification VG597549				MS240613-7	.05005			-	98					
B9863-02MSD MSD 09/11/24 19:57 MS240613-7 .05005 .0257 .07727 mg/L 103 75 125 1 20 B9863-03DUP DUP 09/11/24 19:57 MS240613-7 .05005 .0257 .07727 mg/L 103 75 125 1 20 B9863-03DUP DUP 09/11/24 20:04 Single NAG - EGI 2002 1 20 1 20 let Acid Generation Single NAG - EGI 2002 CZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Quartification VG597549						.0257		-						
B39863-03DUP DUP 09/11/24 20:04 .0262 .02584 mg/L 1 20 Interview Single NAG - EGI 2002 Single NAG - EGI 200												1	20	
CZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Qua	L89863-03DUP													
CZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Qua	Net Acid Genera	ation		Single N	AG - EGI 20	002								
VG597549	ACZ ID		Analyzed				Fo <u>und</u>	Units	Rec%	Lower	Upper_	RPD	Limit_	Qual
			09/18/24 15.11			11	11	(a H2SO4/				Ο	20	R۵
		DOF	03/10/24 10.11			0	U	.g2004/				U	20	11/4

OURAYSM

ACZ Project ID: L89863

Neutralization P	otential	as CaCO3	EPA 600/2	2-78-054	3.2.3 Modi	fied (No	Heat)						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597393													
WG597393PBS	PBS	09/17/24 21:19				.1	%		-0.2	0.2			
WG597393LCSS	LCSS	09/18/24 0:16	PCN625358	99.8		112.5	%	113	80	120			
L89863-01MS	MS	09/18/24 6:10	SI230912-3	3	7.5	9.8	%	77	70	130			
L89863-01DUP	DUP	09/18/24 9:08			7.5	7.6	%				1	20	
Nickel (1312)			EPA 6020	В									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597078													
WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.05134	mg/L	103	90	110			
WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.0012	0.0012			
WG596687PBS	PBS	09/11/24 19:46				U	mg/L		-0.0012	0.0012			
WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.0501		.04948	mg/L	99	80	120			
L89863-02MS	MS	09/11/24 19:55	MS240613-7	.0501	U	.04941	mg/L	99	75	125			
L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.0501	U	.04928	mg/L	98	75	125	0	20	
L89863-03DUP	DUP	09/11/24 20:04			.00042	U	mg/L				200	20	RA
Nitrate/Nitrite as	s N (1312	2-DI)	EPA 353.2	2									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG596786													
WG596786ICV	ICV	09/06/24 23:43	WI240725-5	2.416		2.456	mg/L	102	90	110			
WG596786ICB	ICB	09/06/24 23:44				U	mg/L		-0.02	0.02			
WG596788													
WG596788LFB	LFB	09/07/24 0:52	WI240828-3	2		1.984	mg/L	99	90	110			
WG596691PBS	PBS	09/07/24 0:54		-		U	mg/L		-0.02	0.02			
L89863-01AS	AS	09/07/24 0:56	WI240828-3	2	.253	2.304	mg/L	103	90	110			
L89863-03DUP	DUP	09/07/24 1:00		_	.079	.079	mg/L				0	20	RA
Nitrite as N (131	2 DIV		EPA 353.2	.									
ACZ ID	2-01) Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
	Type	Analyzea	1 ON/OON	40	Gampie	Tound	onito	Nee //	Lower	Opper		Linit	Quui
WG596786			14/10/10705 5										
WG596786ICV	ICV	09/06/24 23:43	WI240725-5	.609		.613	mg/L	101	90	110			
WG596786ICB	ICB	09/06/24 23:44				U	mg/L		-0.01	0.01			
WG596788													
WG596788LFB	LFB	09/07/24 0:52	WI240828-3	1		.996	mg/L	100	90	110			
WG596691PBS	PBS	09/07/24 0:54				U	mg/L		-0.01	0.01			
L89863-01AS	AS	09/07/24 0:56	WI240828-3	1	U	1.048	mg/L	105	90	110			
L89863-03DUP	DUP	09/07/24 1:00			U	U	mg/L				0	20	RA

OURAYSM

ACZ Project ID: L89863

Nitrogen, ammo	onia (131	2-DI)	EPA 350.1										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597045													
WG597045ICV	ICV	09/11/24 10:57	WI240624-5	12		11.742	mg/L	98	90	110			
WG597045ICB	ICB	09/11/24 10:58				U	mg/L		-0.1	0.1			
WG597072													
WG597072LFB	LFB	09/11/24 14:59	WI231102-6	10		10.384	mg/L	104	90	110			
WG596691PBS	PBS	09/11/24 15:01				U	mg/L		-0.1	0.1			
L89863-01AS	AS	09/11/24 15:04	WI231102-6	10	.712	11.232	mg/L	105	90	110			
L89863-03DUP	DUP	09/11/24 15:08			.329	.314	mg/L				5	20	RA
pH, Saturated F	aste		EPA 600/2	2-78-054	3.2.2								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597734													
WG597734ICV	ICV	09/21/24 8:22	PCN625290	3.99		4	units	100	3.9	4.1			
L90059-01DUP	DUP	09/21/24 8:28			5.1	5.1	units				0	20	
Phosphorus, or	tho diss	olved (1312-DI)	EPA 365.1										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG596785													
WG596785ICV	ICV	09/07/24 0:22	WI240307-4	.65228		.657	mg/L	101	90	110			
WG596785ICB	ICB	09/07/24 0:23				U	mg/L		-0.01	0.01			
WG596787													
WG596787LFB	LFB	09/07/24 1:10	WI240824-2	.5		.495	mg/L	99	90	110			
WG596691PBS	PBS	09/07/24 1:11				U	mg/L		-0.01	0.01			
L89863-01AS	AS	09/07/24 1:13	WI240824-2	.5	U	.498	mg/L	100	90	110			
L89863-03DUP	DUP	09/07/24 1:17			U	U	mg/L				0	20	RA
Phosphorus, To	otal (131)	2-DI)	EPA 365.1										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597827													
WG597827ICV	ICV	09/23/24 13:57	WI240723-6	.65228		.675	mg/L	103	90	110			
WG597827ICB	ICB	09/23/24 13:59				U	mg/L		-0.01	0.01			
WG597855													
WG596691PBS	PBS	09/23/24 16:19				U	mg/L		-0.01	0.01			
L89863-03DUP	DUP	09/23/24 16:23			U	U	mg/L				0	20	RA
WG597799PBS	PBS	09/23/24 16:24				U	mg/L		-0.01	0.01			
		00/00/04 46:05	WI240909-3	.5		F47	ma/l	102	90	110			
WG597799LFB	LFB	09/23/24 16:25	VV1240909-5	.5		.517	mg/L	103	90	110			

OURAYSM

ACZ Project ID: L89863

Potassium (1312	:)		EPA 601	0D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597330													
WG597330ICV	ICV	09/16/24 13:42	II240829-1	20		19.57	mg/L	98	90	110			
WG597330ICB	ICB	09/16/24 13:45				U	mg/L		-1.5	1.5			
WG596687PBS	PBS	09/16/24 14:10				U	mg/L		-1.5	1.5			
WG596687LFB1	LFB	09/16/24 14:14	II240808-3	100.237		99.22	mg/L	99	80	120			
L89863-03MS	MS	09/16/24 14:33	II240808-3	100.237	2.89	101.7	mg/L	99	75	125			
L89863-03MSD	MSD	09/16/24 14:36	II240808-3	100.237	2.89	103	mg/L	100	75	125	1	20	
L89863-03DUP	DUP	09/16/24 14:40			2.89	3.05	mg/L				5	20	RA
Residue, Filterat	ole (TDS) @180C (1312)	SM 2540	C-2011									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597571													
WG597571PBW	PBW	09/18/24 21:25				U	mg/L		-20	20			
WG597571LCSW	LCSW	09/18/24 21:30	PCN627251	1000		1010	mg/L	101	80	120			
WG596691PBS	PBS	09/18/24 21:36				U	mg/L		-40	40			
L89863-03DUP	DUP	09/18/24 22:00			44	38	mg/L				15	10	RA
Residue, Non-Fil	ter (TSS	S) @180C (1312	-DI) SM 2540	D-2011/20	15								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG596865													
WG596865PBW	PBW	09/09/24 11:25				U	mg/L		-5	5			
WG596865LCSW	LCSW	09/09/24 11:30	PCN627255	100		90	mg/L	90	80	120			
WG596691PBS	PBS	09/09/24 11:36				U	mg/L		-15	15			
L89863-03DUP	DUP	09/09/24 12:00			U	U	mg/L				0	10	RA
Selenium (1312)			EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597078													
WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.05046	mg/L	101	90	110			
WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.0003	0.0003			
WG596687PBS	PBS	09/11/24 19:46				U	mg/L		-0.0003	0.0003			
WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.05005		.04796	mg/L	96	80	120			
L89863-02MS	MS	09/11/24 19:55	MS240613-7	.05005	U	.04894	mg/L	98	75	125			
L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.05005	U	.0487	mg/L	97	75	125	0	20	
L89863-03DUP	DUP	09/11/24 20:04			U	U	mg/L				0	20	RA
Silica (1312)			EPA 601	0D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG598011													
WG598011ICV	ICV	09/25/24 13:04	II240919-3	42.8		44.54	mg/L	104	90	110			
						U	mg/L		-0.6	0.6			
	ICB	09/25/24 13:07											
WG598011ICB	PBS	09/25/24 13:07				U	mg/L		-0.6	0.6			
WG598011ICB WG596687PBS			II240910-5	21.42782		U 20.94	mg/L mg/L	98	-0.6 80	0.6 120			
WG598011ICB WG596687PBS WG596687LFB1	PBS	09/25/24 13:31 09/25/24 13:35	ll240910-5 ll240910-5		2.3		-	98 96	80	120			
WG598011ICB WG596687PBS WG596687LFB1 L89863-03MS L89863-03MSD	PBS LFB	09/25/24 13:31		21.42782 21.42782 21.42782	2.3 2.3	20.94	mg/L				1	20	

OURAYSM

ACZ Project ID: L89863

Silver (1312)			EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597262													
WG597262ICV	ICV	09/15/24 13:37	MS240912-7	.02		.01897	mg/L	95	90	110			
WG597262ICB	ICB	09/15/24 13:39				U	mg/L		-0.0003	0.0003			
WG596687PBS	PBS	09/15/24 13:48				U	mg/L		-0.0003	0.0003			
WG596687LFB2	LFB	09/15/24 13:50	MS240613-7	.01		.01009	mg/L	101	80	120			
L89863-02MS	MS	09/15/24 13:56	MS240613-7	.01	U	.00962	mg/L	96	75	125			
L89863-02MSD	MSD	09/15/24 13:57	MS240613-7	.01	U	.00993	mg/L	99	75	125	3	20	
L89863-03DUP	DUP	09/15/24 14:06			U	U	mg/L				0	20	RA
Sodium (1312)			EPA 601	0D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597330													
WG597330ICV	ICV	09/16/24 13:42	II240829-1	100		98.8	mg/L	99	90	110			
WG597330ICB	ICB	09/16/24 13:45				U	mg/L		-0.6	0.6			
WG596687PBS	PBS	09/16/24 14:10				U	mg/L		-0.6	0.6			
WG596687LFB1	LFB	09/16/24 14:14	II240808-3	99.97081		99.63	mg/L	100	80	120			
L89863-03MS	MS	09/16/24 14:33	II240808-3	99.97081	.98	99.84	mg/L	99	75	125			
L89863-03MSD	MSD	09/16/24 14:36	II240808-3	99.97081	.98	101.3	mg/L	100	75	125	1	20	
L89863-03DUP	DUP	09/16/24 14:40			.98	1.1	mg/L				12	20	RA
Strontium (1312	2)		EPA 601	0D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597330													
WG597330ICV	ICV	09/16/24 13:42	II240829-1	2		1.954	mg/L	98	90	110			
WG597330ICB	ICB	09/16/24 13:45				U	mg/L		-0.027	0.027			
WG596687PBS	PBS	09/16/24 14:10				U	mg/L		-0.027	0.027			
WG596687LFB1	LFB	09/16/24 14:14	II240808-3	.501		.5327	mg/L	106	80	120			
L89863-03MS	MS	09/16/24 14:33	II240808-3	.501	.195	.7252	mg/L	106	75	125			
L89863-03MSD	MSD	09/16/24 14:36	II240808-3	.501	.195	.7313	mg/L	107	75	125	1	20	
L89863-03DUP	DUP	09/16/24 14:40			.195	.1922	mg/L				1	20	
Sulfate (1312-D	I)		EPA 300	.0									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG594885													
WG594885ICV	ICV	08/06/24 17:10	WI240806-11	50.05		49.16	mg/L	98	90	110			
WG594885ICB	ICB	08/06/24 17:28				U	mg/L		-0.9	0.9			
WG597226													
WG597226LFB	LFB	09/13/24 13:31	WI240708-2	29.997		30.9	mg/L	103	90	110			
WG596691PBS	PBS	09/13/24 13:49				U	mg/L		-0.9	0.9			
L89863-02AS	AS	09/13/24 14:43	WI240708-2	29.997	13.2	44.29	mg/L	104	90	110			
L89863-02ASD	ASD	09/13/24 15:01	WI240708-2	29.997	13.2	42.72	mg/L	98	90	110	4	20	
L89863-03DUP	DUP	09/13/24 15:37			8.45	8.64	mg/L				2	20	RA
Sulfur Hcl Resid	due		EPA 600	/2-78-054 3	3.2.4 Modi	fied							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597577													
L89863-01DUP	DUP	09/20/24 7:19			1.16	1.17	%				1	20	
	201	50/20/24 1.10										20	

(800) 334-5493

OURAYSM

4CZ

ACZ Project ID: L89863

Sulfur Hno3 Res	idue		EPA 600/2	2-78-054	3.2.4 Modi	fied							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qua
WG597577													
L89863-01DUP	DUP	09/20/24 8:18			.05	.05	%				0	20	RA
Sulfur Organic R	Residual		EPA 600/2	2-78-054	3.2.4 Modi	fied							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qua
WG597577													
L89863-01DUP	DUP	09/20/24 8:18			.05	.05	%				0	20	RA
Sulfur Pyritic Su	lfide		EPA 600/2	2-78-054	3.2.4 Modi	fied							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qua
WG597577													
L89863-01DUP	DUP	09/20/24 8:18			1.11	1.12	%				1	20	
Sulfur Sulfate			FPA 600/	2-78-054	3.2.4 Modi								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qua
WG597577	- Type-	Analyzeu		- 40-	oumple	-r-ound	onnto	- Rec //	Lower	- opper			હ્યાય
	DUP	09/20/24 8:18			.12	.11	%				9	20	
L89863-01DUP	DUP	09/20/24 0:10					70				9	20	
Sulfur Total					3.2.4 Modi								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qua
WG597577													
WG597577LCSS	LCSS	09/20/24 6:08	PCN625750	3.95		3.73	%	94	80	120			
L89863-01MS	MS	09/20/24 6:13	PCN625561	1.28	1.28	2.66	% %	108	80	120	0	20	
L89863-01DUP	DUP	09/20/24 6:16			1.28	1.28	70				0	20	
Thallium (1312)			EPA 6020										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qua
WG597078													
WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.05251	mg/L	105	90	110			
WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.0003	0.0003			
WG596687PBS	PBS	09/11/24 19:46				U	mg/L		-0.0003	0.0003			
WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.0501		.04882	mg/L	97	80	120			
L89863-02MS	MS	09/11/24 19:55	MS240613-7	.0501	.00013	.05	mg/L	100	75	125			
L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.0501	.00013	.04966	mg/L	99	75	125	1	20	
L89863-03DUP	DUP	09/11/24 20:04			U	U	mg/L				0	20	RA
Tin (1312)			EPA 6010	D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qua
WG597330													
WG597330ICV	ICV	09/16/24 13:42	II240829-1	2		1.926	mg/L	96	90	110			
WG597330ICB	ICB	09/16/24 13:45				U	mg/L		-0.12	0.12			
WG596687PBS	PBS	09/16/24 14:10				U	mg/L		-0.12	0.12			
WG596687LFB1	LFB	09/16/24 14:14	II240808-3	1.001		1.008	mg/L	101	80	120			
L89863-03MS	MS	09/16/24 14:33	II240808-3	1.001	U	1.009	mg/L	101	75	125			
	MCD	09/16/24 14:36	II240808-3	1.001	U	1.008	mg/L	101	75	125	0	20	
L89863-03MSD	MSD	00/10/24 14.00		1.001	0	1.000	mg/L	101	15	120	0	20	

(800) 334-5493

OURAYSM

ACZ Project ID: L89863

Total Sulfur Min	us Sulfa	ate	EPA 600/2	2-78-054:	3.2.4 Modi	fied							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597577													
L89863-01DUP	DUP	09/20/24 8:18			1.16	1.17	%				1	20	
Uranium (1312)			EPA 6020)B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597078													
WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.05243	mg/L	105	90	110			
WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.0003	0.0003			
WG596687PBS	PBS	09/11/24 19:46				U	mg/L		-0.0003	0.0003			
WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.05		.05017	mg/L	100	80	120			
L89863-02MS	MS	09/11/24 19:55	MS240613-7	.05	U	.05123	mg/L	102	75	125			
L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.05	U	.05041	mg/L	101	75	125	2	20	
L89863-03DUP	DUP	09/11/24 20:04			U	U	mg/L				0	20	RA
Vanadium (1312	?)		EPA 6020	B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG597078													
WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.05047	mg/L	101	90	110			
WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.0015	0.0015			
WG596687PBS	PBS	09/11/24 19:46				U	mg/L		-0.0015	0.0015			
WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.05005		.04995	mg/L	100	80	120			
L89863-02MS	MS	09/11/24 19:55	MS240613-7	.05005	U	.05001	mg/L	100	75	125			
L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.05005	U	.05061	mg/L	101	75	125	1	20	
L89863-03DUP	DUP	09/11/24 20:04			.00053	.00068	mg/L				25	20	RA
Zinc (1312)			EPA 6020	B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qua
WG597078													
WG597078ICV	ICV	09/11/24 19:35	MS240613-12	.05		.0506	mg/L	101	90	110			
WG597078ICB	ICB	09/11/24 19:37				U	mg/L		-0.018	0.018			
WG596687PBS	PBS	09/11/24 19:46				U	mg/L		-0.018	0.018			
WG596687LFB2	LFB	09/11/24 19:48	MS240613-7	.050015		.0523	mg/L	105	80	120			
L89863-02MS	MS	09/11/24 19:55	MS240613-7	.050015	U	.0524	mg/L	105	75	125			
L89863-02MSD	MSD	09/11/24 19:57	MS240613-7	.050015	U	.0525	mg/L	105	75	125	0	20	
L89863-03DUP	DUP	09/11/24 20:04			U	U	mg/L				0	20	RA



(800) 334-5493

Thorin Resources

ACZ Project ID: L89863

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L89863-01	NG597330	Aluminum (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Antimony (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
		Arsenic (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
		Barium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
		Beryllium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Bicarbonate as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG597330	Boron (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597296	Bromide (1312-DI)	EPA 300.0	D1	Sample required dilution due to matrix.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Cadmium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597330	Calcium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG596844	Carbon, total organic (TOC) (1312-DI)	SM 5310 B-2011/2014	Q6	Sample was received above recommended temperature.
			SM 5310 B-2011/2014	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Carbonate as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG597226	Chloride (1312-DI)	EPA 300.0	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Chromium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Conductivity @25C (1312-DI)	SM 2510 B-2011	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 2510 B-2011	Q6	Sample was received above recommended temperature.
	WG597078	Copper (1312)	EPA 6020B	H1	case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).



(800) 334-5493

Inorganic Extended Qualifier Report

Thorin Resources

ACZ Project ID: L89863

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
	WG597257	Fluoride (1312 DI)	SM 4500-F C-2011	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 4500-F C-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Hydroxide as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG597330	Iron (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Lead (1312)	EPA 6020B	B7	Target analyte detected in prep / method blank at or above acceptance limit. Sample value is > 10X the concentration in the method blank.
			EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG597330	Lithium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Magnesium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Manganese (1312)	EPA 6020B	B7	Target analyte detected in prep / method blank at or above acceptance limit. Sample value is > 10X the concentration in the method blank.
			EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG597088	Mercury (1312)	EPA 7470A	Q6	Sample was received above recommended temperature.
			EPA 7470A	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Molybdenum (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG597549	NAG	Single NAG - EGI 2002	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Nickel (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG596788	Nitrate/Nitrite as N (1312-DI)	EPA 353.2	H3	Sample was received and analyzed past holding time.
			EPA 353.2	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 353.2	Q6	Sample was received above recommended temperature.
			EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N (1312-DI)	EPA 353.2	H3	Sample was received and analyzed past holding time.
			EPA 353.2	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 353.2	Q6	Sample was received above recommended temperature.
			EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

REPAD.15.06.05.01

Inorganic Extended Qualifier Report

Thorin Resources

ACZ Project ID: L89863

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
	WG597072	Nitrogen, ammonia (1312-DI)	EPA 350.1	Q6	Sample was received above recommended temperature.
			EPA 350.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG596787	Phosphorus, ortho dissolved (1312-DI)	EPA 365.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597855	Phosphorus, Total (1312-DI)	EPA 365.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597330	Potassium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597571	Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 2540 C-2011	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
			SM 2540 C-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG596865	Residue, Non-Filter (TSS) @180C (1312- DI)	SM 2540 D-2011/2015	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 2540 D-2011/2015	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			SM 2540 D-2011/2015	Z3	Sample volume yielded a residue less than 2.5 mg
	WG597078	Selenium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG598011	Silica (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG597262	Silver (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597330	Sodium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Strontium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597226	Sulfate (1312-DI)	EPA 300.0	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to- analysis.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597577	Sulfur HNO3 Residue	EPA 600/2-78-054 3.2.4 Modified	RA	Relative Percent Difference (RPD) was not used for data

REPAD.15.06.05.01

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

Thorin Resources

(800) 334-5493

Inorganic Extended Qualifier Report

ACZ Project ID: L89863

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
					validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Organic Residual	EPA 600/2-78-054 3.2.4 Modified	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Thallium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597330	Tin (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Total Alkalinity	SM 2320 B-2011	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG597078	Uranium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Vanadium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Zinc (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).


(800) 334-5493

Thorin Resources

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L89863-02	NG597330	Aluminum (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Antimony (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
		Arsenic (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
		Barium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
		Beryllium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Bicarbonate as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG597330	Boron (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597296	Bromide (1312-DI)	EPA 300.0	D1	Sample required dilution due to matrix.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Cadmium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597330	Calcium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG596844	Carbon, total organic (TOC) (1312-DI)	SM 5310 B-2011/2014	Q6	Sample was received above recommended temperature.
			SM 5310 B-2011/2014	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Carbonate as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG597226	Chloride (1312-DI)	EPA 300.0	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Chromium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Conductivity @25C (1312-DI)	SM 2510 B-2011	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 2510 B-2011	Q6	Sample was received above recommended temperature.
	WG597078	Copper (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).



(800) 334-5493

Inorganic Extended Qualifier Report

Thorin Resources

ACZ Project ID: L89863

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
	WG597257	Fluoride (1312 DI)	SM 4500-F C-2011	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 4500-F C-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Hydroxide as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG597330	Iron (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Lead (1312)	EPA 6020B	B7	Target analyte detected in prep / method blank at or above acceptance limit. Sample value is > 10X the concentration in the method blank.
			EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG597330	Lithium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Magnesium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Manganese (1312)	EPA 6020B	B7	Target analyte detected in prep / method blank at or above acceptance limit. Sample value is > 10X the concentration in the method blank.
			EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG597088	Mercury (1312)	EPA 7470A	Q6	Sample was received above recommended temperature.
			EPA 7470A	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Molybdenum (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG597549	NAG	Single NAG - EGI 2002	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Nickel (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG596788	Nitrate/Nitrite as N (1312-DI)	EPA 353.2	H3	Sample was received and analyzed past holding time.
			EPA 353.2	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 353.2	Q6	Sample was received above recommended temperature.
			EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N (1312-DI)	EPA 353.2	H3	Sample was received and analyzed past holding time.
			EPA 353.2	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 353.2	Q6	Sample was received above recommended temperature.
			EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

4C: **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

(800) 334-5493

Thorin Resources

ACZ Project ID: L89863

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
	WG597072	Nitrogen, ammonia (1312-DI)	EPA 350.1	Q6	Sample was received above recommended temperature.
			EPA 350.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG596787	Phosphorus, ortho dissolved (1312-DI)	EPA 365.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597855	Phosphorus, Total (1312-DI)	EPA 365.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597330	Potassium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597571	Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 2540 C-2011	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
			SM 2540 C-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG596865	Residue, Non-Filter (TSS) @180C (1312- DI)	SM 2540 D-2011/2015	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 2540 D-2011/2015	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			SM 2540 D-2011/2015	Z3	Sample volume yielded a residue less than 2.5 mg
	WG597078	Selenium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG598011	Silica (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG597262	Silver (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597330	Sodium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Strontium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG597226	Sulfate (1312-DI)	EPA 300.0	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597577	Sulfur HNO3 Residue	EPA 600/2-78-054 3.2.4 Modified	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Organic Residual	EPA 600/2-78-054 3.2.4 Modified	RA	Relative Percent Difference (RPD) was not used for data

4C AGZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Extended Qualifier Report

Thorin Resources

ACZ Project ID: L89863

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
					validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Thallium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597330	Tin (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Total Alkalinity	SM 2320 B-2011	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG597078	Uranium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Vanadium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Zinc (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).



(800) 334-5493

Thorin Resources

ACZ Project ID: L89863

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L89863-03	NG597330	Aluminum (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Antimony (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
		Arsenic (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
		Barium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
		Beryllium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Bicarbonate as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG597330	Boron (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597296	Bromide (1312-DI)	EPA 300.0	D1	Sample required dilution due to matrix.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Cadmium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597330	Calcium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG596844	Carbon, total organic (TOC) (1312-DI)	SM 5310 B-2011/2014	Q6	Sample was received above recommended temperature.
			SM 5310 B-2011/2014	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Carbonate as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG597226	Chloride (1312-DI)	EPA 300.0	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to- analysis.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Chromium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Conductivity @25C (1312-DI)	SM 2510 B-2011	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 2510 B-2011	Q6	Sample was received above recommended temperature.
	WG597078	Copper (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).



(800) 334-5493

Inorganic Extended Qualifier Report

Thorin Resources

ACZ Project ID: L89863

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
	WG597257	Fluoride (1312 DI)	SM 4500-F C-2011	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 4500-F C-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Hydroxide as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG597330	Iron (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Lead (1312)	EPA 6020B	B7	Target analyte detected in prep / method blank at or above acceptance limit. Sample value is > 10X the concentration in the method blank.
			EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG597330	Lithium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Magnesium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Manganese (1312)	EPA 6020B	B7	Target analyte detected in prep / method blank at or above acceptance limit. Sample value is > 10X the concentration in the method blank.
			EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG597088	Mercury (1312)	EPA 7470A	Q6	Sample was received above recommended temperature.
			EPA 7470A	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Molybdenum (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG597549	NAG	Single NAG - EGI 2002	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Nickel (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG596788	Nitrate/Nitrite as N (1312-DI)	EPA 353.2	H3	Sample was received and analyzed past holding time.
			EPA 353.2	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 353.2	Q6	Sample was received above recommended temperature.
			EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N (1312-DI)	EPA 353.2	H3	Sample was received and analyzed past holding time.
			EPA 353.2	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 353.2	Q6	Sample was received above recommended temperature.
			EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

4C AGZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

(800) 334-5493

Thorin Resources

ACZ Project ID: L89863

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
	WG597072	Nitrogen, ammonia (1312-DI)	EPA 350.1	Q6	Sample was received above recommended temperature.
			EPA 350.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG596787	Phosphorus, ortho dissolved (1312-DI)	EPA 365.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597855	Phosphorus, Total (1312-DI)	EPA 365.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597330	Potassium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597571	Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 2540 C-2011	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
			SM 2540 C-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			SM 2540 C-2011	Z3	Sample volume yielded a residue less than 2.5 mg
	WG596865	Residue, Non-Filter (TSS) @180C (1312- DI)	SM 2540 D-2011/2015	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 2540 D-2011/2015	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			SM 2540 D-2011/2015	Z3	Sample volume yielded a residue less than 2.5 mg
	WG597078	Selenium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG598011	Silica (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG597262	Silver (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597330	Sodium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Strontium (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG597226	Sulfate (1312-DI)	EPA 300.0	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597577	Sulfur HNO3 Residue	EPA 600/2-78-054 3.2.4 Modified	d RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

(800) 334-5493

Inorganic Extended **Qualifier Report**

Thorin Resources

ACZ Project ID: L89863

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L89863-03	NG597577	Sulfur Organic Residual	EPA 600/2-78-054 3.2.4 Modified	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597078	Thallium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597330	Tin (1312)	EPA 6010D	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG597299	Total Alkalinity	SM 2320 B-2011	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG597078	Uranium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Vanadium (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Zinc (1312)	EPA 6020B	H1	Sample prep or analysis performed past holding time. See case narrative.
			EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).



Certification Qualifiers

Thorin Resources

ACZ Project ID: L89863

Metals Analysis

oil Analysis	Silver (1312)	EPA 6020B	
oil Analysis			
,	eters are not offered for certification o	or are not covered by NELAC certificate #ACZ.	
	NAG	Single NAG - EGI 2002	
	Neutralization Potential as CaCO3	EPA 600/2-78-054 3.2.3 Modified (No Heat)	
	pH After Oxidation	Single NAG - EGI 2002	
	pH, Saturated Paste	EPA 600/2-78-054 3.2.2	
	Sulfur HCI Residue	EPA 600/2-78-054 3.2.4 Modified	
	Sulfur HNO3 Residue	EPA 600/2-78-054 3.2.4 Modified	
	Sulfur Total	EPA 600/2-78-054 3.2.4 Modified	

Bicarbonate as CaCO3	SM 2320 B-2011
Bromide (1312-DI)	EPA 300.0
Carbonate as CaCO3	SM 2320 B-2011
Chloride (1312-DI)	EPA 300.0
Conductivity @25C (1312-DI)	SM 2510 B-2011
Fluoride (1312 DI)	SM 4500-F C-2011
Hydroxide as CaCO3	SM 2320 B-2011
Nitrate/Nitrite as N (1312-DI)	EPA 353.2
Nitrite as N (1312-DI)	EPA 353.2
Nitrogen, ammonia (1312-DI)	EPA 350.1
Phosphorus, ortho dissolved (1312-DI)	EPA 365.1
Phosphorus, Total (1312-DI)	EPA 365.1
Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011
Residue, Non-Filter (TSS) @180C (1312- DI)	SM 2540 D-2011/2015
Sulfate (1312-DI)	EPA 300.0
Total Alkalinity	SM 2320 B-2011

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

	ACZ Proje			L89863
	Date Reco		3/29/202	4 09:27
	Receive	•	0/	000004
Receipt Verification	Date Pr	inted:	8/3	30/2024
		YES	NO	NA
1) Is a foreign soil permit included for applicable samples?				X
2) Is the Chain of Custody form or other directive shipping papers present?		Х		
3) Does this project require special handling procedures such as CLP protocol?			Х	
4) Are any samples NRC licensable material?				Х
5) If samples are received past hold time, proceed with requested short hold time analy	yses?	Х		
6) Is the Chain of Custody form complete and accurate?		Х		
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the sa	amples?		Х	
Samples/Containers				
		YES	NO	NA
8) Are all containers intact and with no leaks?		Х		
9) Are all labels on containers and are they intact and legible?		Х		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and T	Time?	Х		
11) For preserved bottle types, was the pH checked and within limits? $ ^{1}$				Х
12) Is there sufficient sample volume to perform all requested work?		Х		
13) Is the custody seal intact on all containers?				Х
14) Are samples that require zero headspace acceptable?				Х
15) Are all sample containers appropriate for analytical requirements?		Х		
16) Is there an Hg-1631 trip blank present?				Х
17) Is there a VOA trip blank present?				Х
18) Were all samples received within hold time?		Х		
		NA indicat	tes Not Ap	plicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
NA42768	22.5	NA	15	N/A

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.

REPAD LPII 2012-03



Sample Receipt

Thorin Resources

ACZ Project ID: L89863 Date Received: 08/29/2024 09:27 Received By: Date Printed: 8/30/2024

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), HCI preserved vial (organics), Na2S2O3 preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

Name Company Thorin Resources Company Traili (dickerson@thorinresources.com Company Name Company Company Name Company Company Name Company Name Company Invoice to: Name Company Thorin Resources Company Company Thorin Resources Company Company Thorin Resources Company Company Company Company Imail Sample(s) received past holding time (HT), or if insufficient HT remains to complete Imails to complete Sample(s) received past holding time (HT), or if insufficient HT remains to complete Imails to complete YES No Imails to complete No Yes No Yes No Yes No Yes No Yes No Yes No Yes No Yes <	Name CJ Dickerson Company Thorin Resour E-mail: cjdickerson@thor Copy of Report to: Name Company.	ces inresources.com		33	0 Main	St Unil 1	_		
E-mail: cjclickerson@lhorinresources.com Telephone: 9703162294 Copy of Repart to: E-mail: Name E-mail: Company. Telephone: Name. Company. Voide to: Address: PO Box 1030 Company. Ouray. Co 81427 Company. Telephone: 9703162294 Company. Ouray. Co 81427 Trail: djckerson@thorinresources.com Telephone: Company. Telephone: Company. Telephone: Trail: djckerson@thorinresources.com Telephone: Company. Telephone: Trail: djckerson@thorinresources.com Telephone: Company. Telephone: Trail: djckerson@thorinresources.com YES Trail: Telephone: Sampler for SDWA Compliance Monitoring? Yes No Instance Monitoring? Yes, plase include state forms. Results will be reported to PDL for Colorado. Sampler's Signature: Sampler's Site Information Traine state for complance testing. State CO Social: Sampler's Signature: Yes SAMPLE IDENTIFICATION <	E-mail: Cjdickerson@thor Copy of Report to: Name	inresources.com	· - ,						
Copy of Report to: E-mail: Name Telephone: Company: Address: PO Box 1030 Company: Ouray, Co 81427 Image: CJ Dickerson Ouray, Co 81427 Image: CJ Dickerson@lthorinresources.com Telephone: Company: Telephone Image: Company: Address: Company: Telephone Image: Company: Address: Company: Telephone Image: Company: Address: Image: Company: Address: Image: Company: Telephone Image: Company: Telephone: Imal: Company: Telephone:	Copy of Report to: Name		Telept	none: 9	7031622	94			
Name E-mail: Company: Telephone: nvoice to: Address: PO Box 1030 Company: Telephone: Company: Totic Resources Company: Telephone: Company: Telephone: Company: Telephone: Company: Telephone: Company: Address: Company: Address: Company: Address: Company: Address: Company: Address: Company: Telephone: mail: Sample(s) received past holding time (HT), or if insufficient HT remains to complete No YES Prev & Col: Conston: No Yes: Yes: <td>Name</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Name								
Company Telephone: nvoice to: Address: PO Box 1030 Company: Thorin Resources Ouray, Co 81427 Email Cyclickerson@Ithorinresources.com Telephone: Sample(s) received past holding time (HT), or if insufficient HT remains to complete native of derived and the repeated of the formation analysis before expiration, shall AC2 proceed with requested short HT remains to complete native of derived and derived anderinderived and derived anderived and derived a			E-mat	Ľ				-	
Address: PO Box 1030 Company: Thorin Resources Company: Duray: Company: Company: Compa	oompony		Telepi	hone:					
Name, CJ Dickerson Address: PO Box 1030 Company, Thorin Resources Ouray, Co 81427 Imail Cidickerson@thorinresources.com Telephone: 9703162294 Copy of Invoice to: Address: Imail: Telephone: Imail: No Imail: YES Imail: No Imail: No Imail: No Imail: No Imail: No Imail: Sampler's Signature: Image: Image: No Image: Image: Image: Image: Sampler's Signature: Image: Image: Image: Image: Image: Image: Image: Image: Sampler's Signature: Image:	Invales te:								
Company: Thorin Resources Ouray: Co 81427 Telephone: 9703162294 Company: Telephone: 9703162294 Telephone: 9703162294 Company: Telephone: 9703162294 Telephone: 9703162294 Table: Telephone: Telephone: NO Sample(s) received past holding time (HT), or if insufficient HT remains to complete respiration, shall AC2 proceed with requested short HT analysis? NO No Yes NO Create Scale concerns the insufficient HT remains to complete respirate only insufficient analysis? NO No Yes NO Create Scale concerns the insufficient of the requested short HT analysis? NO Yes NO Yes Sampler's Signature: Sampler's Site Information of State CO Zip code 81427 Concerns: State Concernse insufficient with the tamper entropy of the tamper of the tamal of the tamper of the tamper of the tamper of the tamper of the			Addre	ss PO	Box 10	30			
Image include kerson@thorinresources.com Telephone: 9703162294 Copp of Invoice to: Address: Image: company Address: Image: company Image: company Image: company									
Copy of Invoice to: tame company:			Telep	hone: 9	703162	294			
Hame Address:								-	
Company Telephone Sample(s) received past holding time (HT), or if insufficient HT remains to complete YES Sample(s) received past holding time (HT), or if insufficient HT remains to complete YES No Ves Sampler's Signature: No Ves Ves No Ves ROJECT INFORMATION XALVSS REQUESTED plank Ast or as glipte number of a produce based	· · · · · · · · · · · · · · · · · · ·		Addre						
Imail Telephone: sample(s) received past holding time (HT), or if insufficient HT remains to complete nalysis before expiration, shall ACZ proceed with requested short HT analyses? NO http://wew.dcl.nd/compliance Monitoring? Yes NO yes, please include state forms. Results will be reported to PDL for Colorado. NO Image: Colorder for the instruction of the substate to the reported to PDL for Colorado. sampler's Signature:				30					
sample(s) received past holding time (HT), or if insufficient HT remains to complete YES NO naltysis before expiration, shall ACZ proceed with requested short HT analyses? NO NO Dree AC2-of create device to further neurodes. H reducer TES* ner NO* a valued AC2 with proceed at bit is reported to PDL for Colorado. No ampler's Name: CJ Drckerson Sampler's Site Information State CO Zip code 81427 Time Zone Min sampler's Name: CJ Drckerson Sampler's Site Information State CO Zip code 81427 Time Zone Min Sampler's Signature:			Teleo	hone					
natysis before expiration, shall ACZ proceed with requested short HT analyses? NO		alding time (HT), or if insufficient HT	· · · · ·		e				
In examples for SDWA Compliance Monitoring? Yes No ✓ yes, please include state forms. Results will be reported to PDL for Colorado. ampler's Name: CJ Dickerson Sampler's Site Information State CO Zip code 81427 Time Zone Min Sampler's Signature: ** attact to be adhedies; aut scheding: aut scheding for scheding fo	analysis before expiration, s	hall ACZ proceed with requested st	hort HT analy	5857		un di bell na a summed	and date we		
yes, please include state forms. Results will be reported to PDL for Colorado. sempler's Name: CJ Dickerson Sampler's Site Information State CO Zip code 81427 Time Zone Min Sampler's Signature: Intelaile the subretter, and referre of time some Intelaile the second of time some				_ 04.4111			1		····-
Implify the little litttle litttle little little little little little little			L for Colora	do.	, 				
Sample f's Signature: Impering all the Lenge is anyony, it canceler if year deriver by and deriver anderiver anderiver and deriver and deriver anderiver and deriver and	Sampler's Name: CJ Dickerso	m Sampler's Site Information	on State_	co	7	ip code 814	127	_ Time Zo	one Min
Note # Ye Ca Ye cporting state for complance testing. Ca heck box if samples include NRC licensed material? Samples include NRC licensed material? SAMPLE IDENTIFICATION DATE:TIME Matrix ** RV SPLP Tails 3/4/2024 09:40 1 ✓ BW SPLP Tails 3/4/2024 09:40 Image: Sample Solution 1 Image: S	'Sampler's Signature:	'i staat to the st	e authenticity and ve shifte sample at shy	W PY, 15 CAR	NUMBER PROVIDE	Put Brankping of			
SAMPLE IDENTIFICATION DATE:TIME Matrix * ✓ Ø RV SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ RV ABA Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ ✓ BW SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ ✓ BW SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ ✓ ✓ BW SPLP Tails 3/4/2024 09:40 1 ✓	PROJECT INFORMATION			ANAL	YSES REC	UESTED (aluae	h list or 43	ie guote nui I	mb er)
SAMPLE IDENTIFICATION DATE:TIME Matrix * ✓ Ø RV SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ RV ABA Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ ✓ BW SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ ✓ BW SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ ✓ ✓ BW SPLP Tails 3/4/2024 09:40 1 ✓	Quole #		¥	1					
SAMPLE IDENTIFICATION DATE:TIME Matrix * ✓ Ø RV SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ RV ABA Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ ✓ BW SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ ✓ BW SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ ✓ ✓ BW SPLP Tails 3/4/2024 09:40 1 ✓	P0#		tain the second						
SAMPLE IDENTIFICATION DATE:TIME Matrix * ✓ Ø RV SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ RV ABA Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ ✓ BW SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ ✓ BW SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ ✓ ✓ BW SPLP Tails 3/4/2024 09:40 1 ✓	Reporting state for compliance	1251/10	Š				1		
SAMPLE IDENTIFICATION DATE MILE Matrix <				9	<u> </u>				
IV ABA Tails 3/4/2024 09:40 1 ✓ ✓ ✓ IBW SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ IBW SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ ✓ IBW SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ ✓ ✓ IBW SPLP Tails 3/4/2024 09:40 1 ✓							-		
BW SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ BW SPLP Tails 3/4/2024 09:40 1 ✓ ✓ ✓ Image: Second state stat			<u> </u>	1 /	1	-	-		┝─┟─
BW SPLP Tails 3/4/2024 09:40 1 ✓ ✓			<u> `</u>	۲Ť			-	+	┠─╂╼
Image: state stat	· · · · · · · · · · · · · · · · · · ·			Ê	·		-		┠╌┠╌
Image: state		51472024 05,40	<u> </u>	⊢	I <u>→</u>		-		┠──┠─
Image: state stat							+	-	┠╍╍┠╸
				┢				╉╌╍	┢──┠─
			<u> </u>	1			_		┠╍╌┠╍
				╞──			-	+	╂╼╼╂╼
				┢──			╉━		╋╌╋╸
	· · · · · · · · · · · · · · · · · · ·								
Manu SW (Surface Water) CW (Ground Water) WW (Waste Water) DW (Drinking Water) SL (Studge) SO (Sod) OL (Out) Other (Specify) MARKS									

Attachment J – Feed Material Updated Material Quality Tables & Acid Generating Potential Tables

Analyte	Units	Minimum	Maximum	Average	Sample Count	Non- Detect Count	MDL
Acid Generation Potential (calc on Sulfur tota	t CaCO3/Kt	9.06	14.1	11.58000	2	-	0.31
Acid Neutralization Potential (calc)	t CaCO3/Kt	64	98	81	2	-	1
Acid-Base Potential (calculation)	t CaCO3/Kt	54.9	83.9	69.4	2	-	-
Aluminum (1312)	mg/L	0.45	0.52	0.485	2	-	0.05
Antimony (1312)	mg/L	0.00114	0.00157	0.001355	2	-	0.0004
Arsenic (1312)	mg/L	0.00655	0.00719	0.00687	2	-	0.0002
Barium (1312)	mg/L	0.0096	0.0154	0.0125	2	-	0.0005
Beryllium (1312)	mg/L	-	-	-	2	2	0.00008
Bicarbonate as CaCO3	mg/L	31.4	33.1	32.25	2	-	2
Boron (1312)	mg/L	-	-	-	2	2	0.03
Bromide (1312-DI)	mg/L	0.35	0.435	0.3925	2	-	0.05
Cadmium (1312)	mg/L	-	-	-	2	2	0.00005
Calcium (1312)	mg/L	8.97	10	9.485	2	-	0.1
Carbon, total organic (TOC) (1312-DI)	mg/L	1.7	1.8	1.75	2	-	1
Carbonate as CaCO3	mg/L	-	-	-	2	2	2
Chloride (1312-DI)	mg/L	-	-	-	2	2	0.4
Chromium (1312)	mg/L	-	-	-	2	2	0.0005
Cobalt (1312)	mg/L	0.000058	0.000082	0.00007	2	-	0.00005
Conductivity @25C (1312-DI)	umhos/cm	51	56	53.5	2	-	1
Copper (1312)	mg/L	0.00128	0.0013	0.00129	2	-	0.0008
Fluoride (1312 DI)	mg/L	0.37	0.38	0.375	2	-	0.15
Hardness as CaCO3 (1312)	mg/L	24	27	25.5	2	-	0.2
Hydroxide as CaCO3	mg/L	-	-	-	2	2	2
Iron (1312)	mg/L	0.071	0.071	0.071	2	1	0.06
Lead (1312)	mg/L	0.00119	0.00273	0.00196	2	-	0.0001
Lithium (1312)	mg/L	-	-	-	2	2	0.008
Magnesium (1312)	mg/L	0.38	0.38	0.38	2	-	0.2
Manganese (1312)	mg/L	0.0251	0.0312	0.02815	2	-	0.0004
Mercury (1312)	mg/L	-	-	-	2	2	0.0002
Molybdenum (1312)	mg/L	0.00357	0.00376	0.003665	2	-	0.0002
Neutralization Potential as CaCO3	%	6.4	9.8	8.1	2	-	0.1
Nickel (1312)	mg/L	-	-	-	2	2	0.0004
Nitrate (1312 DI)	mg/L	0.037	0.037	0.037	2	1	0.02
Nitrate/Nitrite as N (1312-DI)	mg/L	0.037	0.037	0.037	2	1	0.02
Nitrite as N (1312-DI)	mg/L	-	-	-	2	2	0.01
Nitrogen, ammonia (1312-DI)	mg/L	0.106	0.106	0.106	2	1	0.1
рН	Units	9	9	9	2	-	0.1
Phosphorus, ortho dissolved (1312-DI)	mg/L	0.011	0.011	0.011	2	1	0.01
Phosphorus, Total (1312-DI)	mg/L	0.011	0.012	0.0115	2	-	0.01
Potassium (1312)	mg/L	2.31	2.93	2.62	2	-	0.5
Residue, Filterable (TDS) @180C (1312)	mg/L	32	36	34	2	-	20
Residue, Non-Filter (TSS) @180C (1312-DI)	mg/L	-	-	-	2	2	5
Selenium (1312)	mg/L	0.00016	0.00034	0.00025	2	-	0.0001
Silica (1312)	mg/L	3.3	3.7	3.5	2	-	0.2
Silver (1312)	mg/L	-	-	-	2	2	0.0001
Sodium (1312)	mg/L	0.94	1.19	1.065	2	-	0.2
Strontium (1312)	mg/L	0.0857	0.133	0.10935	2	-	0.009
Sulfate (1312-DI)	mg/L	2.84	3.19	3.015	2	-	0.9
Temperature	Units	20.3	20.9	20.6	2	-	0.1
Thallium (1312)	mg/L	-	-	-	2	2	0.0001
Tin (1312)	mg/L	-	-	-	2	2	0.04
Total Alkalinity	mg/L	31.4	33.1	32.25	2	-	2
Uranium (1312)	mg/L	-	-	-	2	2	0.0001
Vanadium (1312)	mg/L	0.00185	0.00213	0.00199	2	-	0.0005
Zinc (1312)	mg/L	-	-	-	2	2	0.006

Updated Table 3: Summary of SPLP & ABA – Proposed Camp Bird Feed Material

Analyte	Units	Minimum	Maximum	Average	Sample Count	Non- Detect Count	MDL
Acid Generation Potential (calc on Sulfur total)	t CaCO3/Kt	9.06	14.1	11.58	2	0	0.31
Acid Neutralization Potential (calc)	t CaCO3/Kt	64	98	81	2	0	1
Acid-Base Potential (calculation)	t CaCO3/Kt	54.9	83.9	69.4	2	0	0
Neutralization Potential as CaCO3	%	6.4	9.8	8.1	2	0	0.1
Neutralization Potential Ratio				7.0	2	0	

Non-Detect Units Minimum Sample Count MDL Analyte Maximum Average Count Acid Generation Potential (calc on Sulfur tota t CaCO3/Kt 43.00000 17.2 68.8 2 0.31 -Acid Neutralization Potential (calc) t CaCO3/Kt 105 131 118 2 -Acid-Base Potential (calculation) t CaCO3/Kt 36.3 114 75.15 2 -0.098 0.098 Aluminum (1312) mg/L 0.098 2 -0.05 0.01095 Antimony (1312) mg/L 0.0103 0.0116 2 0.0004 -Arsenic (1312) mg/L 0.00153 0.00222 0.001875 2 0.0002 -Barium (1312) mg/L 0.0613 0.0655 0.0634 2 0.0005 -Beryllium (1312) mg/L 2 2 0.00008 **Bicarbonate as CaCO3** mg/L 30.6 30.7 30.65 2 -Boron (1312) mg/L ---2 2 0.03 Bromide (1312-DI) mg/L ---2 2 0.05 2 0.00005 Cadmium (1312) mg/L 2 _ -2 Calcium (1312) mg/L 17.9 22.8 20.35 0.1 -Carbon, total organic (TOC) (1312-DI) 2.2 mg/L 1.5 2.9 2 -1 Carbonate as CaCO3 2 2 mg/L 2 Chloride (1312-DI) 0.63 0.63 2 0.4 mg/L 0.63 1 2 0.0005 Chromium (1312) 2 mg/L Cobalt (1312) 0.000073 0.000104 0.0000885 2 0.00005 mg/L -Conductivity @25C (1312-DI) 2 umhos/cm 85 107 96 -0.00547 Copper (1312) 0.00084 0.0101 2 0.0008 mg/L _ Fluoride (1312 DI) 2 0.15 mg/L 2 Hardness as CaCO3 (1312) 0.2 mg/L 54.5 2 48 61 -Hydroxide as CaCO3 2 mg/L 2 ---2 2 Iron (1312) mg/L 2 0.06 Lead (1312) 0.07755 2 0.0001 0.0676 0.0875 mg/L -Lithium (1312) 2 0.008 2 mg/L Magnesium (1312) 0.77 0.89 0.83 2 0.2 mg/L -Manganese (1312) 0.0567 0.0768 0.06675 2 0.0004 mg/L -2 2 0.0002 Mercury (1312) mg/L Molybdenum (1312) 0.0137 0.0218 0.01775 2 0.0002 mg/L -Neutralization Potential as CaCO3 10.5 13.1 11.8 2 0.1 % Nickel (1312) 2 2 0.0004 mg/L Nitrate (1312 DI) 1.72 1.83 1.775 2 0.02 mg/L mg/L Nitrate/Nitrite as N (1312-DI) 1.74 1.85 1.795 2 0.02 -0.0195 Nitrite as N (1312-DI) 0.016 0.023 2 0.01 mg/L Nitrogen, ammonia (1312-DI) 0.116 0.116 0.116 2 1 0.1 mg/L 0.1 pН Units 8.5 8.8 8.65 2 Phosphorus, ortho dissolved (1312-DI) mg/L 2 2 0.01 -2 0.01 Phosphorus, Total (1312-DI) mg/L 2 3.79 3.965 2 0.5 Potassium (1312) mg/L 4.14 Residue, Filterable (TDS) @180C (1312) 2 20 mg/L 56 76 66 Residue, Non-Filter (TSS) @180C (1312-DI) mg/L 2 2 7.5 0.0001 0.00015 0.000125 2 0.0001 Selenium (1312) mg/L Silica (1312) mg/L 2.1 2.5 2.3 2 0.2 Silver (1312) 2 2 0.0001 mg/L Sodium (1312) 0.53 0.79 0.66 2 mg/L 0.2 Strontium (1312) 0.35 0.429 0.3895 2 0.009 mg/L Sulfate (1312-DI) 13.6 26.1 19.85 2 0.9 mg/L Temperature Units 20.1 20.7 20.4 2 0.1 0.00016 0.0001 Thallium (1312) 0.00016 0.00016 2 1 mg/L Tin (1312) 2 2 0.04 mg/L **Total Alkalinity** mg/L 30.6 30.7 30.65 2 Uranium (1312) mg/L 2 2 0.0001

mg/L

mg/L

0.0086

0.0086

Vanadium (1312)

Zinc (1312)

Updated Table 4: Summary of SPLP & ABA - Revenue Virginius Feed Material

0.0005

0.006

2

1

2

2

0.0086

Analyte	Units	Minimum	Maximum	Average	Sample Count	Non- Detect Count	MDL
Acid Generation Potential (calc on Sulfur total)	t CaCO3/Kt	17.2	68.8	43	2	0	0.31
Acid Neutralization Potential (calc)	t CaCO3/Kt	105	131	118	2	0	1
Acid-Base Potential (calculation)	t CaCO3/Kt	36.3	114	75.15	2	0	0
Neutralization Potential as CaCO3	%	10.5	13.1	11.8	2	0	0.1
Neutralization Potential Ratio				2.7	2	0	

New Table: Acid Generation Vs Acid Neutralizing Potential – Revenue Virginius Feed Material

Attachment K – Material Quality Laboratory Reports – Head-Grade Material



Analytical Report

July 23, 2024

Report to: CJ Dickerson Thorin Resources 105 Meadow Estates Dr.

Ridgway, CO 81432

cc: Accounts Payable

Bill to: Accounts Payable Thorin Resources 1900 Main St Unit #1 Ouray, CO 81427

Project ID: ACZ Project ID: L86570

CJ Dickerson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on March 13, 2024. This project has been assigned to ACZ's project number, L86570. 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 L86570. 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 August 22, 2024. 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.

Mark Melleal

Mark McNeal has reviewed and approved this report.





July 23, 2024

Project ID: ACZ Project ID: L86570

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 4 miscellaneous samples from Thorin Resources on March 13, 2024. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L86570. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times.

Sample Analysis

These samples were analyzed for inorganic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports.

This report is being reissued to include values for AGP and ANP.



Project ID:

Sample ID: RV ABA HGW HEADS-01

Inorganic Analytical Results

ACZ Sample ID: **L86570-01** Date Sampled: 03/04/24 09:40 Date Received: 03/13/24 Sample Matrix: Soil

Inorganic Prep										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Phosphorus, Total (1312-DI)	EPA 365.1								03/25/24 10:37	mrd
Total Hot Plate Digestion (1312)	EPA 3010A								03/29/24 15:12	jrj
Total Hot Plate Digestion (1312)	EPA 3010A								03/22/24 12:50	aeh
Metals Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (1312)	EPA 6010D	1	0.056	В	*	mg/L	0.05	0.25	03/26/24 18:04	brc
Antimony (1312)	EPA 6020B	1	0.0116			mg/L	0.0004	0.002	03/30/24 17:32	jrj
Arsenic (1312)	EPA 6020B	1	0.00222			mg/L	0.0002	0.001	03/30/24 17:32	jrj
Barium (1312)	EPA 6020B	1	0.0655			mg/L	0.0005	0.0025	03/30/24 17:32	jrj
Beryllium (1312)	EPA 6020B	1	<0.00008	U	*	mg/L	0.00008	0.00025	03/30/24 17:32	jrj
Boron (1312)	EPA 6010D	1	<0.03	U	*	mg/L	0.03	0.1	03/26/24 18:04	brc
Cadmium (1312)	EPA 6020B	1	<0.00005	U	*	mg/L	0.00005	0.00025	03/30/24 17:32	jrj
Calcium (1312)	EPA 6010D	1	22.8			mg/L	0.1	0.5	03/26/24 18:04	brc
Chromium (1312)	EPA 6020B	1	<0.0005	U	*	mg/L	0.0005	0.002	03/30/24 17:32	jrj
Cobalt (1312)	EPA 6020B	1	0.000104	В	*	mg/L	0.00005	0.00025	03/30/24 17:32	jrj
Copper (1312)	EPA 6020B	1	0.0101		*	mg/L	0.0008	0.002	04/02/24 14:24	aps
Iron (1312)	EPA 6010D	1	<0.06	U	*	mg/L	0.06	0.15	03/26/24 18:04	brc
Lead (1312)	EPA 6020B	1	0.0875			mg/L	0.0001	0.0005	03/30/24 17:32	jrj
Lithium (1312)	EPA 6010D	1	<0.008	U	*	mg/L	0.008	0.04	03/26/24 18:04	brc
Magnesium (1312)	EPA 6010D	1	0.89	В	*	mg/L	0.2	1	03/26/24 18:04	brc
Manganese (1312)	EPA 6020B	1	0.0768			mg/L	0.0004	0.002	03/30/24 17:32	jrj
Mercury (1312)	EPA 7470A	1	<0.0002	U	*	mg/L	0.0002	0.001	03/26/24 14:38	aeh
Molybdenum (1312)	EPA 6020B	1	0.0137		*	mg/L	0.0002	0.0005	03/30/24 17:32	jrj
Nickel (1312)	EPA 6020B	1	<0.0004	U	*	mg/L	0.0004	0.001	03/30/24 17:32	jrj
Potassium (1312)	EPA 6010D	1	4.14		*	mg/L	0.5	1	03/26/24 18:04	brc
Selenium (1312)	EPA 6020B	1	0.00015	В	*	mg/L	0.0001	0.00025	03/30/24 17:32	jrj
Silica (1312)	EPA 6010D	1	2.5			mg/L	0.2	1	03/26/24 18:04	brc
Silver (1312)	EPA 6020B	1	<0.0001	U	*	mg/L	0.0001	0.0005	03/30/24 17:32	jrj
Sodium (1312)	EPA 6010D	1	0.79	В	*	mg/L	0.2	1	03/26/24 18:04	brc
Strontium (1312)	EPA 6010D	1	0.429		*	mg/L	0.009	0.045	03/26/24 18:04	brc
Thallium (1312)	EPA 6020B	1	0.00016	В	*	mg/L	0.0001	0.0005	03/30/24 17:32	jrj
Tin (1312)	EPA 6010D	1	<0.04	U	*	mg/L	0.04	0.2	03/26/24 18:04	brc
Uranium (1312)	EPA 6020B	1	<0.0001	U	*	mg/L	0.0001	0.0005	03/30/24 17:32	jrj
Vanadium (1312)	EPA 6020B	1	<0.0005	U	*	mg/L	0.0005	0.002	03/30/24 17:32	jrj
Zinc (1312)	EPA 6020B	1	0.0086	В	*	mg/L	0.006	0.015	03/30/24 17:32	jrj



Project ID: Sample ID: RV ABA HGW HEADS-01

Inorganic Analytical Results

ACZ Sample ID: **L86570-01** Date Sampled: 03/04/24 09:40 Date Received: 03/13/24 Sample Matrix: Soil

Soil Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	EPA 600/2-78-054 3.2.4		17.2			t CaCO3/Kt	0.31	3.1	07/23/24 0:00	calc
Acid Neutralization Potential (calc)	EPA 600/2-78-054 1.3		131			t CaCO3/Kt	1	5	07/23/24 0:00	calc
Acid-Base Potential (calculation)	EPA 600/2-78-054 1.3		114			t CaCO3/Kt			07/23/24 0:00	calc
Neutralization Potential as CaCO3	EPA 600/2-78-054 3.2.3	1	13.1		*	%	0.1	0.5	07/19/24 13:15	bdc
pH, (1312)	EPA 9045D/9040C									
рН			8.5			Units	0.1	0.1	07/23/24 0:00	LFP
Temperature			20.7			Units	0.1	0.1	07/23/24 0:00	LFP
Sulfur Forms	EPA 600/2-78-054 3.2.4 Modified									
Sulfur HCI Residue		1	0.51		*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur HNO3 Residue		1	<0.01	U	*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Organic Residual		1	<0.01	U	*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Pyritic Sulfide		1	0.51			%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Sulfate		1	0.04	В	*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Total		1	0.55		*	%	0.01	0.1	07/23/24 0:00	kmb
Total Sulfur minus Sulfate		1	0.51			%	0.01	0.1	07/23/24 0:00	kmb
Soil Preparation					_					
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								07/17/24 15:00	bdc

C			
Crush and Pulverize (Ring & Puck)	EPA 600/2-78-054 3.1.3	07/18/24 10:00	bdc
Synthetic Precip. Leaching Procedure	EPA 1312	03/20/24 10:00	lfp
Synthetic Precip. Leaching Procedure	EPA 1312	03/20/24 21:52	lfp



Project ID: Sample ID: RV ABA HGW HEADS-01

Inorganic Analytical Results

ACZ Sample ID: **L86570-01** Date Sampled: 03/04/24 09:40 Date Received: 03/13/24 Sample Matrix: Soil

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (1312 DI)	SM 2320 B-2011									
Bicarbonate as CaCO3		1	30.7		*	mg/L	2	20	03/28/24 0:00	jck
Carbonate as CaCO3	5	1	<2	U	*	mg/L	2	20	03/28/24 0:00	jck
Hydroxide as CaCO3		1	<2	U	*	mg/L	2	20	03/28/24 0:00	jck
Total Alkalinity		1	30.7		*	mg/L	2	20	03/28/24 0:00	jck
Bromide (1312-DI)	EPA 300.0	1	<0.05	U	*	mg/L	0.05	0.25	03/26/24 20:29) bls
Carbon, total organic (TOC) (1312-DI)	SM 5310 B-2011/2014	1	2.9	В	*	mg/L	1	5	04/01/24 21:14	ems
Chloride (1312-DI)	EPA 300.0	1	0.63	В	*	mg/L	0.4	2	03/26/24 20:29) bls
Conductivity @25C (1312-DI)	SM 2510 B-2011	1	107		*	umhos/cm	1	10	03/28/24 17:17	jck
Fluoride (1312 DI)	SM 4500-F C-2011	1	<0.15	U	*	mg/L	0.15	0.35	03/28/24 12:30) jck
Hardness as CaCO3 (1312)	Calculation (SM 2340 B-2011)		61			mg/L	0.2	5	07/23/24 0:00	calc
Nitrate (1312 DI)	Calculation (NO3NO2-NO2)		1.83			mg/L	0.02	0.1	07/23/24 0:00	calc
Nitrate/Nitrite as N (1312-DI)	EPA 353.2	1	1.85		*	mg/L	0.02	0.1	03/22/24 0:46	pjb
Nitrite as N (1312-DI)	EPA 353.2	1	0.023	В	*	mg/L	0.01	0.05	03/22/24 0:46	pjb
Nitrogen, ammonia (1312-DI)	EPA 350.1	1	0.116	В	*	mg/L	0.1	0.2	04/02/24 11:39) jqr
Phosphorus, ortho dissolved (1312-DI)	EPA 365.1	1	<0.01	U	*	mg/L	0.01	0.05	03/22/24 1:17	pjb
Phosphorus, Total (1312-DI)	EPA 365.1	1	<0.01	U	*	mg/L	0.01	0.05	03/27/24 14:37	mrd
Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011	1	76		*	mg/L	20	40	03/25/24 18:35	jck
Residue, Non-Filter (TSS) @180C (1312- DI)	SM 2540 D-2011/2015	1	<5	U	*	mg/L	5	20	03/27/24 21:36	i jck
Sulfate (1312-DI)	EPA 300.0	1	26.1		*	mg/L	0.9	2	03/26/24 20:29	bls



Project ID:

Sample ID: RV SPL HEADS-02

Inorganic Analytical Results

ACZ Sample ID: **L86570-02** Date Sampled: 03/04/24 09:40 Date Received: 03/13/24 Sample Matrix: Soil

Inorganic Prep										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date A	Analyst
Phosphorus, Total (1312-DI)	EPA 365.1								03/25/24 11:42	mrd
Total Hot Plate Digestion (1312)	EPA 3010A								03/22/24 16:10	aeh
Total Hot Plate Digestion (1312)	EPA 3010A								03/29/24 15:34	jrj
Metals Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date A	Analyst
Aluminum (1312)	EPA 6010D	1	0.098	В	*	mg/L	0.05	0.25	03/26/24 18:18	brc
Antimony (1312)	EPA 6020B	1	0.0103			mg/L	0.0004	0.002	03/30/24 17:39	jrj
Arsenic (1312)	EPA 6020B	1	0.00153			mg/L	0.0002	0.001	03/30/24 17:39	jrj
Barium (1312)	EPA 6020B	1	0.0613			mg/L	0.0005	0.0025	03/30/24 17:39	jrj
Beryllium (1312)	EPA 6020B	1	<0.00008	U	*	mg/L	0.00008	0.00025	04/02/24 14:29	aps
Boron (1312)	EPA 6010D	1	<0.03	U	*	mg/L	0.03	0.1	03/26/24 18:18	brc
Cadmium (1312)	EPA 6020B	1	<0.00005	U	*	mg/L	0.00005	0.00025	03/30/24 17:39	jrj
Calcium (1312)	EPA 6010D	1	17.9			mg/L	0.1	0.5	03/26/24 18:18	brc
Chromium (1312)	EPA 6020B	1	<0.0005	U	*	mg/L	0.0005	0.002	03/30/24 17:39	jrj
Cobalt (1312)	EPA 6020B	1	0.000073	В	*	mg/L	0.00005	0.00025	03/30/24 17:39	jrj
Copper (1312)	EPA 6020B	1	0.00084	В	*	mg/L	0.0008	0.002	04/02/24 14:29	aps
Iron (1312)	EPA 6010D	1	<0.06	U	*	mg/L	0.06	0.15	03/26/24 18:18	brc
Lead (1312)	EPA 6020B	1	0.0676			mg/L	0.0001	0.0005	03/30/24 17:39	jrj
Lithium (1312)	EPA 6010D	1	<0.008	U	*	mg/L	0.008	0.04	03/26/24 18:18	brc
Magnesium (1312)	EPA 6010D	1	0.77	В	*	mg/L	0.2	1	03/26/24 18:18	brc
Manganese (1312)	EPA 6020B	1	0.0567			mg/L	0.0004	0.002	03/30/24 17:39	jrj
Mercury (1312)	EPA 7470A	1	<0.0002	U	*	mg/L	0.0002	0.001	03/26/24 14:42	aeh
Molybdenum (1312)	EPA 6020B	1	0.0218		*	mg/L	0.0002	0.0005	03/30/24 17:39	jrj
Nickel (1312)	EPA 6020B	1	<0.0004	U	*	mg/L	0.0004	0.001	03/30/24 17:39	jrj
Potassium (1312)	EPA 6010D	1	3.79		*	mg/L	0.5	1	03/26/24 18:18	brc
Selenium (1312)	EPA 6020B	1	0.00010	В	*	mg/L	0.0001	0.00025	03/30/24 17:39	jrj
Silica (1312)	EPA 6010D	1	2.1			mg/L	0.2	1	03/26/24 18:18	brc
Silver (1312)	EPA 6020B	1	<0.0001	U	*	mg/L	0.0001	0.0005	03/30/24 17:39	jrj
Sodium (1312)	EPA 6010D	1	0.53	В	*	mg/L	0.2	1	03/26/24 18:18	brc
Strontium (1312)	EPA 6010D	1	0.350		*	mg/L	0.009	0.045	03/26/24 18:18	brc
Thallium (1312)	EPA 6020B	1	<0.0001	U	*	mg/L	0.0001	0.0005	03/30/24 17:39	jrj
Tin (1312)	EPA 6010D	1	<0.04	U	*	mg/L	0.04	0.2	03/26/24 18:18	brc
Uranium (1312)	EPA 6020B	1	<0.0001	U	*	mg/L	0.0001	0.0005	03/30/24 17:39	jrj
Vanadium (1312)	EPA 6020B	1	<0.0005	U	*	mg/L	0.0005	0.002	03/30/24 17:39	jrj
Zinc (1312)	EPA 6020B	1	<0.006	U	*	mg/L	0.006	0.015	03/30/24 17:39	jrj



Project ID: Sample ID: RV SPL HEADS-02

Inorganic Analytical Results

ACZ Sample ID:	L86570-02
Date Sampled:	03/04/24 09:40
Date Received:	03/13/24
Sample Matrix:	Soil

Soil Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	EPA 600/2-78-054 3.2.4		68.8			t CaCO3/Kt	0.31	3.1	07/23/24 0:00	calc
Acid Neutralization Potential (calc)	EPA 600/2-78-054 1.3		105			t CaCO3/Kt	1	5	07/23/24 0:00	calc
Acid-Base Potential (calculation)	EPA 600/2-78-054 1.3		36.3			t CaCO3/Kt			07/23/24 0:00	calc
Neutralization Potential as CaCO3	EPA 600/2-78-054 3.2.3	1	10.5		*	%	0.1	0.5	07/19/24 13:42	bdc
pH, (1312)	EPA 9045D/9040C									
pН			8.8			Units	0.1	0.1	07/23/24 0:00	LFP
Temperature			20.1			Units	0.1	0.1	07/23/24 0:00	LFP
Sulfur Forms	EPA 600/2-78-054 3.2.4 Modified									
Sulfur HCI Residue		1	1.86		*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur HNO3 Residue	9	1	0.11		*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Organic Residual		1	0.11		*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Pyritic Sulfide		1	1.75			%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Sulfate		1	0.34		*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Total		1	2.20		*	%	0.01	0.1	07/23/24 0:00	kmb
Total Sulfur minus Sulfate		1	1.86			%	0.01	0.1	07/23/24 0:00	kmb
Soil Preparation					_					

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								07/17/24 15:05	5 bdc
Crush and Pulverize (Ring & Puck)	EPA 600/2-78-054 3.1.3								07/18/24 10:08	3 bdc
Synthetic Precip. Leaching Procedure	EPA 1312								03/21/24 3:31	lfp
Synthetic Precip. Leaching Procedure	EPA 1312								03/20/24 15:00) lfp



Project ID: Sample ID: RV SPL HEADS-02

Inorganic Analytical Results

ACZ Sample ID: **L86570-02** Date Sampled: 03/04/24 09:40 Date Received: 03/13/24 Sample Matrix: Soil

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (1312 DI)	SM 2320 B-2011									
Bicarbonate as CaCO3		1	30.6		*	mg/L	2	20	03/28/24 0:00	jck
Carbonate as CaCO3	3	1	<2	U	*	mg/L	2	20	03/28/24 0:00	jck
Hydroxide as CaCO3		1	<2	U	*	mg/L	2	20	03/28/24 0:00	jck
Total Alkalinity		1	30.6		*	mg/L	2	20	03/28/24 0:00	jck
Bromide (1312-DI)	EPA 300.0	1	<0.05	U	*	mg/L	0.05	0.25	03/26/24 21:05	5 bls
Carbon, total organic (TOC) (1312-DI)	SM 5310 B-2011/2014	1	1.5	В	*	mg/L	1	5	04/01/24 21:40) ems
Chloride (1312-DI)	EPA 300.0	1	<0.4	U	*	mg/L	0.4	2	03/26/24 21:05	5 bls
Conductivity @25C (1312-DI)	SM 2510 B-2011	1	85		*	umhos/cm	1	10	03/28/24 17:26	ð jck
Fluoride (1312 DI)	SM 4500-F C-2011	1	<0.15	U	*	mg/L	0.15	0.35	03/28/24 12:53	3 jck
Hardness as CaCO3 (1312)	Calculation (SM 2340 B-2011)		48			mg/L	0.2	5	07/23/24 0:00	calc
Nitrate (1312 DI)	Calculation (NO3NO2-NO2)		1.72			mg/L	0.02	0.1	07/23/24 0:00	calc
Nitrate/Nitrite as N (1312-DI)	EPA 353.2	1	1.74		*	mg/L	0.02	0.1	03/22/24 0:48	pjb
Nitrite as N (1312-DI)	EPA 353.2	1	0.016	В	*	mg/L	0.01	0.05	03/22/24 0:48	pjb
Nitrogen, ammonia (1312-DI)	EPA 350.1	1	<0.1	U	*	mg/L	0.1	0.2	04/02/24 11:42	2 jqr
Phosphorus, ortho dissolved (1312-DI)	EPA 365.1	1	<0.01	U	*	mg/L	0.01	0.05	03/22/24 1:19	pjb
Phosphorus, Total (1312-DI)	EPA 365.1	1	<0.01	U	*	mg/L	0.01	0.05	03/27/24 14:39) mrd
Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011	1	56		*	mg/L	20	40	03/25/24 18:42	2 jck
Residue, Non-Filter (TSS) @180C (1312- DI)	SM 2540 D-2011/2015	2	<10	U	*	mg/L	10	40	03/27/24 21:40) jck
Sulfate (1312-DI)	EPA 300.0	1	13.6		*	mg/L	0.9	2	03/26/24 21:05	5 bls



Project ID:

Sample ID: CBW ABA HEADS-03

ACZ Sample ID: **L86570-03** Date Sampled: 03/04/24 09:40 Date Received: 03/13/24 Sample Matrix: Soil

Inorganic Prep										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Phosphorus, Total (1312-DI)	EPA 365.1								03/25/24 12:47	mrd
Total Hot Plate Digestion (1312)	EPA 3010A								03/22/24 17:00	aeh
Total Hot Plate	EPA 3010A								03/29/24 16:08	jrj
Digestion (1312)										
Metals Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (1312)	EPA 6010D	1	0.520		*	mg/L	0.05	0.25	03/26/24 18:22	brc
Antimony (1312)	EPA 6020B	1	0.00114	В		mg/L	0.0004	0.002	03/30/24 17:45	jrj
Arsenic (1312)	EPA 6020B	1	0.00655			mg/L	0.0002	0.001	03/30/24 17:45	jrj
Barium (1312)	EPA 6020B	1	0.0154			mg/L	0.0005	0.0025	03/30/24 17:45	jrj
Beryllium (1312)	EPA 6020B	1	<0.00008	U	*	mg/L	0.00008	0.00025	04/02/24 14:36	aps
Boron (1312)	EPA 6010D	1	<0.03	U	*	mg/L	0.03	0.1	03/26/24 18:22	brc
Cadmium (1312)	EPA 6020B	1	<0.00005	U	*	mg/L	0.00005	0.00025	03/30/24 17:45	jrj
Calcium (1312)	EPA 6010D	1	8.97			mg/L	0.1	0.5	03/26/24 18:22	brc
Chromium (1312)	EPA 6020B	1	<0.0005	U	*	mg/L	0.0005	0.002	03/30/24 17:45	jrj
Cobalt (1312)	EPA 6020B	1	0.000082	В	*	mg/L	0.00005	0.00025	03/30/24 17:45	jrj
Copper (1312)	EPA 6020B	1	0.00130	В	*	mg/L	0.0008	0.002	04/02/24 14:36	aps
Iron (1312)	EPA 6010D	1	0.071	В	*	mg/L	0.06	0.15	03/26/24 18:22	brc
Lead (1312)	EPA 6020B	1	0.00273			mg/L	0.0001	0.0005	03/30/24 17:45	jrj
Lithium (1312)	EPA 6010D	1	<0.008	U	*	mg/L	0.008	0.04	03/26/24 18:22	brc
Magnesium (1312)	EPA 6010D	1	0.38	В	*	mg/L	0.2	1	03/26/24 18:22	brc
Manganese (1312)	EPA 6020B	1	0.0312			mg/L	0.0004	0.002	03/30/24 17:45	jrj
Mercury (1312)	EPA 7470A	1	<0.0002	U	*	mg/L	0.0002	0.001	03/26/24 14:43	aeh
Molybdenum (1312)	EPA 6020B	1	0.00376		*	mg/L	0.0002	0.0005	03/30/24 17:45	jrj
Nickel (1312)	EPA 6020B	1	<0.0004	U	*	mg/L	0.0004	0.001	03/30/24 17:45	jrj
Potassium (1312)	EPA 6010D	1	2.31		*	mg/L	0.5	1	03/26/24 18:22	brc
Selenium (1312)	EPA 6020B	1	0.00034		*	mg/L	0.0001	0.00025	03/30/24 17:45	jrj
Silica (1312)	EPA 6010D	1	3.7			mg/L	0.2	1	03/26/24 18:22	brc
Silver (1312)	EPA 6020B	1	<0.0001	U	*	mg/L	0.0001	0.0005	03/30/24 17:45	jrj
Sodium (1312)	EPA 6010D	1	1.19		*	mg/L	0.2	1	03/26/24 18:22	brc
Strontium (1312)	EPA 6010D	1	0.0857		*	mg/L	0.009	0.045	03/26/24 18:22	brc
Thallium (1312)	EPA 6020B	1	<0.0001	U	*	mg/L	0.0001	0.0005	03/30/24 17:45	jrj
Tin (1312)	EPA 6010D	1	<0.04	U	*	mg/L	0.04	0.2	03/26/24 18:22	brc
Uranium (1312)	EPA 6020B	1	<0.0001	U	*	mg/L	0.0001	0.0005	03/30/24 17:45	jrj
Vanadium (1312)	EPA 6020B	1	0.00185	В	*	mg/L	0.0005	0.002	03/30/24 17:45	jrj
Zinc (1312)	EPA 6020B	1	<0.006	U	*	mg/L	0.006	0.015	03/30/24 17:45	jrj



Project ID: Sample ID: CBW ABA HEADS-03 ACZ Sample ID: **L86570-03** Date Sampled: 03/04/24 09:40 Date Received: 03/13/24 Sample Matrix: Soil

Soil Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	EPA 600/2-78-054 3.2.4		9.06			t CaCO3/Kt	0.31	3.1	07/23/24 0:00	calc
Acid Neutralization Potential (calc)	EPA 600/2-78-054 1.3		64.0			t CaCO3/Kt	1	5	07/23/24 0:00	calc
Acid-Base Potential (calculation)	EPA 600/2-78-054 1.3		54.9			t CaCO3/Kt			07/23/24 0:00	calc
Neutralization Potential as CaCO3	EPA 600/2-78-054 3.2.3	1	6.4		*	%	0.1	0.5	07/19/24 15:05	bdc
pH, (1312)	EPA 9045D/9040C									
рН			9			Units	0.1	0.1	07/23/24 0:00	LFP
Temperature			20.9			Units	0.1	0.1	07/23/24 0:00	LFP
Sulfur Forms	EPA 600/2-78-054 3.2.4 Modified									
Sulfur HCI Residue		1	0.29		*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur HNO3 Residue		1	<0.01	U	*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Organic Residual		1	<0.01	U	*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Pyritic Sulfide		1	0.29			%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Sulfate		1	<0.01	U	*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Total		1	0.29		*	%	0.01	0.1	07/23/24 0:00	kmb
Total Sulfur minus Sulfate		1	0.29			%	0.01	0.1	07/23/24 0:00	kmb
Soil Preparation										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees	USDA No. 1, 1972								07/17/24 15:10	bdc

Air Dry at 34 Degrees C	USDA No. 1, 1972				07/17/24 15:10) bdc
Crush and Pulverize (Ring & Puck)	EPA 600/2-78-054 3.1.3				07/18/24 10:16	6 bdc
Synthetic Precip. Leaching Procedure	EPA 1312				03/21/24 9:10	lfp
Synthetic Precip. Leaching Procedure	EPA 1312				03/20/24 17:30) lfp



Project ID: Sample ID: CBW ABA HEADS-03

Inorganic Analytical Results

ACZ Sample ID: **L86570-03** Date Sampled: 03/04/24 09:40 Date Received: 03/13/24 Sample Matrix: Soil

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (1312 DI)	SM 2320 B-2011									
Bicarbonate as CaCO3		1	31.4		*	mg/L	2	20	03/28/24 0:00	jck
Carbonate as CaCO3	3	1	<2	U	*	mg/L	2	20	03/28/24 0:00	jck
Hydroxide as CaCO3		1	<2	U	*	mg/L	2	20	03/28/24 0:00	jck
Total Alkalinity		1	31.4		*	mg/L	2	20	03/28/24 0:00	jck
Bromide (1312-DI)	EPA 300.0	1	0.350		*	mg/L	0.05	0.25	03/26/24 21:41	bls
Carbon, total organic (TOC) (1312-DI)	SM 5310 B-2011/2014	1	1.7	В	*	mg/L	1	5	04/01/24 22:23	ems
Chloride (1312-DI)	EPA 300.0	1	<0.4	U	*	mg/L	0.4	2	03/26/24 21:41	bls
Conductivity @25C (1312-DI)	SM 2510 B-2011	1	51		*	umhos/cm	1	10	03/28/24 17:31	jck
Fluoride (1312 DI)	SM 4500-F C-2011	1	0.38		*	mg/L	0.15	0.35	03/28/24 12:58	jck
Hardness as CaCO3 (1312)	Calculation (SM 2340 B-2011)		24.0			mg/L	0.2	5	07/23/24 0:00	calc
Nitrate (1312 DI)	Calculation (NO3NO2-NO2)		<0.02	U		mg/L	0.02	0.1	07/23/24 0:00	calc
Nitrate/Nitrite as N (1312-DI)	EPA 353.2	1	<0.02	U	*	mg/L	0.02	0.1	03/22/24 0:51	pjb
Nitrite as N (1312-DI)	EPA 353.2	1	<0.01	U	*	mg/L	0.01	0.05	03/22/24 0:51	pjb
Nitrogen, ammonia (1312-DI)	EPA 350.1	1	<0.1	U	*	mg/L	0.1	0.2	04/02/24 11:45	jqr
Phosphorus, ortho dissolved (1312-DI)	EPA 365.1	1	0.011	В	*	mg/L	0.01	0.05	03/22/24 1:21	pjb
Phosphorus, Total (1312-DI)	EPA 365.1	1	0.011	В	*	mg/L	0.01	0.05	03/27/24 14:41	mrd
Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011	1	32	В	*	mg/L	20	40	03/25/24 18:46	ick j
Residue, Non-Filter (TSS) @180C (1312- DI)	SM 2540 D-2011/2015	1	<5	U	*	mg/L	5	20	03/27/24 21:42	2 jck
Sulfate (1312-DI)	EPA 300.0	1	2.84		*	mg/L	0.9	2	03/26/24 21:41	bls



Project ID: Sample ID: CBW SPLP HEADS-04 ACZ Sample ID: **L86570-04** Date Sampled: 03/04/24 09:40 Date Received: 03/13/24 Sample Matrix: Soil

Inorganic Prep										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Phosphorus, Total (1312-DI)	EPA 365.1								03/25/24 13:20	mrd
Total Hot Plate Digestion (1312)	EPA 3010A								03/22/24 17:50	aeh
Total Hot Plate Digestion (1312)	EPA 3010A								03/29/24 16:19	jrj
Metals Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (1312)	EPA 6010D	1	0.450		*	mg/L	0.05	0.25	03/26/24 18:26	brc
Antimony (1312)	EPA 6020B	1	0.00157	В		mg/L	0.0004	0.002	03/30/24 17:47	jrj
Arsenic (1312)	EPA 6020B	1	0.00719			mg/L	0.0002	0.001	03/30/24 17:47	jrj
Barium (1312)	EPA 6020B	1	0.00960			mg/L	0.0005	0.0025	03/30/24 17:47	jrj
Beryllium (1312)	EPA 6020B	1	<0.00008	U	*	mg/L	0.00008	0.00025	04/02/24 14:38	aps
Boron (1312)	EPA 6010D	1	<0.03	U	*	mg/L	0.03	0.1	03/26/24 18:26	brc
Cadmium (1312)	EPA 6020B	1	<0.00005	U	*	mg/L	0.00005	0.00025	03/30/24 17:47	jrj
Calcium (1312)	EPA 6010D	1	10.00			mg/L	0.1	0.5	03/26/24 18:26	brc
Chromium (1312)	EPA 6020B	1	<0.0005	U	*	mg/L	0.0005	0.002	03/30/24 17:47	jrj
Cobalt (1312)	EPA 6020B	1	0.000058	В	*	mg/L	0.00005	0.00025	03/30/24 17:47	jrj
Copper (1312)	EPA 6020B	1	0.00128	В	*	mg/L	0.0008	0.002	04/02/24 14:38	aps
Iron (1312)	EPA 6010D	1	<0.06	U	*	mg/L	0.06	0.15	03/26/24 18:26	brc
Lead (1312)	EPA 6020B	1	0.00119			mg/L	0.0001	0.0005	03/30/24 17:47	jrj
Lithium (1312)	EPA 6010D	1	<0.008	U	*	mg/L	0.008	0.04	03/26/24 18:26	brc
Magnesium (1312)	EPA 6010D	1	0.38	В	*	mg/L	0.2	1	03/26/24 18:26	brc
Manganese (1312)	EPA 6020B	1	0.0251			mg/L	0.0004	0.002	03/30/24 17:47	jrj
Mercury (1312)	EPA 7470A	1	<0.0002	U	*	mg/L	0.0002	0.001	03/26/24 14:46	aeh
Molybdenum (1312)	EPA 6020B	1	0.00357		*	mg/L	0.0002	0.0005	03/30/24 17:47	jrj
Nickel (1312)	EPA 6020B	1	<0.0004	U	*	mg/L	0.0004	0.001	03/30/24 17:47	jrj
Potassium (1312)	EPA 6010D	1	2.93		*	mg/L	0.5	1	03/26/24 18:26	brc
Selenium (1312)	EPA 6020B	1	0.00016	В	*	mg/L	0.0001	0.00025	03/30/24 17:47	jrj
Silica (1312)	EPA 6010D	1	3.3			mg/L	0.2	1	03/26/24 18:26	brc
Silver (1312)	EPA 6020B	1	<0.0001	U	*	mg/L	0.0001	0.0005	03/30/24 17:47	jrj
Sodium (1312)	EPA 6010D	1	0.94	В	*	mg/L	0.2	1	03/26/24 18:26	brc
Strontium (1312)	EPA 6010D	1	0.133		*	mg/L	0.009	0.045	03/26/24 18:26	brc
Thallium (1312)	EPA 6020B	1	<0.0001	U	*	mg/L	0.0001	0.0005	03/30/24 17:47	jrj
Tin (1312)	EPA 6010D	1	<0.04	U	*	mg/L	0.04	0.2	03/26/24 18:26	brc
Uranium (1312)	EPA 6020B	1	<0.0001	U	*	mg/L	0.0001	0.0005	03/30/24 17:47	jrj
Vanadium (1312)	EPA 6020B	1	0.00213		*	mg/L	0.0005	0.002	03/30/24 17:47	jrj
Zinc (1312)	EPA 6020B	1	<0.006	U	*	mg/L	0.006	0.015	03/30/24 17:47	jrj



Project ID: Sample ID: CBW SPLP HEADS-04 ACZ Sample ID: **L86570-04** Date Sampled: 03/04/24 09:40 Date Received: 03/13/24 Sample Matrix: Soil

Soil Analysis		Dilution	Descult	0	VO	11	MDI	DOI	Dete	A
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	EPA 600/2-78-054 3.2.4		14.1			t CaCO3/Kt	0.31	3.1	07/23/24 0:00	calc
Acid Neutralization Potential (calc)	EPA 600/2-78-054 1.3		98.0			t CaCO3/Kt	1	5	07/23/24 0:00	calc
Acid-Base Potential (calculation)	EPA 600/2-78-054 1.3		83.9			t CaCO3/Kt			07/23/24 0:00	calc
Neutralization Potential as CaCO3	EPA 600/2-78-054 3.2.3	1	9.8		*	%	0.1	0.5	07/19/24 15:32	bdc
pH, (1312)	EPA 9045D/9040C									
рН			9			Units	0.1	0.1	07/23/24 0:00	LFP
Temperature			20.3			Units	0.1	0.1	07/23/24 0:00	LFP
Sulfur Forms	EPA 600/2-78-054 3.2.4 Modified									
Sulfur HCI Residue		1	0.48		*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur HNO3 Residue		1	<0.01	U	*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Organic Residual		1	<0.01	U	*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Pyritic Sulfide		1	0.48			%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Sulfate		1	<0.01	U	*	%	0.01	0.1	07/23/24 0:00	kmb
Sulfur Total		1	0.45		*	%	0.01	0.1	07/23/24 0:00	kmb
Total Sulfur minus Sulfate		1	0.48			%	0.01	0.1	07/23/24 0:00	kmb
Soil Preparation										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Drv at 34 Degrees	USDA No. 1, 1972								07/17/24 15:15	bdc

Farameter	EPA Methou	Dilution	Result	Quai	λų	Units	WDL	FQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								07/17/24 15:1	5 bdc
Crush and Pulverize (Ring & Puck)	EPA 600/2-78-054 3.1.3								07/18/24 10:2	4 bdc
Synthetic Precip. Leaching Procedure	EPA 1312								03/21/24 10:3	5 lfp
Synthetic Precip. Leaching Procedure	EPA 1312								03/20/24 20:0	0 lfp



Project ID: Sample ID: CBW SPLP HEADS-04

Inorganic Analytical Results

ACZ Sample ID: **L86570-04** Date Sampled: 03/04/24 09:40 Date Received: 03/13/24 Sample Matrix: Soil

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity (1312 DI)	SM 2320 B-2011									
Bicarbonate as CaCO3		1	33.1		*	mg/L	2	20	03/28/24 0:00	jck
Carbonate as CaCO3	3	1	<2	U	*	mg/L	2	20	03/28/24 0:00	jck
Hydroxide as CaCO3		1	<2	U	*	mg/L	2	20	03/28/24 0:00	jck
Total Alkalinity		1	33.1		*	mg/L	2	20	03/28/24 0:00	jck
Bromide (1312-DI)	EPA 300.0	1	0.435		*	mg/L	0.05	0.25	03/26/24 21:59) bls
Carbon, total organic (TOC) (1312-DI)	SM 5310 B-2011/2014	1	1.8	В	*	mg/L	1	5	04/01/24 22:49	ems
Chloride (1312-DI)	EPA 300.0	1	<0.4	U	*	mg/L	0.4	2	03/26/24 21:59) bls
Conductivity @25C (1312-DI)	SM 2510 B-2011	1	56		*	umhos/cm	1	10	03/28/24 17:36	i jck
Fluoride (1312 DI)	SM 4500-F C-2011	1	0.37		*	mg/L	0.15	0.35	03/28/24 13:04	jck
Hardness as CaCO3 (1312)	Calculation (SM 2340 B-2011)		27			mg/L	0.2	5	07/23/24 0:00	calc
Nitrate (1312 DI)	Calculation (NO3NO2-NO2)		0.037	В		mg/L	0.02	0.1	07/23/24 0:00	calc
Nitrate/Nitrite as N (1312-DI)	EPA 353.2	1	0.037	В	*	mg/L	0.02	0.1	03/22/24 0:52	pjb
Nitrite as N (1312-DI)	EPA 353.2	1	<0.01	U	*	mg/L	0.01	0.05	03/22/24 0:52	pjb
Nitrogen, ammonia (1312-DI)	EPA 350.1	1	0.106	В	*	mg/L	0.1	0.2	04/02/24 11:46	iqr
Phosphorus, ortho dissolved (1312-DI)	EPA 365.1	1	<0.01	U	*	mg/L	0.01	0.05	03/22/24 1:23	pjb
Phosphorus, Total (1312-DI)	EPA 365.1	1	0.012	В	*	mg/L	0.01	0.05	03/27/24 14:42	2 mrd
Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011	1	36	В	*	mg/L	20	40	03/25/24 18:49) jck
Residue, Non-Filter (TSS) @180C (1312- DI)	SM 2540 D-2011/2015	1	<5	U	*	mg/L	5	20	03/27/24 21:45	jck
Sulfate (1312-DI)	EPA 300.0	1	3.19		*	mg/L	0.9	2	03/26/24 21:59	bls



Inorganic Reference

Batch	Explanations A distinct set of samples analyzed at a specific time		
Found	Value of the QC Type of interest		
Limit	Upper limit for RPD, in %.		
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)		
MDL	Method Detection Limit. Same as Minimum Reporting Limit ur	less omitted or e	qual to the POL (see comment #5)
MBL	Allows for instrument and annual fluctuations.		
PCN/SCN	A number assigned to reagents/standards to trace to the man	ufacturer's certific	ate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term		
QC	True Value of the Control Sample or the amount added to the		
Rec	Recovered amount of the true value or spike added, in % (exc		n/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC		
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)		
Sample	Value of the Sample of interest		
Sample Typ	Analytical Spike (Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicat
ASD	Analytical Spike (Post Digestion) Duplicate	LESWD	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibration Dank	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank
ICB	Initial Calibration Blank	MS	Matrix Spike
ICV	Initial Calibration Verification standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	PBS	Prep Blank - Soil
	•		
LCSS	Laboratory Control Sample - Soll	PRW	Prep Blank - Water
LCSS LCSSD	Laboratory Control Sample - Soil Laboratory Control Sample - Soil Duplicate	PBW PQV	Prep Blank - Water Practical Quantitation Verification standard
LCSSD	Laboratory Control Sample - Soil Duplicate	PBW PQV SDL	Prep Blank - Water Practical Quantitation Verification standard Serial Dilution
LCSSD LCSW	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water	PQV	Practical Quantitation Verification standard
LCSSD LCSW C Sample Typ	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water be Explanations	PQV SDL	Practical Quantitation Verification standard Serial Dilution
LCSSD LCSW Sample Typ Blanks	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Verifies that there is no or minimal co	PQV SDL	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure.
LCSSD LCSW Sample Typ Blanks Control San	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Verifies that there is no or minimal control of the method, Note: The section of the method,	PQV SDL ontamination in th including the prej	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure.
LCSSD LCSW Sample Typ Blanks Control San Duplicates	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Nerifies that there is no or minimal control of the method, Verifies the accuracy of the method, Verifies the precision of the instrume	PQV SDL ontamination in th including the prep nt and/or method	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure.
LCSSD LCSW Sample Typ Blanks Control San Duplicates Spikes/Forti	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Verifies that there is no or minimal control of the method, Verifies the accuracy of the method, Verifies the precision of the instrume Determines sample matrix interference	PQV SDL ontamination in th including the prej nt and/or method ces, if any.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure.
LCSSD LCSW Sample Typ Blanks Control San Duplicates	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Nerifies that there is no or minimal control of the method, Verifies the accuracy of the method, Verifies the precision of the instrume	PQV SDL ontamination in th including the prej nt and/or method ces, if any.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure.
LCSSD LCSW Sample Typ Blanks Control San Duplicates Spikes/Forti	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Imples Verifies that there is no or minimal control for the method, verifies the accuracy of the method, verifies the precision of the instrume ified Matrix Determines sample matrix interference Verifies the validity of the calibration.	PQV SDL ontamination in th including the prej nt and/or method ces, if any.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure.
LCSSD LCSW Sample Typ Blanks Control San Duplicates Spikes/Forti Standard	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Imples Verifies that there is no or minimal control for the method, verifies the accuracy of the method, verifies the precision of the instrume ified Matrix Determines sample matrix interference Verifies the validity of the calibration.	PQV SDL ontamination in th including the prej nt and/or method ces, if any.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure.
LCSSD LCSW Sample Typ Blanks Control San Duplicates Spikes/Forti Standard	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water be Explanations weifies that there is no or minimal control nples Verifies the accuracy of the method, Verifies the precision of the instrume ified Matrix Determines sample matrix interferency Verifies the validity of the calibration.	PQV SDL ontamination in th including the prep nt and/or method ces, if any. PQL. The associa	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure.
LCSSD LCSW Sample Typ Blanks Control San Duplicates Spikes/Forti Standard Z Qualifiers B	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Imples Verifies that there is no or minimal control for the method, Verifies the accuracy of the method, Verifies the precision of the instrume Infied Matrix Determines sample matrix interference Verifies the validity of the calibration. (Qual) Analyte concentration detected at a value between MDL and F	PQV SDL ontamination in th including the prep nt and/or method ces, if any. PQL. The associa n immediate hold	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure.
LCSSD LCSW Sample Typ Blanks Control San Duplicates Spikes/Forti Standard Z Qualifiers B H	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Imples Verifies that there is no or minimal control for the precision of the method, Verifies the precision of the instrume Imples Verifies the precision of the instrume Imples Determines sample matrix interference Verifies the validity of the calibration. (Qual) Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with an analysis exceeded method hold time.	PQV SDL ontamination in th including the prep nt and/or method ces, if any. PQL. The associa n immediate hold gative threshold.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure.
LCSSD LCSW Sample Typ Blanks Control San Duplicates Spikes/Forti Standard Z Qualifiers B H L	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Imples Verifies that there is no or minimal control for the instrume Imples Verifies the accuracy of the method, Verifies the precision of the instrume Ified Matrix Determines sample matrix interference Verifies the validity of the calibration. (Qual) Analysis exceeded method hold time. pH is a field test with an Target analyte response was below the laboratory defined negotiation.	PQV SDL entamination in the including the prep nt and/or method ces, if any. PQL. The associate in immediate hold gative threshold. e level of the associate	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time. bociated value.
LCSSD LCSW Sample Typ Blanks Control San Duplicates Spikes/Forti Standard Z Qualifiers B H L	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water be Explanations Imples Verifies that there is no or minimal control Sample - Water Imples Verifies the accuracy of the method, Verifies the precision of the instrume Infied Matrix Determines sample matrix interference Verifies the validity of the calibration. (Qual) Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with an Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the same quantitation lim	PQV SDL entamination in the including the prep nt and/or method ces, if any. PQL. The associate in immediate hold gative threshold. e level of the associate	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time. bociated value.
LCSSD LCSW Sample Typ Blanks Control San Duplicates Spikes/Forti Standard Z Qualifiers B H L U	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water be Explanations Imples Verifies that there is no or minimal control Sample - Water Imples Verifies the accuracy of the method, Verifies the precision of the instrume Infied Matrix Determines sample matrix interference Verifies the validity of the calibration. (Qual) Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with an Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the same quantitation lim	PQV SDL entamination in th including the prep nt and/or method ces, if any. PQL. The associa in immediate hold gative threshold. e level of the associate the sample detect	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time. pociated value. tion limit.
LCSSD LCSW Sample Typ Blanks Control Sam Duplicates Spikes/Forti Standard Z Qualifiers B H L U	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Imples Verifies that there is no or minimal control for the method, Verifies the accuracy of the method, Verifies the precision of the instrume Imples Verifies the accuracy of the method, Verifies the precision of the instrume Imples Verifies the precision of the instrume Verifies the validity of the calibration. Verifies the validity of the calibration. (Qual) Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with an Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the associated value is either the sample quantitation limit or the target of the sample quantitation limit or the target provide target provide the target provide target provide target provide target provide target p	PQV SDL	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time. bciated value. tion limit. ch 1983.
LCSSD LCSW Sample Typ Blanks Control San Duplicates Spikes/Forti Standard Z Qualifiers B H L U	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water be Explanations Imples Verifies that there is no or minimal control for the precision of the method, Verifies the precision of the instrume Imples Verifies the precision of the instrume Imples Determines sample matrix interference Verifies the validity of the calibration. Verifies the validity of the calibration. (Qual) Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with an Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the the sample for the sample quantitation limit or the the sample for the sample for the target of the target of the sample quantitation limit or the target for the sample quantitation limit or the target of the sample quantitation limit or the target of the sample quantitation limit or the target of target of the target of	PQV SDL	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time. bciated value. tion limit. ch 1983. Environmental Samples, August 1993.
LCSSD LCSW Sample Typ Blanks Control San Duplicates Spikes/Forti Standard Z Qualifiers B H L U U	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Imples Verifies that there is no or minimal control Sample accuracy of the method, Verifies the precision of the instrume Imples Verifies the precision of the instrume Ified Matrix Determines sample matrix interference Verifies the validity of the calibration. (Qual) Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with and Target analyte response was below the laboratory defined nego The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the Image: EPA 600/4-83-020. Methods for Chemical Analysis of Water at EPA 600/R-93-100. Methods for the Determination of Inorgan	PQV SDL	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time. bciated value. tion limit. ch 1983. Environmental Samples, August 1993.
LCSSD LCSW Sample Typ Blanks Control Sam Duplicates Spikes/Forti Standard Z Qualifiers B H L U U Sthod Referent (1) (2) (3)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Imples Verifies that there is no or minimal converting the precision of the method, verifies the precision of the instrume Imples Verifies the accuracy of the method, Verifies the precision of the instrume Imples Verifies the precision of the instrume Imples Verifies the validity of the calibration. (Qual) Determines sample matrix interference Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with and Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the Image: EPA 600/4-83-020. Methods for Chemical Analysis of Water and EPA 600/R-93-100. Methods for the Determination of Inorgan EPA 600/R-94-111. Methods for the Determination of Metals in	PQV SDL entamination in th including the prep nt and/or method ces, if any. PQL. The associa in immediate hold gative threshold. e level of the association the sample detection and Wastes, Marca ic Substances in in Environmental	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time. bciated value. tion limit. ch 1983. Environmental Samples, August 1993.
LCSSD LCSW Sample Typ Blanks Control Sam Duplicates Spikes/Forti Standard Z Qualifiers B H L U U Sthod Referent (1) (2) (3) (4) (5)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Imples Verifies that there is no or minimal control for the precision of the instrume Imples Verifies the accuracy of the method, Verifies the precision of the instrume Imples Verifies the precision of the instrume Imples Verifies the precision of the instrume Imples Verifies the validity of the calibration. (Qual) Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with and T Target analyte response was below the laboratory defined nego The material was analyzed for, but was not detected above the T The associated value is either the sample quantitation limit or the associated value is either the sample quantitation limit or the the associated value is either the sample quantitation limit or the the associated value is for the Determination of Inorgan EPA 600/R-93-100. Methods for the Determination of Inorgan EPA 600/R-94-111. Methods for Evaluating Solid Waste.	PQV SDL entamination in th including the prep nt and/or method ces, if any. PQL. The associa in immediate hold gative threshold. e level of the association the sample detection and Wastes, Marca ic Substances in in Environmental	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time. bciated value. tion limit. ch 1983. Environmental Samples, August 1993.
LCSSD LCSW Sample Typ Blanks Control San Duplicates Spikes/Forti Standard Z Qualifiers B H L U U Sthod Referent (1) (2) (3) (4) (5)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Imples Verifies that there is no or minimal control for the precision of the method, Verifies the precision of the instrume Imples Verifies the accuracy of the method, Verifies the precision of the instrume Imples Verifies the precision of the instrume Imples Verifies the validity of the calibration. (Qual) Analyte concentration detected at a value between MDL and F Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with an Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the associated value is either the sample quantitation limit or the PPA 600/R-93-100. Methods for Chemical Analysis of Water and EPA 600/R-94-111. Methods for the Determination of Inorgan EPA SW-846. Test Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastewa	PQV SDL ontamination in th including the prep nt and/or method ces, if any. PQL. The associa in immediate hold gative threshold. e level of the association the sample detection the sample detection and Wastes, Marci in Environmental iter.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure. to procedure. time. cociated value. tion limit. ch 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994.
LCSSD LCSW Sample Typ Blanks Control San Duplicates Spikes/Forti Standard Z Qualifiers B H L U U thod Referent (1) (2) (3) (4) (5)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Imples Verifies that there is no or minimal control for the precision of the instrume Imples Verifies the accuracy of the method, Verifies the precision of the instrume Ified Matrix Determines sample matrix interference Verifies the validity of the calibration. (Qual) Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with and Target analyte response was below the laboratory defined nego The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the REPA 600/4-83-020. Methods for Chemical Analysis of Water at EPA 600/R-93-100. Methods for the Determination of Inorgan EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wasteward QC results calculated from raw data. Results may vary slightly	PQV SDL	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure. to procedure. time. bciated value. tion limit. ch 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. alues are used in the calculations.
LCSSD LCSW Sample Typ Blanks Control Sam Duplicates Spikes/Forti Standard Z Qualifiers B H L U U ethod Referent (1) (2) (3) (4) (5) mments (1) (2)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Verifies that there is no or minimal content mples Verifies the accuracy of the method, Verifies the precision of the instrume ified Matrix Determines sample matrix interference Verifies the validity of the calibration. (Qual) Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with an Target analyte response was below the laboratory defined nego The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the nces EPA 600/R-93-100. Methods for Chemical Analysis of Water and EPA 600/R-94-111. Methods for the Determination of Inorgan EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastewar QC results calculated from raw data. Results may vary slightly Soil, Sludge, and Plant matrices for Inorganic analyses are reported.	PQV SDL ontamination in the including the prep int and/or method ces, if any. PQL. The associate in mmediate hold gative threshold. The associate hold gative threshold. The sample detection and Wastes, Marca ic Substances in in Environmental atter.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. p procedure. to procedure. time. bciated value. tion limit. ch 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. alues are used in the calculations.
LCSSD LCSW Sample Typ Blanks Control Sam Duplicates Spikes/Forti Standard Z Qualifiers B H L U U Sthod Referent (1) (2) (3) (4) (5) Somments (1) (2) (3)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Imples Verifies that there is no or minimal control for the precision of the instrume ified Matrix Determines sample matrix interference Verifies the validity of the calibration. (Qual) Analyte concentration detected at a value between MDL and F Analyte concentration detected at a value between MDL and F Analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the nces EPA 600/R-93-100. Methods for the Determination of Inorgan EPA 600/R-94-111. Methods for the Determination of Metals is EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastewa QC results calculated from raw data. Results may vary slightly Soil, Sludge, and Plant matrices for Inorganic analyses are reported on an "as	PQV SDL ontamination in the including the prep int and/or method ces, if any. PQL. The associate in immediate hold gative threshold. The associate hold gative threshold. The sample detection in Environmental in Environmental iter.	Practical Quantitation Verification standard Serial Dilution e prop method or calibration procedure. p procedure. to procedure. time. cociated value. tion limit. ch 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. alues are used in the calculations. eight basis.
LCSSD LCSW Sample Typ Blanks Control Sam Duplicates Spikes/Forti Standard Z Qualifiers B H L U U ethod Referent (1) (2) (3) (4) (5) mments (1) (2)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water De Explanations Verifies that there is no or minimal content mples Verifies the accuracy of the method, Verifies the precision of the instrume ified Matrix Determines sample matrix interference Verifies the validity of the calibration. (Qual) Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with an Target analyte response was below the laboratory defined nego The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or the nces EPA 600/R-93-100. Methods for Chemical Analysis of Water and EPA 600/R-94-111. Methods for the Determination of Inorgan EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastewar QC results calculated from raw data. Results may vary slightly Soil, Sludge, and Plant matrices for Inorganic analyses are reported.	PQV SDL ontamination in the including the prep int and/or method ces, if any. PQL. The associate in immediate hold gative threshold. The associate hold gative threshold. The sample detection in Environmental in Environmental iter.	Practical Quantitation Verification standard Serial Dilution e prop method or calibration procedure. p procedure. to procedure. time. cociated value. tion limit. ch 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. alues are used in the calculations. eight basis.

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

REP001.03.15.02

ACZ Project ID: L86570

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.

Alkalinity as CaC	:03		SM2320E	3 - Titration									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586499													
WG586499PBW	PBW	03/28/24 16:55				3.1	mg/L		-20	20			
WG586499LCSW2	LCSW	03/28/24 17:04	WC240320-1	820.0001		765.1	mg/L	93	90	110			
WG585975PBS	PBS	03/28/24 17:10				5.4	mg/L		-20	20			
L86570-01DUP	DUP	03/28/24 17:22			30.7	31.3	mg/L				2	20	
WG586499LCSW4	LCSW	03/28/24 17:44	WC240320-1	820.0001		799.8	mg/L	98	90	110			
Aluminum (1312))		EPA 601	0D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586211													
WG586211ICV	ICV	03/26/24 17:29	II240309-1	2		1.946	mg/L	97	90	110			
WG586211ICB	ICB	03/26/24 17:33				U	mg/L		-0.15	0.15			
WG585978PBS	PBS	03/26/24 17:56				U	mg/L		-0.15	0.15			
WG585978LFB1	LFB	03/26/24 18:00	II240306-3	1.001		.962	mg/L	96	80	120			
L86570-01MS	MS	03/26/24 18:07	II240306-3	1.001	.056	1.065	mg/L	101	75	125			
L86570-01MSD	MSD	03/26/24 18:11	II240306-3	1.001	.056	1.07	mg/L	101	75	125	0	20	
L86570-01DUP	DUP	03/26/24 18:14			.056	.072	mg/L				25	20	RA
Antimony (1312)			EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586576													
WG586576ICV	ICV	03/30/24 17:10	MS240109-5	.02002		.01899	mg/L	95	90	110			
WG586576ICB	ICB	03/30/24 17:12				U	mg/L		-0.0012	0.0012			
WG585978PBS	PBS	03/30/24 17:21				U	mg/L		-0.0012	0.0012			
WG586112PBS	PBS	03/30/24 17:23				U	mg/L		-0.0012	0.0012			
WG586354PBS	PBS	03/30/24 17:25				U	mg/L		-0.0012	0.0012			
WG585978LFB2	LFB	03/30/24 17:27	MS240321-2	.01		.00928	mg/L	93	80	120			
WG586112LFB2	LFB	03/30/24 17:28	MS240321-2	.01		.00951	mg/L	95	80	120			
WG586354LFB2	LFB	03/30/24 17:30	MS240321-2	.01		.00946	mg/L	95	80	120			
L86570-01DUP	DUP	03/30/24 17:38			.0116	.01115	mg/L			.20	4	20	
L86570-02MS	MS	03/30/24 17:41	MS240321-2	.01	.0103	.02043	mg/L	101	75	125			
L86570-02MSD	MSD	03/30/24 17:43	MS240321-2	.01	.0103	.02026	mg/L	100	75	125	1	20	
Arsenic (1312)			EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586576													
WG586576ICV	ICV	03/30/24 17:10	MS240109-5	.05		.05196	mg/L	104	90	110			
WG586576ICB	ICB	03/30/24 17:12				U	mg/L	-	-0.0006	0.0006			
WG585978PBS	PBS	03/30/24 17:21				U	mg/L		-0.0006	0.0006			
WG586112PBS	PBS	03/30/24 17:23				U	mg/L		-0.0006	0.0006			
WG586354PBS	PBS	03/30/24 17:25				U	mg/L		-0.0006	0.0006			
WG585978LFB2	LFB	03/30/24 17:27	MS240321-2	.0501		.04664	mg/L	93	80	120			
WG586112LFB2	LFB	03/30/24 17:28	MS240321-2	.0501		.04679	mg/L	93	80	120			
	LFB	03/30/24 17:30	MS240321-2	.0501		.04683	mg/L	93	80	120			
VVG300334LFDZ							0						
		03/30/24 17:38			.00222	.00245	mg/L				10	20	
WG586354LFB2 L86570-01DUP L86570-02MS	DUP MS	03/30/24 17:38 03/30/24 17:41	MS240321-2	.0501	.00222 .00153	.00245 .04972	mg/L mg/L	96	75	125	10	20	

ACZ Project ID: L86570

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.

Barium (1312)			EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586576													
WG586576ICV	ICV	03/30/24 17:10	MS240109-5	.05		.05218	mg/L	104	90	110			
WG586576ICB	ICB	03/30/24 17:12				U	mg/L		-0.0015	0.0015			
WG585978PBS	PBS	03/30/24 17:21				U	mg/L		-0.0015	0.0015			
WG586112PBS	PBS	03/30/24 17:23				U	mg/L		-0.0015	0.0015			
WG586354PBS	PBS	03/30/24 17:25				U	mg/L		-0.0015	0.0015			
WG585978LFB2	LFB	03/30/24 17:27	MS240321-2	.05005		.04558	mg/L	91	80	120			
WG586112LFB2	LFB	03/30/24 17:28	MS240321-2	.05005		.04496	mg/L	90	80	120			
WG586354LFB2	LFB	03/30/24 17:30	MS240321-2	.05005		.04582	mg/L	92	80	120			
L86570-01DUP	DUP	03/30/24 17:38			.0655	.0628	mg/L				4	20	
L86570-02MS	MS	03/30/24 17:41	MS240321-2	.05005	.0613	.10846	mg/L	94	75	125			
L86570-02MSD	MSD	03/30/24 17:43	MS240321-2	.05005	.0613	.10732	mg/L	92	75	125	1	20	
Beryllium (1312)			EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586576													
WG586576ICV	ICV	03/30/24 17:10	MS240109-5	.05		.051105	mg/L	102	90	110			
WG586576ICB	ICB	03/30/24 17:12		.00		.001100 U	mg/L	102	-0.00024	0.00024			
WG585978PBS	PBS	03/30/24 17:12				U	mg/L		-0.00024	0.00024			
WG586112PBS	PBS	03/30/24 17:21				U	mg/L		-0.00024	0.00024			
WG586354PBS	PBS	03/30/24 17:25				U	mg/L		-0.00024	0.00024			
WG585978LFB2	LFB	03/30/24 17:23	MS240321-2	.05005		.046064	mg/L	92	-0.00024 80	120			
WG586112LFB2	LFB	03/30/24 17:28	MS240321-2 MS240321-2	.05005		.040004	mg/L	92 89	80	120			
WG586354LFB2	LFB	03/30/24 17:30	MS240321-2 MS240321-2	.05005		.047159	mg/L	94	80 80	120			
L86570-01DUP	DUP	03/30/24 17:38	MO240321-2	.03003	U	.047139 U	mg/L	54	00	120	0	20	RA
L86570-02MS	MS	03/30/24 17:38	MS240321-2	.05005	U	.047451	mg/L	95	75	125	0	20	INA.
L86570-02MSD	MSD	03/30/24 17:41	MS240321-2 MS240321-2	.05005	U	.047274	mg/L	93 94	75	125	0	20	
	MOD	00/00/24 11.40		.00000	0	.047274		54	10	120	0	20	
WG586646	101/		N0040400 5	0.5									
WG586646ICV	ICV	04/02/24 14:03	MS240109-5	.05		.052088	mg/L	104	90	110			
WG586646ICB	ICB	04/02/24 14:06				U	mg/L		-0.00024	0.00024			
WG585978PBS	PBS	04/02/24 14:20				U	mg/L		-0.00024	0.00024			
WG585978LFB2	LFB	04/02/24 14:22	MS240321-2	.05005		.047776	mg/L	95	80	120			
L86570-01DUP	DUP	04/02/24 14:27			U	U	mg/L				0	20	RA
L86570-02MS	MS	04/02/24 14:31	MS240321-2	.05005	U	.047325	mg/L	95	75	125			
L86570-02MSD	MSD	04/02/24 14:34	MS240321-2	.05005	U	.045864	mg/L	92	75	125	3	20	
WG586112PBS	PBS	04/02/24 14:48	M6040204-0	05005		U	mg/L	00	-0.00024	0.00024			
WG586112LFB2	LFB	04/02/24 14:50	MS240321-2	.05005		.046595	mg/L	93	80	120			
Boron (1312)			EPA 601	0D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586211													
WG586211ICV	ICV	03/26/24 17:29	II240309-1	2		1.997	mg/L	100	90	110			
WG586211ICB	ICB	03/26/24 17:33				U	mg/L		-0.09	0.09			
WG585978PBS	PBS	03/26/24 17:56				U	mg/L		-0.09	0.09			
			11040000 0	.5005		.485	mg/L	97	80	120			
WG585978LFB1	LFB	03/26/24 18:00	II240306-3	.5005		.400	5	01					
L86570-01MS	LFB MS	03/26/24 18:00 03/26/24 18:07	II240306-3 II240306-3	.5005	U	.495	mg/L	99	75	125			
					U U						1	20	

ACZ Project ID: L86570

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.

Bromide (1312-E	DI)		EPA 300	.0									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG585845													
WG585845ICV	ICV	03/20/24 14:53	WI240315-8	4.016		3.946	mg/L	98	90	110			
WG585845ICB	ICB	03/20/24 15:11				U	mg/L		-0.05	0.05			
WG586304													
WG586304ICV	ICV	03/20/24 14:53	WI240315-8	4.016		3.946	mg/L	98	90	110			
WG586304ICB	ICB	03/20/24 15:11	1112 100 10 0	4.010		U.040	mg/L	00	-0.05	0.05			
WG586304LFB	LFB	03/26/24 19:53	WI230714-6	1.5		1.352	mg/L	90	90	110			
WG585975PBS	PBS	03/26/24 20:11				U	mg/L		-0.05	0.05			
L86570-01DUP	DUP	03/26/24 20:47			U	U	mg/L				0	20	RA
L86570-02AS	AS	03/26/24 21:23	WI230714-6	1.5	U	1.253	mg/L	84	90	110			M2
Cadmium (1312))		EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qua
WG586576	51	, i i i i i i i i i i i i i i i i i i i											
WG586576ICV	ICV	03/30/24 17:10	MS240109-5	.05		.052382	mg/L	105	90	110			
WG586576IC8	ICB	03/30/24 17:10		.05		.052362 U	mg/L	100	-0.00015	0.00015			
WG585978PBS	PBS	03/30/24 17:21				U	mg/L		-0.00015	0.00015			
WG586112PBS	PBS	03/30/24 17:23				U	mg/L		-0.00015	0.00015			
VG586354PBS	PBS	03/30/24 17:25				U	mg/L		-0.00015	0.00015			
NG585978LFB2	LFB	03/30/24 17:27	MS240321-2	.05005		.044942	mg/L	90	80	120			
VG586112LFB2	LFB	03/30/24 17:28	MS240321-2	.05005		.044837	mg/L	90	80	120			
VG586354LFB2	LFB	03/30/24 17:30	MS240321-2	.05005		.045903	mg/L	92	80	120			
_86570-01DUP	DUP	03/30/24 17:38			U	U	mg/L				0	20	RA
_86570-02MS	MS	03/30/24 17:41	MS240321-2	.05005	U	.044697	mg/L	89	75	125			
_86570-02MSD	MSD	03/30/24 17:43	MS240321-2	.05005	U	.045095	mg/L	90	75	125	1	20	
Calcium (1312)			EPA 601	0D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qua
NG586211													
NG586211ICV	ICV	03/26/24 17:29	II240309-1	100		96.63	mg/L	97	90	110			
WG586211ICB	ICB	03/26/24 17:33	1240000 1	100		90.00 U	mg/L	51	-0.3	0.3			
NG585978PBS	PBS	03/26/24 17:56				U	mg/L		-0.3	0.3			
WG585978LFB1	LFB	03/26/24 18:00	11240306-3	67.94555		66.66	mg/L	98	-0.5 80	120			
_86570-01MS	MS	03/26/24 18:07	11240306-3	67.94555	22.8	89.12	mg/L	98	75	125			
_86570-01MSD	MSD	03/26/24 18:11	II240306-3	67.94555	22.8	90.28	mg/L	99	75	125	1	20	
-86570-01DUP	DUP	03/26/24 18:14			22.8	20.19	mg/L				12	20	
Carbon, total or	ganic (T	OC) (1312-DI)	SM 5310	B-2011/20	14								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qua
WG584961													
WG584961ICV	ICV	03/02/24 9:02	WI240129-11	100		97.4	mg/L	97	90	110			
NG584961ICB	ICB	03/02/24 9:17				U	mg/L		-2.5	2.5			
WG586623													
WG586623ICB	ICB	04/01/24 20:12				U	mg/L		-2.5	2.5			
	LFB	04/01/24 20:44	WI231227-9	49.6		49.4	mg/L	100	85	115			
NG586623LFB													
	PBS	04/01/24 20:59				1.2	mg/L		-2.5	2.5			
WG586623LFB WG585975PBS _86570-01DUP		04/01/24 20:59 04/01/24 21:27			2.9	1.2 3	mg/L mg/L		-2.5	2.5	3	15	RA
ACZ Project ID: L86570

Chloride (1312-	DI)		EPA 300	.0									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG585845													
WG585845ICV	ICV	03/20/24 14:53	WI240315-8	20.02		19.9	mg/L	99	90	110			
WG585845ICB	ICB	03/20/24 15:11				U	mg/L		-0.4	0.4			
WG586304													
WG586304ICV	ICV	03/20/24 14:53	WI240315-8	20.02		19.9	mg/L	99	90	110			
WG586304ICB	ICB	03/20/24 15:11		20.02		U	mg/L		-0.4	0.4			
WG586304LFB	LFB	03/26/24 19:53	WI230714-6	30		28.29	mg/L	94	90	110			
WG585975PBS	PBS	03/26/24 20:11				U	mg/L	•	-0.4	0.4			
L86570-01DUP	DUP	03/26/24 20:47			.63	.59	mg/L				7	20	RA
L86570-02AS	AS	03/26/24 21:23	WI230714-6	30	U	29.56	mg/L	99	90	110			
Chromium (131	2)		EPA 602	08									
ACZ ID	z) Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
	1360	Analyzou		40	Gampio	round	onno	100 //	Lonoi	oppor		2	quui
WG586576	101/		M6040400 F	05		05000		400		110			
WG586576ICV	ICV	03/30/24 17:10	MS240109-5	.05		.05283	mg/L	106	90	110			
WG586576ICB	ICB	03/30/24 17:12				U	mg/L		-0.0015	0.0015			
WG585978PBS	PBS	03/30/24 17:21				U	mg/L		-0.0015	0.0015			
WG586112PBS	PBS PBS	03/30/24 17:23				U U	mg/L		-0.0015	0.0015			
WG586354PBS		03/30/24 17:25	MS240321-2	05005			mg/L	00	-0.0015	0.0015			
WG585978LFB2	LFB	03/30/24 17:27	MS240321-2 MS240321-2	.05005		.04676	mg/L	93	80	120			
WG586112LFB2	LFB	03/30/24 17:28		.05005		.04689	mg/L	94	80	120			
WG586354LFB2	LFB	03/30/24 17:30	MS240321-2	.05005		.04698 U	mg/L	94	80	120	0	00	
L86570-01DUP	DUP	03/30/24 17:38	MS240321-2	05005	U		mg/L	06	75	105	0	20	RA
L86570-02MS L86570-02MSD	MS MSD	03/30/24 17:41 03/30/24 17:43	MS240321-2 MS240321-2	.05005 .05005	U U	.04823 .04773	mg/L mg/L	96 95	75 75	125 125	1	20	
L00570-021013D	NISD	03/30/24 17.43			0	.04773	mg/L	90	75	125		20	
Cobalt (1312)			EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586576													
WG586576ICV	ICV	03/30/24 17:10	MS240109-5	.05		.052814	mg/L	106	90	110			
WG586576ICB	ICB	03/30/24 17:12				U	mg/L		-0.00015	0.00015			
WG585978PBS	PBS	03/30/24 17:21				U	mg/L		-0.00015	0.00015			
WG586112PBS	PBS	03/30/24 17:23				U	mg/L		-0.00015	0.00015			
WG586354PBS	PBS	03/30/24 17:25				U	mg/L		-0.00015	0.00015			
WG585978LFB2	LFB	03/30/24 17:27	MS240321-2	.05005		.045978	mg/L	92	80	120			
WG586112LFB2	LFB	03/30/24 17:28	MS240321-2	.05005		.046142	mg/L	92	80	120			
WG586354LFB2	LFB	03/30/24 17:30	MS240321-2	.05005		.047238	mg/L	94	80	120			
L86570-01DUP	DUP	03/30/24 17:38			.000104	.000085	mg/L				20	20	RA
L86570-02MS	MS	03/30/24 17:41	MS240321-2	.05005	.000073	.045874	mg/L	92	75	125			
L86570-02MSD	MSD	03/30/24 17:43	MS240321-2	.05005	.000073	.045819	mg/L	91	75	125	0	20	

ACZ Project ID: L86570

Conductivity @2	5C (131	2-DI)	SM 2510	B-2011									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586499													
WG586499PBW	PBW	03/28/24 16:55				31	umhos/cm		-10	10			
WG586499LCSW1	LCSW	03/28/24 17:01	PCN626495	1410		1454	umhos/cm	103	90	110			
WG585975PBS	PBS	03/28/24 17:10				10	umhos/cm		-4	4			
L86570-01DUP	DUP	03/28/24 17:22			107	118	umhos/cm				10	20	
WG586499LCSW3	LCSW	03/28/24 17:41	PCN626495	1410		1474	umhos/cm	105	90	110			
Copper (1312)			EPA 6020)B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586646													
WG586646ICV	ICV	04/02/24 14:03	MS240109-5	.05		.05249	mg/L	105	90	110			
WG586646ICB	ICB	04/02/24 14:06				U	mg/L		-0.0024	0.0024			
WG585978PBS	PBS	04/02/24 14:20				.00105	mg/L		-0.0024	0.0024			
WG585978LFB2	LFB	04/02/24 14:22	MS240321-2	.05005		.04709	mg/L	94	80	120			
L86570-01DUP	DUP	04/02/24 14:27			.0101	U	mg/L				200	20	RD
L86570-02MS	MS	04/02/24 14:31	MS240321-2	.05005	.00084	.04581	mg/L	90	75	125			
L86570-02MSD	MSD	04/02/24 14:34	MS240321-2	.05005	.00084	.04413	mg/L	86	75	125	4	20	
WG586112PBS	PBS	04/02/24 14:48				U	mg/L		-0.0024	0.0024			
WG586112LFB2	LFB	04/02/24 14:50	MS240321-2	.05005		.04527	mg/L	90	80	120			
Fluoride (1312 D	I)		SM 4500-	F C-2011									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586467													
WG586467ICV	ICV	03/28/24 11:52	WC240322-2	2.002		2	mg/L	100	90	110			
WG586467ICB	ICB	03/28/24 12:00				U	mg/L		-0.3	0.3			
WG586467LFB	LFB	03/28/24 12:14	WC230825-1	5.005		5.37	mg/L	107	90	110			
WG585975PBS	PBS	03/28/24 12:22				U	mg/L		-0.3	0.3			
L86570-01AS	AS	03/28/24 12:37	WC230825-1	5.005	U	5.37	mg/L	107	90	110			
L86570-01DUP	DUP	03/28/24 12:45			U	.2	mg/L				200	20	RA
Iron (1312)			EPA 6010	D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586211													
WG586211ICV	ICV	03/26/24 17:29	II240309-1	2		1.905	mg/L	95	90	110			
WG586211ICB	ICB	03/26/24 17:33				U	mg/L		-0.18	0.18			
WG585978PBS	PBS	03/26/24 17:56				U	mg/L		-0.18	0.18			
WG585978LFB1	LFB	03/26/24 18:00	II240306-3	1.003		1	mg/L	100	80	120			
L86570-01MS	MS	03/26/24 18:07	II240306-3	1.003	U	.963	mg/L	96	75	125			
L86570-01MSD	MSD	03/26/24 18:11	II240306-3	1.003	U	.973	mg/L	97	75	125	1	20	
L86570-01DUP	DUP	03/26/24 18:14			U	U	mg/L				0	20	RA

ACZ Project ID: L86570

WGS88576 WGS88576 U MGS40109-5 .0.5 .0.5186 mg/L 104 90 110 WGS885761CB ICB 03/02/24 17:10 MS240109-5 .0.5 .0.5186 mg/L 104 90 110 WGS8857781CB ICB 03/02/24 17:25 U mg/L -0.0003 0.0003	Lead (1312)			EPA 602	0B													
NYCSB85761CV ICV 03/00/24 17:10 M6240109-5 .05 .05188 mpL 104 90 110 WCSB85761CB ICB 03/00/24 17:21	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual				
WG38857910C8 GG GGS 30024 17.21 U mpL -0.0003 0.0003 V V V WG38597910C8 PBS GG30024 17.23 U U mpL -0.0003 0.0003 V V V WG38539712F82 FPS GG30024 17.27 MS240321-2 0.6005 0.4464 mpL 90 80 120 V	WG586576																	
WGS86971PBS PBS 033024 17.23	WG586576ICV	ICV	03/30/24 17:10	MS240109-5	.05		.05186	mg/L	104	90	110							
WC858112PBS PBS 0330/24 17.25 U mpl. 0 0.0033 U U mpl. 0.0033 U U U 0.0033 U U U U U U U U U U U U U U U	WG586576ICB	ICB	03/30/24 17:12				U	mg/L		-0.0003	0.0003							
WC858112PBS PBS 0330/24 17.25 U mpl. 0 0.0033 U U mpl. 0.0033 U U U 0.0033 U U U U U U U U U U U U U U U	WG585978PBS	PBS	03/30/24 17:21				.00025	mg/L		-0.0003	0.0003							
WG88847BB WG889781LF2PES G 330024 17.27 MS240321-2 MS240321-2 MS240321-2MG40321-2 MS240321-2 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG4030 MS240321-2MG70 MS24								-										
WGS8978LFB2 WGS89112LFB2 UGS89214217B3 UGS89214217B3 UGS892142173 UGS8924173 UGS8924173MS240321-2 MS240321-2 MS240321-2MS20321-2 <br< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></br<>																		
WG888112_FB2 LFB 03302417.28 M8240371-2 0,5005 0,4181 m91 60 80 120 8 20 MG889314_FB2 LFB 03302417.34 M8240371-2 0,6005 0,676 11608 m91 67 75 125 0 <td></td> <td></td> <td></td> <td>MS240321-2</td> <td>.05005</td> <td></td> <td></td> <td></td> <td>90</td> <td></td> <td></td> <td></td> <td></td> <td></td>				MS240321-2	.05005				90									
W1C888384LFB2 LFB 03302417.30 M8240321-2 0,6005 0,8053 reg. 80 120 80 120 L8870-02M MS 03302417.34 M8240321-2 0,6005 0676 11602 reg. 7 75 125 0 0 0 LB8670-02M MS 03302417.34 M8240321-2 0,6006 0676 11602 reg. 775 125 0								-										
LBB570-01D/P DIP 0330/24 17:31 M2401321-2 .0505 .0676 .1160 mgL 97 75 125 .25 .25 LBB570-021D/P M30 0300/24 17:41 M5240321-2 .0500 .0676 .1160 mgL 97 75 125 .25				MS240321-2				-										
Labs70-02MS MS 03/30/24 17:41 MS240321-2 0.5005 0.676 .11608 mg/L 97 75 125 0 20 Lthium (1312) EPA 6010000 ACZID 79 Analyzed PCN/SCN QC Sample Found Units Rec // Lower Upper RPD Linit Qual VGS86211(CV UV 03/26/24 17.29 L/240304-1 2 1.336 mg/L 97 90 110 J Ker Lower Linit Qual VGS86211(CV UV 03/26/24 17.50 II/240306-3 1 U 977 75 125 Linit Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4"Colspan="4">Colspan="4">Colspan="4"Colspan="4">Colspan="4"Colspan="4">Colspan="4"Colspan="4">Colspan="4">Colspan="4">Colspan="4"Colspan="4">Colspan="4">Colspan="4"Colspan="4">Colspan="4"Colspan="4" Colspan= <th< td=""><td></td><td></td><td></td><td></td><td></td><td>.0875</td><td></td><td>-</td><td></td><td></td><td></td><td>8</td><td>20</td><td></td></th<>						.0875		-				8	20					
Latery DecompositionMSD0.300/24 17:40MS24032:20.50050.6760.160mgLmgL97751250.1020Lithium (1312)AZUDTPA 01/200PON/SCNQCSampleFoundUnitsRec'lLowerUpperRPDLintlQualMG5862111CV1CV03/26/24 17:231240309-121.336mgL97901101.5<				MS240321-2	05005			-	97	75	125	-						
Lithium (1312) EPA 6010D ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Ref. Lower Upper RPD Limit Qual WG586211 UC 0326/24 17:29 11240308-1 2 1.936 mgl. 97 90 110 - - - - 0.024								-				0	20					
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rev Upper RPD Limit Qual WG586211 WG586211 U 03/26/24 17:29 II/40309-1 2 1.936 mgl. 97 90 110 U WG586211 WG58621110E UE 03/26/24 17:29 II/40308-3 1 U mgl. 90.0120 0.024 0.024 U WG5862716 WG5862711ES LFB 03/26/24 18:00 II/40308-3 1 U 9674 mgl. 97 75 125 0 20 RA B6570-01DUP DUP 03/26/24 18:11 II/40308-3 1 U 9704 mgl. 97 90 110 U Rev Limit Qual Qual QU U		MOD	00/00/211110			.0010	.11002	5	01	10	120	Ŭ	20					
WGS86211 WGS86211 View																		
WGS862111CV ICV 03/26/24 17.29 II240309-1 2 1.936 mg/L 97 90 110 WGS862110E ICB 03/26/24 17.33 U mg/L 0.024 0.024 0.024 0.024 WGS85978PES PBS 03/26/24 18:00 II240306-3 1 U .9677 mg/L 97 75 125 0 20 RA US6557010DP DUP 03/26/24 18:01 II240306-3 1 U .9704 mg/L 97 75 125 0 20 RA US656701DUP DUP 03/26/24 18:11 II240306-3 1 U .9704 mg/L 97 75 125 0 20 RA US656211CV DV 03/26/24 17:33 EPA 6010D U mg/L -0.6 0.6 0.6 U WGS66271CV WGS662711C2 II240306-3 50.00453 .89 49.8 mg/L 97 90 110 U U WGS662711CV WGS66	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual				
WG886211ICB ICB 03/26/24 17:33 u U mg/l -0.024 0.024	WG586211																	
WGS85978PBS PBS 03/26/24 17:56 III 240306-3 1	WG586211ICV	ICV	03/26/24 17:29	II240309-1	2		1.936	mg/L	97	90	110							
WGS85878LFB1 LFB 03/26/24 18:00 11/240308-3 1 .9414 mgL 94 80 120 L86570-01MSD MS 03/26/24 18:11 11/240308-3 1 U .9657 mgL 97 75 125 0 20 RA L86570-01MSD DUP 03/26/24 18:14 11/240308-3 1 U .970 mgL 97 75 125 0 20 RA Magnesium(1312 EPA 6010D U U 0 mgL 97 90 110 Linit Qual Qual Qual Qual MGS 100 mgL -0.6 0.6 0.5 C V V V V V V Qual MGS 0.6 0.6 V V V V V V V 0.6 0.6 V V V V V V 0.6 0.6 V V V V V V V V V V V V V V V V <td< td=""><td>WG586211ICB</td><td>ICB</td><td>03/26/24 17:33</td><td></td><td></td><td></td><td>U</td><td>mg/L</td><td></td><td>-0.024</td><td>0.024</td><td></td><td></td><td></td></td<>	WG586211ICB	ICB	03/26/24 17:33				U	mg/L		-0.024	0.024							
Basestrono Mase Ms 03/26/24 18:07 II240306-3 1 U .9657 mg/L 97 75 125 0 20 Basestrono MMSD MSD 03/26/24 18:11 II240306-3 1 U .9704 mg/L 97 75 125 0 20 RA Magnesium (1312) EPA 6010D Kot 21D value value WG586211 V value value WG5862111CV ICV of 0 value WG586211 Value WG5862110CV value <th colspan="4" td="" val<=""><td>WG585978PBS</td><td>PBS</td><td>03/26/24 17:56</td><td></td><td></td><td></td><td>U</td><td>mg/L</td><td></td><td>-0.024</td><td>0.024</td><td></td><td></td><td></td></th>	<td>WG585978PBS</td> <td>PBS</td> <td>03/26/24 17:56</td> <td></td> <td></td> <td></td> <td>U</td> <td>mg/L</td> <td></td> <td>-0.024</td> <td>0.024</td> <td></td> <td></td> <td></td>				WG585978PBS	PBS	03/26/24 17:56				U	mg/L		-0.024	0.024			
L88570-01MSD MSD 0.3/26/24 18:11 II240306-3 1 U .9704 mg/L 97 75 125 0 20 RA Magnesium (131/2 EPA 60102 ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RP Linit Qual WG586211 Vice 0.3/26/24 17:23 II240309-1 100 Sample 96.86 mg/L 97 90 110 Sample	WG585978LFB1	LFB	03/26/24 18:00	II240306-3	1		.9414	mg/L	94	80	120							
Lass70-01DUP DUP 03/26/24 18:14 U U mg/L U mg/L 0	L86570-01MS	MS	03/26/24 18:07	II240306-3	1	U	.9657	mg/L	97	75	125							
Magnesium (1312) EPA 6010D ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Qual WG586211 U 03/26/24 17:33 100 96.86 mg/L -0.6 0.6	L86570-01MSD	MSD	03/26/24 18:11	II240306-3	1	U	.9704	mg/L	97	75	125	0	20					
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Qual WG586211 WG5862111CV ICV 03/26/24 17:29 II240309-1 100 96.86 mg/L 97 90 110 WG5862111CV ICV 03/26/24 17:33 U mg/L -0.6 0.6 0.6 0.6 WG5862111CV ICV 03/26/24 17:33 U mg/L -0.6 0.6 0.6 0.6 WG586278LF81 LFB 03/26/24 18:00 II240306-3 50.00453 .48,71 mg/L 97 80 120 Lia6570-01MS MS 03/26/24 18:10 II240306-3 50.00453 .89 49.8 mg/L 98 75 125 1 20 Lia6570-01MS MS 03/26/24 18:10 II240306-3 50.00453 .89 50.2 mg/L 98 75 125 1 20 Lia6570-01DUP DUP 03/26/24 18:10 II240306-3 50.00453 .8	L86570-01DUP	DUP	03/26/24 18:14			U	U	mg/L				0	20	RA				
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Qual WG586211 WG5862111CV ICV 03/26/24 17:29 II240309-1 100 96.86 mg/L 97 90 110 WG5862111CV ICV 03/26/24 17:33 U mg/L -0.6 0.6 0.6 0.6 WG5862111CV ICV 03/26/24 17:33 U mg/L -0.6 0.6 0.6 0.6 WG586278LF81 LFB 03/26/24 18:00 II240306-3 50.00453 .48,71 mg/L 97 80 120 Lia6570-01MS MS 03/26/24 18:10 II240306-3 50.00453 .89 49.8 mg/L 98 75 125 1 20 Lia6570-01MS MS 03/26/24 18:10 II240306-3 50.00453 .89 50.2 mg/L 98 75 125 1 20 Lia6570-01DUP DUP 03/26/24 18:10 II240306-3 50.00453 .8	Magnesium (13	12)		FPA 601	0D													
WG586211 WG586211 UC 0.3/26/24 17:29 II240309-1 100 96.86 mg/L 97 90 110 WG586211ICV ICV 0.3/26/24 17:33 U mg/L -0.6 0.6 0.6 WG586211ICS ICB 0.3/26/24 17:36 U mg/L -0.6 0.6 0.6 WG586278PBS PBS 0.3/26/24 18:00 II240306-3 50.00453 48.71 mg/L 97 80 120 L86570-01MS MS 0.3/26/24 18:07 II240306-3 50.00453 .89 49.8 mg/L 98 75 125 1 20 L86570-01MS MSD 0.3/26/24 18:11 II240306-3 50.00453 .89 50.2 mg/L 99 75 125 1 20 RA Manganese (1312) EPA 6020B EPA 6020B III24 .89 .84 mg/L -0.0012 0.0012 .0012 .0012 .0012 .0012 .0012 .0012 .0012 .0012 <td< td=""><td>•</td><td></td><td>Analvzed</td><td></td><td></td><td>Sample</td><td>Found</td><td>Units</td><td>Rec%</td><td>Lower</td><td>Upper</td><td>RPD</td><td>Limit</td><td>Qual</td></td<>	•		Analvzed			Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual				
WGS86211ICV ICV 03/26/24 17:29 II/240309-1 100 96.86 mg/L 97 90 110 WGS86211ICB ICB 03/26/24 17:33		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,								oppos							
WG 5862111CB ICB 03/26/24 17:33 U mg/L -0.6 0.6 0.6 WG 585978PBS PBS 03/26/24 17:36 U mg/L 97 80 120 WG 585978LFB1 LFB 03/26/24 18:00 1120306-3 50.00453 8.9 48.71 mg/L 97 80 120 L86570-01MSD MS 03/26/24 18:10 1120306-3 50.00453 8.9 49.8 mg/L 98 75 125 1 20 L86570-01MSD MSD 03/26/24 18:11 1120306-3 50.00453 8.9 50.2 mg/L 99 75 125 1 20 L86570-01DV DUP 03/26/24 18:11 1120306-3 50.00453 8.9 50.2 mg/L 99 75 125 1 20 L86570-01DVP DUP 33/26/24 18:14 1120306-3 50.00453 8.9 50.2 mg/L 90 105 10 105 10 105 10 100 100 100 100 100 100 100 100 100 100		101/		11040000 4	100													
WGS85978PBS PBS 03/26/24 17:56 III 40306-3 50.00453 48.71 mg/L 97 80 120 L86570-01MS MS 03/26/24 18:07 III 40306-3 50.00453 .89 49.8 mg/L 98 75 125 1 20 L86570-01MSD MSD 03/26/24 18:01 III 40306-3 50.00453 .89 60.2 mg/L 99 75 125 1 20 L86570-01MSD DUP 03/26/24 18:11 III 40306-3 50.00453 .89 60.2 mg/L 99 75 125 1 20 L86570-01DUP DUP 03/26/24 18:11 III 40306-3 50.00453 .89 50.2 mg/L 99 75 125 1 20 RA L86570-01DUP DUP 03/26/24 18:10 III 40306-3 .50.0453 .89 50.2 mg/L 105 90 101 .00 MG MG <td></td> <td></td> <td></td> <td>11240309-1</td> <td>100</td> <td></td> <td></td> <td>-</td> <td>97</td> <td></td> <td></td> <td></td> <td></td> <td></td>				11240309-1	100			-	97									
WG885978LFB1 LFB 03/26/24 18:00 II240306-3 50.00453 .89 48.71 mg/L 97 80 120 L86570-01MS MS 03/26/24 18:07 II240306-3 50.00453 .89 49.8 mg/L 98 75 125 1 20 L86570-01MSD MSD 03/26/24 18:11 II240306-3 50.00453 .89 50.2 mg/L 99 75 125 1 20 L86570-01DUP DUP 03/26/24 18:14 II240306-3 50.00453 .89 50.2 mg/L 99 75 125 1 20 RA Manganese (1312) EPA 6020B KG286576 WG586576ICV ICV 03/30/24 17:10 MS240109-5 .05 .05227 mg/L 105 90 110 V V V V V V V V V V V V V 0.0012 0.0012 V V V V V V V V V V V V V V <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								-										
Marce MS O3/2/6/24 18:07 II240306-3 50.00453 .89 49.8 mg/L 98 75 125 L86570-01MSD MSD O3/2/6/24 18:11 II240306-3 50.00453 .89 50.2 mg/L 99 75 125 1 20 L86570-01DUP DUP O3/2/6/24 18:14 II240306-3 50.00453 .89 .84 mg/L 99 75 125 1 20 L86570-01DUP DUP O3/2/6/24 18:14 II240306-3 50.00453 .89 .84 mg/L 99 75 125 1 20 Manganese (1312) EPA 60208 EPA 60208 WG586576ICV ICV 03/30/24 17:10 MS240109-5 .05 .05227 mg/L 105 90 110 V V V 0.0012 0.0012 0.0012 V V V V 0.0012 0.0012 0.0012 V V V V V 0.0012 0.0012 0.0012 V V V V V V <								-										
Lactor of Mice Mice<								-										
Laber of model								-										
Manganese (1312) EPA 6020B Ac2 ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Qual WG586576 WG586576ICV ICV 03/30/24 17:10 MS240109-5 .05 .05227 mg/L 105 90 110				11240306-3	50.00453			-	99	75	125							
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RPD Limit Qual WG586576 WG586576ICV ICV 03/30/24 17:10 MS240109-5 .05 .05227 mg/L 105 90 110 400012 40	L86570-01DUP	DUP	03/26/24 18:14			.89	.84	mg/L				6	20	RA				
WG586576 WG586576ICV ICV 03/30/24 17:10 MS240109-5 .05 .05227 mg/L 105 90 110 WG586576ICB ICB 03/30/24 17:12 U mg/L -0.0012 0.0012 WG5865978PBS PBS 03/30/24 17:21 U mg/L -0.0012 0.0012 WG5865978PBS PBS 03/30/24 17:23 U mg/L -0.0012 0.0012 WG5865978LFB2 LFB 03/30/24 17:27 MS240321-2 .0501 .04663 mg/L 93 80 120 WG586354LFB2 LFB 03/30/24 17:28 MS240321-2 .0501 .05051 mg/L 101 80 120 WG586354LFB2 LFB 03/30/24 17:30 MS240321-2 .0501 .05051 mg/L 101 80 120 L86570-01DUP DUP 03/30/24 17:38 .0768 .07544 mg/L 101 80 120 L86570-02MS MS 03/30/24 17:41 MS240321-2 .0501 .0567 .10518 mg/L 97 75 125	Manganese (13 ⁻	12)		EPA 602	0B													
WG586576ICV ICV 03/30/24 17:10 MS240109-5 .05 .05227 mg/L 105 90 110 WG586576ICB ICB 03/30/24 17:12 U mg/L -0.0012 0.0012 0.0012 WG5865978PBS PBS 03/30/24 17:21 U mg/L -0.0012 0.0012 0.0012 WG5865978PBS PBS 03/30/24 17:21 U mg/L -0.0012 0.0012 0.0012 WG5865112PBS PBS 03/30/24 17:23 U U mg/L -0.0012 0.0012 WG586112LFB2 LFB 03/30/24 17:23 MS240321-2 .0501 .04663 mg/L 93 80 120 WG586354LFB2 LFB 03/30/24 17:30 MS240321-2 .0501 .05051 mg/L 93 80 120 WG586354LFB2 LFB 03/30/24 17:30 MS240321-2 .0501 .05051 mg/L 101 80 120 L86570-01DUP DUP 03/30/24 17:38 .0501 .0768 .07544 mg/L 97 75 125	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual				
WG5865761CB ICB 03/30/24 17:12 U mg/L -0.0012 0.0012 WG5865978PBS PBS 03/30/24 17:21 .0006 mg/L -0.0012 0.0012 WG5865978PBS PBS 03/30/24 17:21 U mg/L -0.0012 0.0012 WG5865978PBS PBS 03/30/24 17:27 MS240321-2 .0501 .04663 mg/L 93 80 120 WG5865978LFB2 LFB 03/30/24 17:28 MS240321-2 .0501 .0467 mg/L 93 80 120 WG586354LFB2 LFB 03/30/24 17:30 MS240321-2 .0501 .05051 mg/L 101 80 120 L86570-01DUP DUP 03/30/24 17:38 .0501 .0768 .07544 mg/L 120 20 L86570-02MS MS 03/30/24 17:41 MS240321-2 .0501 .0567 .0518 mg/L 97 75 125	WG586576																	
WG5865761CB ICB 03/30/24 17:12 U mg/L -0.0012 0.0012 WG5865978PBS PBS 03/30/24 17:21 .0006 mg/L -0.0012 0.0012 WG5865978PBS PBS 03/30/24 17:21 U mg/L -0.0012 0.0012 WG5865978PBS PBS 03/30/24 17:27 MS240321-2 .0501 .04663 mg/L 93 80 120 WG5865978LFB2 LFB 03/30/24 17:28 MS240321-2 .0501 .0467 mg/L 93 80 120 WG586354LFB2 LFB 03/30/24 17:30 MS240321-2 .0501 .05051 mg/L 101 80 120 L86570-01DUP DUP 03/30/24 17:38 .0501 .0768 .07544 mg/L 120 20 L86570-02MS MS 03/30/24 17:41 MS240321-2 .0501 .0567 .0518 mg/L 97 75 125	WG586576ICV	ICV	03/30/24 17.10	MS240109-5	.05		.05227	ma/L	105	90	110							
WG585978PBS PBS 03/30/24 17:21 .0006 mg/L -0.0012 0.0012 WG5850112PBS PBS 03/30/24 17:23 U mg/L -0.0012 0.0012 WG585978LFB2 LFB 03/30/24 17:27 MS240321-2 .0501 .04663 mg/L 93 80 120 WG586354LFB2 LFB 03/30/24 17:28 MS240321-2 .0501 .0467 mg/L 93 80 120 WG586354LFB2 LFB 03/30/24 17:30 MS240321-2 .0501 .05051 mg/L 101 80 120 L86570-01DUP DUP 03/30/24 17:38 .0501 .0768 .07544 mg/L . 2 20 L86570-02MS MS 03/30/24 17:41 MS240321-2 .0501 .0567 .10518 mg/L 97 75 125																		
WG586112PBS PBS 03/30/24 17:23 U mg/L -0.0012 0.0012 WG586112PBS LFB 03/30/24 17:27 MS240321-2 .0501 .04663 mg/L 93 80 120 WG586112LFB2 LFB 03/30/24 17:28 MS240321-2 .0501 .0467 mg/L 93 80 120 WG586354LFB2 LFB 03/30/24 17:30 MS240321-2 .0501 .05051 mg/L 101 80 120 L86570-01DUP DUP 03/30/24 17:38 .0768 .07544 mg/L 101 80 120 L86570-02MS MS 03/30/24 17:41 MS240321-2 .0501 .0768 .07544 mg/L 97 75 125																		
WG585978LFB2 LFB 03/30/24 17:27 MS240321-2 .0501 .04663 mg/L 93 80 120 WG586112LFB2 LFB 03/30/24 17:28 MS240321-2 .0501 .0467 mg/L 93 80 120 WG586354LFB2 LFB 03/30/24 17:30 MS240321-2 .0501 .05051 mg/L 93 80 120 L86570-01DUP DUP 03/30/24 17:38 .0501 .0768 .07544 mg/L 2 20 L86570-02MS MS 03/30/24 17:41 MS240321-2 .0501 .0567 .10518 mg/L 97 75 125																		
WG586112LFB2 LFB 03/30/24 17:28 MS240321-2 .0501 .0467 mg/L 93 80 120 WG586354LFB2 LFB 03/30/24 17:30 MS240321-2 .0501 .05051 mg/L 101 80 120 L86570-01DUP DUP 03/30/24 17:38 .0768 .07544 mg/L 101 80 120 L86570-02MS MS 03/30/24 17:41 MS240321-2 .0501 .0567 .10518 mg/L 97 75 125				MS240321-2	0501				03									
WG586354LFB2 LFB 03/30/24 17:30 MS240321-2 .0501 .05051 mg/L 101 80 120 L86570-01DUP DUP 03/30/24 17:38 .0768 .07544 mg/L 2 20 L86570-02MS MS 03/30/24 17:41 MS240321-2 .0501 .0567 .10518 mg/L 97 75 125																		
L86570-01DUP DUP 03/30/24 17:38 .0768 .07544 mg/L 2 20 L86570-02MS MS 03/30/24 17:41 MS240321-2 .0501 .0567 .10518 mg/L 97 75 125																		
L86570-02MS MS 03/30/24 17:41 MS240321-2 .0501 .0567 .10518 mg/L 97 75 125				1113240321-2	.0501	0700			101	80	120	~	00					
				10040004 6	0-04				07	75	405	2	20					
L86570-02MSD MSD 03/30/2417:43 MS240321-2 .0501 .0567 .10489 mg/L 96 75 125 0 20												-						
	L86570-02MSD	MSD	03/30/24 17:43	MS240321-2	.0501	.0567	.10489	mg/L	96	75	125	0	20					

ACZ Project ID: L86570

Mercury (1312)			EPA 747	0A									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586201													
WG586201ICV1	ICV	03/26/24 13:19	HG240226-3	.005		.00515	mg/L	103	95	105			
WG586201ICB	ICB	03/26/24 13:20				U	mg/L		-0.0002	0.0002			
WG586206													
WG586206LFB	LFB	03/26/24 14:35	HG240325-3	.002002		.00185	mg/L	92	85	115			
WG585978PBS	PBS	03/26/24 14:36				U	mg/L		-0.0006	0.0006			
WG585978LFB1	LFB	03/26/24 14:37	HG240325-3	.002002		.00175	mg/L	87	85	115			
L86570-01MS	MS	03/26/24 14:39	HG240325-3	.002002	U	.00178	mg/L	89	85	115			
L86570-01MSD	MSD	03/26/24 14:40	HG240325-3	.002002	U	.00178	mg/L	89	85	115	0	20	
L86570-01DUP	DUP	03/26/24 14:41			U	U	mg/L				0	20	RA
WG586112PBS	PBS	03/26/24 14:47				U	mg/L		-0.0006	0.0006			
WG586112LFB1	LFB	03/26/24 14:48	HG240325-3	.002002		.0018	mg/L	90	85	115			
Molybdenum (13	312)		EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586576													
WG586576ICV	ICV	03/30/24 17:10	MS240109-5	.02		.02014	mg/L	101	90	110			
WG586576ICB	ICB	03/30/24 17:12				U	mg/L		-0.0006	0.0006			
WG585978PBS	PBS	03/30/24 17:21				U	mg/L		-0.0006	0.0006			
WG586112PBS	PBS	03/30/24 17:23				U	mg/L		-0.0006	0.0006			
WG586354PBS	PBS	03/30/24 17:25				U	mg/L		-0.0006	0.0006			
WG585978LFB2	LFB	03/30/24 17:27	MS240321-2	.05005		.04572	mg/L	91	80	120			
WG586112LFB2	LFB	03/30/24 17:28	MS240321-2	.05005		.04661	mg/L	93	80	120			
WG586354LFB2	LFB	03/30/24 17:30	MS240321-2	.05005		.04751	mg/L	95	80	120			
L86570-01DUP	DUP	03/30/24 17:38			.0137	.01697	mg/L				21	20	RD
L86570-02MS	MS	03/30/24 17:41	MS240321-2	.05005	.0218	.06929	mg/L	95	75	125			
L86570-02MSD	MSD	03/30/24 17:43	MS240321-2	.05005	.0218	.06799	mg/L	92	75	125	2	20	
Neutralization P	otential	as CaCO3	EPA 600	/2-78-054 3	3.2.3								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG593465													
WG593465PBS	PBS	07/19/24 12:20				U	%		-0.2	0.2			
WG593465LCSS	LCSS	07/19/24 12:47	PCN625358	99.8		97.5	%	98	80	120			
L86570-02DUP	DUP	07/19/24 14:10			10.5	10.6	%				1	20	
L86570-02MS	MS	07/19/24 14:37	SI230912-3	3	10.5	13.9	%	113	70	130			

ACZ Project ID: L86570

Nickel (1312)			EPA 6020	В									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586576													
WG586576ICV	ICV	03/30/24 17:10	MS240109-5	.05		.0517	mg/L	103	90	110			
WG586576ICB	ICB	03/30/24 17:12				U	mg/L		-0.0012	0.0012			
WG585978PBS	PBS	03/30/24 17:21				U	mg/L		-0.0012	0.0012			
WG586112PBS	PBS	03/30/24 17:23				U	mg/L		-0.0012	0.0012			
WG585978LFB2	LFB	03/30/24 17:27	MS240321-2	.0501		.04742	mg/L	95	80	120			
WG586112LFB2	LFB	03/30/24 17:28	MS240321-2	.0501		.04678	mg/L	93	80	120			
WG586354LFB2	LFB	03/30/24 17:30	MS240321-2	.0501		.04671	mg/L	93	80	120			
L86570-01DUP	DUP	03/30/24 17:38			U	U	mg/L				0	20	RA
L86570-02MS	MS	03/30/24 17:41	MS240321-2	.0501	U	.0468	mg/L	93	75	125			
L86570-02MSD	MSD	03/30/24 17:43	MS240321-2	.0501	U	.04637	mg/L	93	75	125	1	20	
Nitrate/Nitrite as	s N (1312	2-DI)	EPA 353.2	2									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586121													
WG586121ICV	ICV	03/21/24 23:31	WI240103-7	2.416		2.326	mg/L	96	90	110			
WG586121ICB	ICB	03/21/24 23:32				U	mg/L		-0.02	0.02			
WG586123													
WG586123LFB	LFB	03/22/24 0:43	WI240228-17	2		1.947	mg/L	97	90	110			
WG585975PBS	PBS	03/22/24 0:45				U	mg/L		-0.02	0.02			
L86570-01DUP	DUP	03/22/24 0:47			1.85	1.828	mg/L				1	20	
L86570-02AS	AS	03/22/24 0:50	WI240228-17	2	1.74	3.727	mg/L	99	90	110			
Nitrite as N (131	2-DI)		EPA 353.2	2									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586121													
WG586121ICV	ICV	03/21/24 23:31	WI240103-7	.608		.596	mg/L	98	90	110			
WG586121ICB	ICB	03/21/24 23:32		.000		.000 U	mg/L	50	-0.01	0.01			
WG586123						-	Ū						
WG586123LFB		02/22/24 0.42	WI240228-17	4		1 014	ma/l	101	00	110			
WG585975PBS	LFB PBS	03/22/24 0:43 03/22/24 0:45	W1240220-17	1		1.014 U	mg/L mg/L	101	90 -0.01	110 0.01			
L86570-01DUP	DUP	03/22/24 0:43			.023	.014	mg/L		-0.01	0.01	49	20	RA
L86570-02AS	AS	03/22/24 0:50	WI240228-17	1	.016	1.075	mg/L	106	90	110	10	20	101
Nitrogen, ammo	nia (131	2 (וח 2	EPA 350.1	1									
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Unito	Rec%	Lower	Upper	RPD	Limit	Qual
	туре	Analyzeu	PCN/SCN	QC	Sample	Found	Units	Rec //	Lower	Opper	KFU	Liiliit	Quai
WG586671	10.1	0.1/00/01 100 5	111040455			10			0.5				
WG586671ICV	ICV	04/02/24 10:25	WI240106-1	12		12.336	mg/L	103	90	110			
WG586671ICB	ICB	04/02/24 10:26				U	mg/L		-0.1	0.1			
WG586679													
WG586679LFB	LFB	04/02/24 11:36	WI231102-6	10		9.713	mg/L	97	90	110			
WG585975PBS	PBS	04/02/24 11:37				U	mg/L		-0.1	0.1			
L86570-01DUP	DUP	04/02/24 11:40			.116	.113	mg/L				3	20	RA
L86570-02AS	AS	04/02/24 11:43	WI231102-6	10	U	10.679	mg/L	107	90	110			

ACZ Project ID: L86570

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.

Phosphorus, ortho dissolved (1312-DI) EPA 365.1

ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586122													
WG586122ICV	ICV	03/22/24 0:52	WI240307-4	.65228		.66	mg/L	101	90	110			
WG586122ICB	ICB	03/22/24 0:53				U	mg/L		-0.01	0.01			
WG586125													
WG586125LFB	LFB	03/22/24 1:15	WI240315-2	.5		.49	mg/L	98	90	110			
WG585975PBS	PBS	03/22/24 1:16				U	mg/L		-0.01	0.01			
L86570-01DUP	DUP	03/22/24 1:18			U	U	mg/L				0	20	RA
L86570-02AS	AS	03/22/24 1:20	WI240315-2	.5	U	.489	mg/L	98	90	110			

Phosphorus, Total (1312-DI)

ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586398													
WG586398ICV	ICV	03/27/24 14:32	WI240301-4	.6523		.694	mg/L	106	90	110			
WG586398ICB	ICB	03/27/24 14:35				U	mg/L		-0.01	0.01			
WG585975PBS	PBS	03/27/24 14:36				U	mg/L		-0.01	0.01			
L86570-01DUP	DUP	03/27/24 14:38			U	U	mg/L				0	20	RA
L86570-02MS	MS	03/27/24 14:40	WI240315-2	.5	U	.517	mg/L	103	90	110			
WG586190PBS	PBS	03/27/24 14:47				U	mg/L		-0.01	0.01			
WG586190LFB	LFB	03/27/24 14:50	WI240315-2	.5		.514	mg/L	103	90	110			

Potassium (1312)

EPA 6010D

EPA 365.1

ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586211													
WG586211ICV	ICV	03/26/24 17:29	II240309-1	20		19.4	mg/L	97	90	110			
WG586211ICB	ICB	03/26/24 17:33				U	mg/L		-1.5	1.5			
WG585978PBS	PBS	03/26/24 17:56				U	mg/L		-1.5	1.5			
WG585978LFB1	LFB	03/26/24 18:00	II240306-3	100.0104		96.87	mg/L	97	80	120			
L86570-01MS	MS	03/26/24 18:07	II240306-3	100.0104	4.14	101.2	mg/L	97	75	125			
L86570-01MSD	MSD	03/26/24 18:11	II240306-3	100.0104	4.14	102.2	mg/L	98	75	125	1	20	
L86570-01DUP	DUP	03/26/24 18:14			4.14	3.97	mg/L				4	20	RA

Residue, Filterable (TDS) @180C (1312) SM 2540 C-2011

ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586253													
WG586253PBW	PBW	03/25/24 18:25				U	mg/L		-20	20			
WG586253LCSW	LCSW	03/25/24 18:28	PCN626254	1000		986	mg/L	99	80	120			
WG585975PBS	PBS	03/25/24 18:32				U	mg/L		-40	40			
L86570-01DUP	DUP	03/25/24 18:39			76	86	mg/L				12	10	RA

Residue, Non-Filter (TSS) @180C (1312-DI) SM 2540 D-2011/2015

ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586424													
WG586424PBW	PBW	03/27/24 21:30				5	mg/L		-5	5			BF
WG586424LCSW	LCSW	03/27/24 21:32	PCN626252	100		90	mg/L	90	80	120			
WG585975PBS	PBS	03/27/24 21:34				U	mg/L		-15	15			
L86570-01DUP	DUP	03/27/24 21:38			U	U	mg/L				0	10	RA

ACZ Project ID: L86570

Selenium (1312))		EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
NG586576													
VG586576ICV	ICV	03/30/24 17:10	MS240109-5	.05		.05265	mg/L	105	90	110			
VG586576ICB	ICB	03/30/24 17:12				U	mg/L		-0.0003	0.0003			
VG585978PBS	PBS	03/30/24 17:21				U	mg/L		-0.0003	0.0003			
VG586112PBS	PBS	03/30/24 17:23				U	mg/L		-0.0003	0.0003			
VG586354PBS	PBS	03/30/24 17:25				U	mg/L		-0.0003	0.0003			
VG585978LFB2	LFB	03/30/24 17:27	MS240321-2	.05005		.04607	mg/L	92	80	120			
VG586112LFB2	LFB	03/30/24 17:28	MS240321-2	.05005		.04669	mg/L	93	80	120			
NG586354LFB2	LFB	03/30/24 17:30	MS240321-2	.05005		.04669	mg/L	93	80	120			
_86570-01DUP	DUP	03/30/24 17:38			.00015	.00013	mg/L				14	20	RA
.86570-02MS	MS	03/30/24 17:41	MS240321-2	.05005	.0001	.04741	mg/L	95	75	125			
.86570-02MSD	MSD	03/30/24 17:43	MS240321-2	.05005	.0001	.04748	mg/L	95	75	125	0	20	
Silica (1312)			EPA 601	0D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
NG586211													
VG586211ICV	ICV	03/26/24 17:29	II240309-1	42.8		42.13	mg/L	98	90	110			
WG586211ICB	ICB	03/26/24 17:33				U	mg/L		-0.6	0.6			
VG585978PBS	PBS	03/26/24 17:56				U	mg/L		-0.6	0.6			
VG585978LFB1	LFB	03/26/24 18:00	II240306-3	21.42782		20.24	mg/L	94	80	120			
86570-01MS	MS	03/26/24 18:07	II240306-3	21.42782	2.5	22.45	mg/L	93	75	125			
86570-01MSD	MSD	03/26/24 18:11	11240306-3	21.42782	2.5	23.05	mg/L	96	75	125	3	20	
.86570-01DUP	DUP	03/26/24 18:14		21.12702	2.5	2.31	mg/L	00	10	120	8	20	
Silver (1312)			EPA 602	:0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
NG586576													
VG586576ICV	ICV	03/30/24 17:10	MS240109-5	.02		.02081	mg/L	104	90	110			
VG586576ICB	ICB	03/30/24 17:12		.02		U	mg/L	104	-0.0003	0.0003			
VG585978PBS	PBS	03/30/24 17:12				U	mg/L		-0.0003	0.0003			
VG586112PBS	PBS	03/30/24 17:23				U	mg/L		-0.0003	0.0003			
VG586354PBS	PBS	03/30/24 17:25				U	mg/L		-0.0003	0.0003			
VG585978LFB2	LFB	03/30/24 17:25	MS240321-2	.01		.00932	mg/L	93	-0.0003	120			
VG586112LFB2			MS240321-2 MS240321-2				mg/L						
	LFB LFB	03/30/24 17:28	MS240321-2 MS240321-2	.01		.00936 .00953	-	94 05	80 80	120 120			
VG586354LFB2		03/30/24 17:30	WI3240321-2	.01		.00953 U	mg/L mg/L	95	80	120	0	20	
.86570-01DUP	DUP	03/30/24 17:38	MS240321-2	01	U			05	75	105	0	20	RA
.86570-02MS .86570-02MSD	MS MSD	03/30/24 17:41 03/30/24 17:43	MS240321-2 MS240321-2	.01 .01	U U	.00954 .0094	mg/L mg/L	95 94	75 75	125 125	1	20	
					0	.0001		01	10	120	•	20	
Sodium (1312) ACZ ID	Туре	Analyzed	EPA 601 PCN/SCN	QC	Sample	Found	Unite	Rec%	Lower	Upper	RPD	Limit	Qual
	Туре	Analyzeu	I ON/SON	QU	Sample	1 Ound	Units	Nec /	Lower	Opper		Linin	Quai
VG586211		00/06/04 47:00	11240200 4	100		06.00	m=//	07	00	140			
VG586211ICV	ICV	03/26/24 17:29	II240309-1	100		96.98	mg/L	97	90	110			
	ICB	03/26/24 17:33				U	mg/L		-0.6	0.6			
	PBS	03/26/24 17:56				U	mg/L	-	-0.6	0.6			
VG585978PBS						06 67	mg/L	97	80	120			
VG585978PBS VG585978LFB1	LFB	03/26/24 18:00	II240306-3	99.96689		96.67							
VG586211ICB VG585978PBS VG585978LFB1 .86570-01MS	LFB MS	03/26/24 18:07	II240306-3	99.96689	.79	97.81	mg/L	97	75	125			
VG585978PBS VG585978LFB1	LFB				.79 .79 .79						1 9	20 20	RA

ACZ Project ID: L86570

Strontium (1312	2)		EPA 6010	D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586211													
WG586211ICV	ICV	03/26/24 17:29	II240309-1	2		1.915	mg/L	96	90	110			
WG586211ICB	ICB	03/26/24 17:33				U	mg/L		-0.027	0.027			
WG585978PBS	PBS	03/26/24 17:56				U	mg/L		-0.027	0.027			
WG585978LFB1	LFB	03/26/24 18:00	II240306-3	.501		.5072	mg/L	101	80	120			
L86570-01MS	MS	03/26/24 18:07	II240306-3	.501	.429	.9378	mg/L	102	75	125			
L86570-01MSD	MSD	03/26/24 18:11	II240306-3	.501	.429	.9525	mg/L	104	75	125	2	20	
L86570-01DUP	DUP	03/26/24 18:14			.429	.4686	mg/L				9	20	
Sulfate (1312-D	I)		EPA 300.	0									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG585845													
WG585845ICV	ICV	03/20/24 14:53	WI240315-8	50		49.33	mg/L	99	90	110			
WG585845ICB	ICB	03/20/24 15:11				U	mg/L		-0.9	0.9			
WG586304													
WG586304ICV	ICV	03/20/24 14:53	WI240315-8	50		49.33	mg/L	99	90	110			
WG586304ICB	ICB	03/20/24 15:11				U	mg/L		-0.9	0.9			
WG586304LFB	LFB	03/26/24 19:53	WI230714-6	30		28.08	mg/L	94	90	110			
WG585975PBS	PBS	03/26/24 20:11				U	mg/L		-0.9	0.9			
L86570-01DUP	DUP	03/26/24 20:47			26.1	30.09	mg/L				14	20	
L86570-02AS	AS	03/26/24 21:23	WI230714-6	30	13.6	42.46	mg/L	96	90	110			
Sulfur Hcl Resid	due		EPA 600/	2-78-054	3.2.4 Modi	ified							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG593362													
L86570-01DUP	DUP	07/23/24 13:01			.51	.47	%				8	20	
Sulfur Hno3 Re	sidue		EPA 600/	2-78-054	3.2.4 Modi	ified							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG593362													
L86570-01DUP	DUP	07/23/24 13:46			U	U	%				0	20	RA
				2 79 054	3.2.4 Modi							-	
Sulfur Organic	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
	Type	Analyzeu	FCN/SCN	QC	Sample	Found	Units	Rec //	Lower	Opper	RFD	Linint	Quai
WG593362 L86570-01DUP	DUP	07/23/24 13:46			U	U	%				0	20	RA
		07/23/24 13:40					,0				0	20	IVA.
Sulfur Pyritic S					3.2.4 Modi								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG593362													
L86570-01DUP	DUP	07/23/24 13:46			.51	.47	%				8	20	
Sulfur Sulfate			EPA 600/	2-78-054	3.2.4 Modi	ified							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG593362													
L86570-01DUP	DUP	07/23/24 13:46			.04	.1	%				86	20	RA
	201	57720724 10.40			.04	. '					50	20	1.0.1

ACZ Project ID: L86570

Sulfur Total			EPA 600/	2-78-054	3.2.4 Modi	fied							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG593362													
WG593362LCSS	LCSS	07/23/24 12:06	PCN625750	3.95		3.75	%	95	80	120			
L86570-01MS	MS	07/23/24 12:11	PCN625561	1.28	.55	1.95	%	109	80	120			
L86570-01DUP	DUP	07/23/24 12:15			.55	.57	%				4	20	
Thallium (1312)			EPA 6020)B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586576													
WG586576ICV	ICV	03/30/24 17:10	MS240109-5	.05		.05484	mg/L	110	90	110			
WG586576ICB	ICB	03/30/24 17:12				U	mg/L		-0.0003	0.0003			
WG585978PBS	PBS	03/30/24 17:21				U	mg/L		-0.0003	0.0003			
WG586112PBS	PBS	03/30/24 17:23				U	mg/L		-0.0003	0.0003			
WG586354PBS	PBS	03/30/24 17:25				U	mg/L		-0.0003	0.0003			
WG585978LFB2	LFB	03/30/24 17:27	MS240321-2	.0501		.04654	mg/L	93	80	120			
WG586112LFB2	LFB	03/30/24 17:28	MS240321-2	.0501		.04765	mg/L	95	80	120			
WG586354LFB2	LFB	03/30/24 17:30	MS240321-2	.0501		.04772	mg/L	95	80	120			
L86570-01DUP	DUP	03/30/24 17:38			.00016	.00011	mg/L				37	20	RA
L86570-02MS	MS	03/30/24 17:41	MS240321-2	.0501	U	.04825	mg/L	96	75	125			
L86570-02MSD	MSD	03/30/24 17:43	MS240321-2	.0501	U	.04765	mg/L	95	75	125	1	20	
Tin (1312)			EPA 6010	D									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586211													
WG586211ICV	ICV	03/26/24 17:29	II240309-1	2		1.923	mg/L	96	90	110			
WG586211ICB	ICB	03/26/24 17:33				U	mg/L		-0.12	0.12			
WG585978PBS	PBS	03/26/24 17:56				U	mg/L		-0.12	0.12			
WG585978LFB1	LFB	03/26/24 18:00	II240306-3	1.001		.962	mg/L	96	80	120			
L86570-01MS	MS	03/26/24 18:07	II240306-3	1.001	U	.965	mg/L	96	75	125			
L86570-01MSD	MSD	03/26/24 18:11	II240306-3	1.001	U	.98	mg/L	98	75	125	2	20	
L86570-01DUP	DUP	03/26/24 18:14			U	U	mg/L				0	20	RA
Total Sulfur Min	us Sulfa	ite	EPA 600/	2-78-054	3.2.4 Modi	fied							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG593362													
L86570-01DUP	DUP	07/23/24 13:46			.51	.47	%				8	20	

ACZ Project ID: L86570

Uranium (1312)			EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586576													
WG586576ICV	ICV	03/30/24 17:10	MS240109-5	.05		.05406	mg/L	108	90	110			
WG586576ICB	ICB	03/30/24 17:12				U	mg/L		-0.0003	0.0003			
WG585978PBS	PBS	03/30/24 17:21				U	mg/L		-0.0003	0.0003			
WG586112PBS	PBS	03/30/24 17:23				U	mg/L		-0.0003	0.0003			
WG586354PBS	PBS	03/30/24 17:25				U	mg/L		-0.0003	0.0003			
WG585978LFB2	LFB	03/30/24 17:27	MS240321-2	.05		.04653	mg/L	93	80	120			
WG586112LFB2	LFB	03/30/24 17:28	MS240321-2	.05		.04646	mg/L	93	80	120			
WG586354LFB2	LFB	03/30/24 17:30	MS240321-2	.05		.04758	mg/L	95	80	120			
L86570-01DUP	DUP	03/30/24 17:38			U	U	mg/L				0	20	RA
L86570-02MS	MS	03/30/24 17:41	MS240321-2	.05	U	.04881	mg/L	98	75	125			
L86570-02MSD	MSD	03/30/24 17:43	MS240321-2	.05	U	.04789	mg/L	96	75	125	2	20	
Vanadium (1312	:)		EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586576													
WG586576ICV	ICV	03/30/24 17:10	MS240109-5	.05		.05375	mg/L	108	90	110			
WG586576ICB	ICB	03/30/24 17:12				U	mg/L		-0.0015	0.0015			
WG585978PBS	PBS	03/30/24 17:21				U	mg/L		-0.0015	0.0015			
WG586112PBS	PBS	03/30/24 17:23				U	mg/L		-0.0015	0.0015			
WG586354PBS	PBS	03/30/24 17:25				U	mg/L		-0.0015	0.0015			
WG585978LFB2	LFB	03/30/24 17:27	MS240321-2	.05005		.04694	mg/L	94	80	120			
WG586112LFB2	LFB	03/30/24 17:28	MS240321-2	.05005		.04719	mg/L	94	80	120			
WG586354LFB2	LFB	03/30/24 17:30	MS240321-2	.05005		.0476	mg/L	95	80	120			
L86570-01DUP	DUP	03/30/24 17:38			U	U	mg/L				0	20	RA
L86570-02MS	MS	03/30/24 17:41	MS240321-2	.05005	U	.04933	mg/L	99	75	125			
L86570-02MSD	MSD	03/30/24 17:43	MS240321-2	.05005	U	.04864	mg/L	97	75	125	1	20	
Zinc (1312)			EPA 602	0B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG586576													
WG586576ICV	ICV	03/30/24 17:10	MS240109-5	.05		.0516	mg/L	103	90	110			
WG586576ICB	ICB	03/30/24 17:12				U	mg/L		-0.018	0.018			
WG585978PBS	PBS	03/30/24 17:21				U	mg/L		-0.018	0.018			
WG586112PBS	PBS	03/30/24 17:23				U	mg/L		-0.018	0.018			
WG586354PBS	PBS	03/30/24 17:25				.0104	mg/L		-0.018	0.018			
WG585978LFB2	LFB	03/30/24 17:27	MS240321-2	.050015		.0483	mg/L	97	80	120			
WG586112LFB2	LFB	03/30/24 17:28	MS240321-2	.050015		.0475	mg/L	95	80	120			
WG586354LFB2	LFB	03/30/24 17:30	MS240321-2	.050015		.0568	mg/L	114	80	120			
L86570-01DUP	DUP	03/30/24 17:38			.0086	.0072	mg/L				18	20	RA
L86570-02MS	MS	03/30/24 17:41	MS240321-2	.050015	U	.0487	mg/L	97	75	125			
L86570-02MSD	MSD	03/30/24 17:43	MS240321-2	.050015	U	.0487	mg/L	97	75	125	0	20	



(800) 334-5493

Thorin Resources

ACZ Project ID:	L86570
-----------------	--------

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L86570-01	WG586211	Aluminum (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG586576	Beryllium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Bicarbonate as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586211	Boron (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586304	Bromide (1312-DI)	EPA 300.0	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586576	Cadmium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586623	Carbon, total organic (TOC) (1312-DI)	SM 5310 B-2011/2014	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM 5310 B-2011/2014	Q6	Sample was received above recommended temperature.
			SM 5310 B-2011/2014	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Carbonate as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586304	Chloride (1312-DI)	EPA 300.0	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586576	Chromium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Conductivity @25C (1312-DI)	SM 2510 B-2011	Q6	Sample was received above recommended temperature.
	WG586646	Copper (1312)	EPA 6020B	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG586467	Fluoride (1312 DI)	SM 4500-F C-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Hydroxide as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586211	lron (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Lithium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Magnesium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586206	Mercury (1312)	EPA 7470A	Q6	Sample was received above recommended temperature.
			EPA 7470A	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

Thorin Resources

(800) 334-5493

Inorganic Extended Qualifier Report

ACZ Project ID: L86570

ACZ ID WORKNU	M PARAMETER	METHOD	QUAL	DESCRIPTION
				sample is too low for accurate evaluation (< 10x MDL).
WG58657	6 Molybdenum (1312)	EPA 6020B	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	Nickel (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
WG58612	3 Nitrate/Nitrite as N (1312-DI)	EPA 353.2	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
		EPA 353.2	Q6	Sample was received above recommended temperature.
	Nitrite as N (1312-DI)	EPA 353.2	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
		EPA 353.2	Q6	Sample was received above recommended temperature.
		EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
WG58667	9 Nitrogen, ammonia (1312-DI)	EPA 350.1	Q6	Sample was received above recommended temperature.
		EPA 350.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
WG58612	5 Phosphorus, ortho dissolved (1312-DI)	EPA 365.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
WG58639	8 Phosphorus, Total (1312-DI)	EPA 365.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
WG58621	1 Potassium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
WG58625	3 Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
WG58642	4 Residue, Non-Filter (TSS) @180C (1312-DI)	SM 2540 D-2011/2015	BF	Target analyte in prep / method blank at or above the acceptance criteria. Target analyte was not detected in the sample [< MDL].
		SM 2540 D-2011/2015	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		SM 2540 D-2011/2015	Z3	Sample volume yielded a residue less than 2.5 mg
WG58657	6 Selenium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	Silver (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
WG58621	1 Sodium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	Strontium (1312)	EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
WG58630	4 Sulfate (1312-DI)	EPA 300.0	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
WG59336	2 Sulfur HNO3 Residue	EPA 600/2-78-054 3.2.4 Modified	i RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	Sulfur Organic Residual	EPA 600/2-78-054 3.2.4 Modified	I RA	Relative Percent Difference (RPD) was not used for data

4C: **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

(800) 334-5493

Inorganic Extended Qualifier Report

Thorin Resources

ACZ Project ID: L86570

ACZ ID WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
				validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	Sulfur Sulfate	EPA 600/2-78-054 3.2.4 Modified	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
WG586576	Thallium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
WG586211	Tin (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
WG586499	Total Alkalinity	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
WG586576	Uranium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	Vanadium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	Zinc (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).



(800) 334-5493

Thorin Resources

ACZ Project ID: L86570

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L86570-02	WG586211	Aluminum (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG586646	Beryllium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Bicarbonate as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586211	Boron (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586304	Bromide (1312-DI)	EPA 300.0	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586576	Cadmium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586623	Carbon, total organic (TOC) (1312-DI)	SM 5310 B-2011/2014	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM 5310 B-2011/2014	Q6	Sample was received above recommended temperature.
			SM 5310 B-2011/2014	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Carbonate as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586304	Chloride (1312-DI)	EPA 300.0	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586576	Chromium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Conductivity @25C (1312-DI)	SM 2510 B-2011	Q6	Sample was received above recommended temperature.
	WG586646	Copper (1312)	EPA 6020B	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG586467	Fluoride (1312 DI)	SM 4500-F C-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Hydroxide as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586211	Iron (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Lithium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Magnesium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586206	Mercury (1312)	EPA 7470A	Q6	Sample was received above recommended temperature.
			EPA 7470A	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated

4C: **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

Thorin Resources

(800) 334-5493

Inorganic Extended Qualifier Report

ACZ Project ID: L86570

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
					sample is too low for accurate evaluation (< 10x MDL).
	WG586576	Molybdenum (1312)	EPA 6020B	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Nickel (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586123	Nitrate/Nitrite as N (1312-DI)	EPA 353.2	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 353.2	Q6	Sample was received above recommended temperature.
		Nitrite as N (1312-DI)	EPA 353.2	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 353.2	Q6	Sample was received above recommended temperature.
			EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586679	Nitrogen, ammonia (1312-DI)	EPA 350.1	Q6	Sample was received above recommended temperature.
			EPA 350.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586125	Phosphorus, ortho dissolved (1312-DI)	EPA 365.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586398	Phosphorus, Total (1312-DI)	EPA 365.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586211	Potassium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586253	Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586424	Residue, Non-Filter (TSS) @180C (1312-DI)	SM 2540 D-2011/2015	BF	Target analyte in prep / method blank at or above the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			SM 2540 D-2011/2015	DJ	Sample dilution required due to insufficient sample.
			SM 2540 D-2011/2015	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			SM 2540 D-2011/2015	Z3	Sample volume yielded a residue less than 2.5 mg
	WG586576	Selenium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Silver (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586211	Sodium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Strontium (1312)	EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG586304	Sulfate (1312-DI)	EPA 300.0	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
	WG593362	Sulfur HNO3 Residue	EPA 600/2-78-054 3.2.4 Modified	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

ACZ 2773 Downhill Drive Laboratories, Inc. Steamboat Springs, CO 80487

(800) 334-5493

Inorganic Extended Qualifier Report

Thorin Resources

ACZ Project ID: L86570

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
		Sulfur Organic Residual	EPA 600/2-78-054 3.2.4 Modified	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	EPA 600/2-78-054 3.2.4 Modified	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586576	Thallium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586211	Tin (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Total Alkalinity	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586576	Uranium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Vanadium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Zinc (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).



(800) 334-5493

ACZ Project ID: L86570

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L86570-03	WG586211	Aluminum (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG586646	Beryllium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Bicarbonate as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586211	Boron (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586304	Bromide (1312-DI)	EPA 300.0	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586576	Cadmium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586623	Carbon, total organic (TOC) (1312-DI)	SM 5310 B-2011/2014	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM 5310 B-2011/2014	Q6	Sample was received above recommended temperature.
			SM 5310 B-2011/2014	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Carbonate as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586304	Chloride (1312-DI)	EPA 300.0	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586576	Chromium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Conductivity @25C (1312-DI)	SM 2510 B-2011	Q6	Sample was received above recommended temperature.
	WG586646	Copper (1312)	EPA 6020B	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG586467	Fluoride (1312 DI)	SM 4500-F C-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Hydroxide as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586211	lron (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Lithium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Magnesium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586206	Mercury (1312)	EPA 7470A	Q6	Sample was received above recommended temperature.
			EPA 7470A	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated

4C: **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

Thorin Resources

(800) 334-5493

Inorganic Extended Qualifier Report

ACZ Project ID: L86570

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
					sample is too low for accurate evaluation (< 10x MDL).
	WG586576	Molybdenum (1312)	EPA 6020B	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Nickel (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586123	Nitrate/Nitrite as N (1312-DI)	EPA 353.2	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 353.2	Q6	Sample was received above recommended temperature.
		Nitrite as N (1312-DI)	EPA 353.2	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 353.2	Q6	Sample was received above recommended temperature.
			EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586679	Nitrogen, ammonia (1312-DI)	EPA 350.1	Q6	Sample was received above recommended temperature.
			EPA 350.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586125	Phosphorus, ortho dissolved (1312-DI)	EPA 365.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586398	Phosphorus, Total (1312-DI)	EPA 365.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586211	Potassium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586253	Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			SM 2540 C-2011	Z3	Sample volume yielded a residue less than 2.5 mg
	WG586424	Residue, Non-Filter (TSS) @180C (1312-DI)	SM 2540 D-2011/2015	BF	Target analyte in prep / method blank at or above the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			SM 2540 D-2011/2015	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			SM 2540 D-2011/2015	Z3	Sample volume yielded a residue less than 2.5 mg
	WG586576	Selenium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Silver (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586211	Sodium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Strontium (1312)	EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG586304	Sulfate (1312-DI)	EPA 300.0	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
	WG593362	Sulfur HNO3 Residue	EPA 600/2-78-054 3.2.4 Modified	I RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

4C: **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

(800) 334-5493

Inorganic Extended Qualifier Report

Thorin Resources

ACZ Project ID: L86570

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
		Sulfur Organic Residual	EPA 600/2-78-054 3.2.4 Modified	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	EPA 600/2-78-054 3.2.4 Modified	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586576	Thallium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586211	Tin (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Total Alkalinity	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586576	Uranium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Vanadium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Zinc (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).



(800) 334-5493

ACZ Project ID: L86570

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L86570-04	WG586211	Aluminum (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG586646	Beryllium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Bicarbonate as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586211	Boron (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586304	Bromide (1312-DI)	EPA 300.0	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586576	Cadmium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586623	Carbon, total organic (TOC) (1312-DI)	SM 5310 B-2011/2014	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM 5310 B-2011/2014	Q6	Sample was received above recommended temperature.
			SM 5310 B-2011/2014	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Carbonate as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586304	Chloride (1312-DI)	EPA 300.0	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 300.0	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586576	Chromium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Cobalt (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Conductivity @25C (1312-DI)	SM 2510 B-2011	Q6	Sample was received above recommended temperature.
	WG586646	Copper (1312)	EPA 6020B	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG586467	Fluoride (1312 DI)	SM 4500-F C-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Hydroxide as CaCO3	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586211	lron (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Lithium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Magnesium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586206	Mercury (1312)	EPA 7470A	Q6	Sample was received above recommended temperature.
			EPA 7470A	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated

4C: **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

Thorin Resources

(800) 334-5493

Inorganic Extended Qualifier Report

ACZ Project ID: L86570

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
					sample is too low for accurate evaluation (< 10x MDL).
	WG586576	Molybdenum (1312)	EPA 6020B	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Nickel (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586123	Nitrate/Nitrite as N (1312-DI)	EPA 353.2	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 353.2	Q6	Sample was received above recommended temperature.
		Nitrite as N (1312-DI)	EPA 353.2	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			EPA 353.2	Q6	Sample was received above recommended temperature.
			EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586679	Nitrogen, ammonia (1312-DI)	EPA 350.1	Q6	Sample was received above recommended temperature.
			EPA 350.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586125	Phosphorus, ortho dissolved (1312-DI)	EPA 365.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586398	Phosphorus, Total (1312-DI)	EPA 365.1	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586211	Potassium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586253	Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			SM 2540 C-2011	Z3	Sample volume yielded a residue less than 2.5 mg
	WG586424	Residue, Non-Filter (TSS) @180C (1312-DI)	SM 2540 D-2011/2015	BF	Target analyte in prep / method blank at or above the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			SM 2540 D-2011/2015	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			SM 2540 D-2011/2015	Z3	Sample volume yielded a residue less than 2.5 mg
	WG586576	Selenium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Silver (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586211	Sodium (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Strontium (1312)	EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG586304	Sulfate (1312-DI)	EPA 300.0	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
	WG593362	Sulfur HNO3 Residue	EPA 600/2-78-054 3.2.4 Modified	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

4C: **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

(800) 334-5493

Inorganic Extended Qualifier Report

Thorin Resources

ACZ Project ID: L86570

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
		Sulfur Organic Residual	EPA 600/2-78-054 3.2.4 Modified	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	EPA 600/2-78-054 3.2.4 Modified	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586576	Thallium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586211	Tin (1312)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG586499	Total Alkalinity	SM 2320 B-2011	Q6	Sample was received above recommended temperature.
	WG586576	Uranium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Vanadium (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Zinc (1312)	EPA 6020B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).



ACZ Project ID: L86570

The following	parameters are not offered for certification or a	are not covered by NELAC certificate #ACZ.
	Silver (1312)	EPA 6020B
Soil Analysis		
The following	parameters are not offered for certification or a	are not covered by NELAC certificate #ACZ.
	Neutralization Potential as CaCO3	EPA 600/2-78-054 3.2.3
	Sulfur HCI Residue	EPA 600/2-78-054 3.2.4 Modified
	Sulfur HNO3 Residue	EPA 600/2-78-054 3.2.4 Modified
	Sulfur Total	EPA 600/2-78-054 3.2.4 Modified
Wet Chemistr The following r	y parameters are not offered for certification or a	are not covered by NELAC certificate #ACZ.
51	Bicarbonate as CaCO3	SM 2320 B-2011
	Bromide (1312-DI)	EPA 300.0
	Carbonate as CaCO3	SM 2320 B-2011
	Chloride (1312-DI)	EPA 300.0
	Conductivity @25C (1312-DI)	SM 2510 B-2011
	Fluoride (1312 DI)	SM 4500-F C-2011
	Hydroxide as CaCO3	SM 2320 B-2011
	Nitrate/Nitrite as N (1312-DI)	EPA 353.2
	Nitrite as N (1312-DI)	EPA 353.2
	Nitrogen, ammonia (1312-DI)	EPA 350.1
	Phosphorus, ortho dissolved (1312-DI)	EPA 365.1
	Phosphorus, Total (1312-DI)	EPA 365.1
	Residue, Filterable (TDS) @180C (1312)	SM 2540 C-2011
	Residue, Non-Filter (TSS) @180C (1312-DI)	SM 2540 D-2011/2015
	Sulfate (1312-DI)	EPA 300.0

SM 2320 B-2011

Total Alkalinity

ACZ	Laboratories, Inc.
	Steamboat Springs, CO 80487 (800) 334-5493

Steamboat Springs, CO 80487 (800) 334-5493

	ACZ Proje	ct ID:		L86570
Thorin Resources	Date Rece			
	Receive	ed By:		
	Date Pr	inted:	3/2	20/2024
Receipt Verification				
1) la a faraign agil normit included for applicable complex?		YES	NO	NA X
1) Is a foreign soil permit included for applicable samples?				<u>^</u>
2) Is the Chain of Custody form or other directive shipping papers present?		X		
3) Does this project require special handling procedures such as CLP protocol?			Х	
4) Are any samples NRC licensable material?				Х
5) If samples are received past hold time, proceed with requested short hold time	analyses?	Х		
6) Is the Chain of Custody form complete and accurate?		Х		
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the	ne samples?		Х	
Samples/Containers				
		YES	NO	NA
8) Are all containers intact and with no leaks?		Х		
		-		
9) Are all labels on containers and are they intact and legible?		Х		
9) Are all labels on containers and are they intact and legible? 10) Do the sample labels and Chain of Custody form match for Sample ID, Date, a	and Time?	X X		
	and Time?			X
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, a	and Time?			X
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, a 11) For preserved bottle types, was the pH checked and within limits? ¹	and Time?	X		X X
 10) Do the sample labels and Chain of Custody form match for Sample ID, Date, a 11) For preserved bottle types, was the pH checked and within limits? 1 12) Is there sufficient sample volume to perform all requested work? 	and Time?	X		
 10) Do the sample labels and Chain of Custody form match for Sample ID, Date, a 11) For preserved bottle types, was the pH checked and within limits? 12) Is there sufficient sample volume to perform all requested work? 13) Is the custody seal intact on all containers? 	and Time?	X		X
 10) Do the sample labels and Chain of Custody form match for Sample ID, Date, a 11) For preserved bottle types, was the pH checked and within limits? 12) Is there sufficient sample volume to perform all requested work? 13) Is the custody seal intact on all containers? 14) Are samples that require zero headspace acceptable? 	and Time?	X X 		X
 10) Do the sample labels and Chain of Custody form match for Sample ID, Date, a 11) For preserved bottle types, was the pH checked and within limits? 12) Is there sufficient sample volume to perform all requested work? 13) Is the custody seal intact on all containers? 14) Are samples that require zero headspace acceptable? 15) Are all sample containers appropriate for analytical requirements? 	and Time?	X X 		X X

Chain of Custody Related Remarks

Client Contact Remarks

Sx ID's were entered per labels on bags

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
NA41420	12.1	NA	15	N/A

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.



Sample Receipt

Thorin Resources

ACZ Project ID: L86570 Date Received: 03/13/2024 15:43 Received By: Date Printed: 3/20/2024

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), HCI preserved vial (organics), Na2S2O3 preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

ACCredited Environment Testing	2773 Downhill Drive tal Steamboat Springs, CC (970) 879-6590	D 80487	869	57()	С	HAIN	l of (CUST	ODY	
Report to:		Ţ	1								
Name: CJ Dickerson	······		Address: 1900 Main St Unit 1								
Company: Thorin Resource				y, Co 8		-					
E-mail: cjdickerson@thorinr	resources.com		Telep	hone: 6	02793	1321					
Copy of Report to:											
Name:			E-mail:								
Company:			Telephone:								
Invoice to:											
Name: CJ Dickerson			Addre	ss:							
Company:											
E-mail: cjdickerson@thorini	resources.com		Telep	hone:							
Copy of Invoice to:											
Name:			Addre	SS:							
Company:											
E-mail:			Telep	hone:							
If sample(s) received past hold analysis before expiration, sha	II ACZ proceed with request	ed short H	T analy	ses?					YES NO	✓	
¥ "NO" then ACZ will contact client for further ins Are samples for SDWA Compli		ted, ACZ will proc	Yes	e requested	analyses, e	No	is expired, a	d data will b	e qualified		
If yes, please include state for	-	to PQL for		do.		ine in					
Sampler's Name: CJ Dickerson	Sampler's Site Infor	mation	State_	со		Zip co	de 8142	7	Time Zon	e_mst	
*Sampler's Signature: <u>CJ Dicke</u>		est to the authen rering with the sa							eling the time/	date/location o	
PROJECT INFORMATION				ANAL	YSES RE	QUESTE	D (attach	ist or use	quote numb	er}	
Quote #: SPLP/ABA			<u>۾</u>								
PO#:			of Containers								
Reporting state for compliance te	sting:		E S	⊿	م						
Check box if samples include NR SAMPLE IDENTIFICATIO		Matrix		AB	SPLP						
RV HGW Heads	3/4/2024 09:40		1	\checkmark	\checkmark						
RV HGW Tails	3/4/2024 09:40		1	\checkmark	\checkmark						
CB Heads	3/4/2024 09:40		1	\checkmark	\checkmark						
CB Tails	3/4/2024 09:40		1	\checkmark	\checkmark						
	· · · · · · · · · · · · · · · · · · ·	_	 								
			ļ								
	· GW (Ground Water) · WW (Was	ite Water) · D	W (Drink	ting Wate	er) · SL (S	Sludge)	SO (Soil) • OL (Oil) · Other (S	pecity)	
REMARKŜ											
-				41				~~			
RELINQUISHED	e refer to ACZ's terms & co BY: DATE		cated (DAT	E:TIME	
					RECEN				7 6 A	Eanwei 101 .€∙i	
DIUNEI SUII Dale: 2024	ned by CJ Dickerson .03.13 09:54:37 -06'00' 3/7/2024	5:10 pm		H	72		\rightarrow	{	5](*]](7 11	
				£		\nearrow	• .				
			10	-		ellow -					

86570 Chain of Custod

Attachment L - CDPHE Correspondence, Notification of discharge changes & Receipt of Letter

THORIN

July 26th, 2024

Colorado Department of Public Health and Environment Water Quality Control Division 4300 Cherry Creek Drive South Denver, Colorado 80246

Subject: Thorin Resources Discharge Permit, Permit No. CO000003

Dear Erin Scott,

We are writing to update CDPHE, Water Quality Control Division on proposed Technical Revision #17, related to DMRS Permit M-2012-032 on our planned gravity processing circuit. The planned process circuit will operate within all our current permit guidelines. Specifically, we are notifying on the following items:

- For the circuit, we will be using existing water flow from the portal discharge to feed the gravity separation process. At the end of the circuit, the process water will be discharged to an existing drift underground where it will be diluted with the mine discharge water before being treated in the pond system. The are no changes to water volumes related to Permit No. CO000003 and no chemical reagents will be used in the process.
- The gravity separation circuit will process ore to create a concentrate. During bench-top testing of
 the gravity processing circuit water samples were taken for quality analysis. The Table below
 shows the results from the water quality testing and demonstrates confirmation that water quality
 is expected to be within guidelines of Permit No. CO00003. Water quality analytics was completed
 by Colorado Analytical February 13th, 2024

TH\otimesRIN

		Bench Top Tests	Discharge	Standards	Historical Sample Results		
Analyte	Units	Average Results	30 Duy Avg	Daily Max	2023 Outfail Discharge	2023 Portal Discharge	
Arsenic, total recoverable	mg/3.	ND:	Report	2.4	0.001246667	+:	
Cadmium, dissolved	mg/2.	0.0001	0.00074	0.0022	0.000124222	0.00130525	
Cadmium, total	mg/1	ND	0.05	0.1	0.000142667	+.	
Chromium, total recoverable	mg/Q	ND	Report		ND	2000	
Copper, dissolved	mg/2	ND	0.0125	Report	0.0008	0.00173	
Copper, total	mg/2	0.01	0.15	0.3	0.00121	1000	
Cyanide, wad	110/2	ND	-	0.0056	ND	+.	
Iron, total recoverable	ing/2	0.0165	1.276		0.0952	+	
Lead, dissolved	mg/2	0.0107	0.0026	0.1	0.000947	0.0012525	
Lead, total	110/2	0.0451	0.3	0.6	0.001472	. tu	
Manganese, dissolved	mg/2	0.575	2.067	4.127	0.09418	1.5391	
Mercury, total	19272	ND	0.001	0.002	NO	27434	
pH	mg/2.	7.65	Report	20,000	7,661111111	7.375	
Silver, dissolved	而這刀	NB	0.00008	Report	ND	NB	
Zinc, dissolved	mg/2.	0.0025	0.126	0.166	0.07527	0.4535	
Zinc, total	mg/1	0.04	0.75	1.5	0.072066667	÷.,	
Residue, Filterable (TDS) @180C	mg/2	Not Tested	Report		199.33333333		
Residue, Non-Filterable (TSS) @105C	mg/2	2.5	20	1	ND	NU	

 We will continue to monitor and report water quality within requirements under Permit No. CO000003

We have a submission deadline for DRMS TR#17 of September 1st, 2024 and we request acknowledgement of our Notification Letter no later than the deadline date.

Sincerely yours

Chris Skerik Chief Operating Officer Thorin Resources

Ecc: Lucas West, DRMS Amy Yeldell, DRMS

U.S. Postal Service[™] 20 **CERTIFIED MAIL® RECEIPT** Domestic Mail Only DHL For delivery information, visit our website at www.usps.com -0 RAY, CO & Certified Mail Fee P-T 76 Extra Services & Fees (check box, add fee as appropriate, Beturn Receipt (hardcopy) Return Receipt (electronic) Jt Certified Mail Restricted Delivery r-Adult Signature Required 25 Adult Signature Restricted Delivery \$ Postage 710 Total Postage and Fees USPS σ O Box No. ireo -0 1err S 8 0 Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions AN ADDRESS, FOLD AT DOTTED LINE SENDER: COMPLETE THIS SECTION COMPLETE THIS SECTION ON DELIVERY Complete items 1, 2, and 3. Print your name and address on the reverse A. Signature so that we can return the card to you. X Attach this card to the back of the mailpiece, D Agent or on the front if space permits. B. Received by (Printed Name) Addressee C. Date of Delivery 1. Article Addressed to: Attn: Erin Scott D. Is delivery address different from item 1? If YES, enter delivery address below: CDPHE, water Quality 4300 Cherry Creak □ Yes D No Dener Co 3. Service Type Service lype
 Adult Signature Restricted Delivery
 Adult Signature Restricted Delivery
 Certified Mail®
 Certified Mail Restricted Delivery
 Collect on Delivery Restricted Delivery
 t on Delivery Restricted Delivery
 d Mail Restricted Delivery
 (over \$500) Priority Mail Express®
 Registered Mail™
 Registered Mail Restricted
 Delivery
 Signature Confirmation™
 Signature Confirmation
 Restricted Delivery 9590 9402 8926 4064 5516 93 9589 0710 5270 1697 8740 70 PS Form 3811, July 2020 PSN 7530-02-000-9053 Domestic Return Receipt



Attachment M – Revenue and Camp Bird Sample Locations Map of Sample Location – Revenue Material



Map of Sample Location – Camp Bird Material



Attachment N – BioZem Material for Rail Yard Equipment Foundation

Material Safety Data Sheet

SECTION I: IDENTIFICATION OF PRODUCT

COMPANY: BioZem Canada Corp.	DATE: Febru	ary 17, 2022
Address:	PHONE: 403	-710-6046
Address:	FAX:	N/A

PRODUCT NAME: **BioZem**

PRODUCT USE: Concrete Admixture/Soil Stabilizer

CHEMICAL FAMILY: Mixture

CAS #: Mixture

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: WORKPLACE HAZARD: D2A; D2B Potential carcinogen; contains free silica: Skin and eye irritant.

TRANSPORTATION OF DANGEROUS GOODS (TDG)

PROPER SHIPPING NAME: TDG CLASSIFICATION: UN NUMBER (PIN): PACKING GROUP: Not regulated under TDG. Not applicable. Not applicable. Not applicable.

SECTION II: HAZARDOUS INGREDIENT

INGREDIENT	%(w/w)	CAS NUMBER	LD50 Oral-Rat	LC50 Inhal-Rat	ACGIH-TLV
Zeolite	30-60	68989-22-0	Not available	Not available	10 mg/m ³
Calcium Chloride	10-30	10043-52-4	1000 mg/kg	No information	Not established
Crystalline silica	1-5	14808-60-7	Not available	Not available	0.025 mg/m3 (respirable)



SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY:	\checkmark EYE CONTACT \checkmark SKIN CONTACT \checkmark INHALATION X INGESTION
EYE CONTACT:	Contains an ingredient which will cause moderate to severe eye irritation with corneal injury that may be slow to heal. When dissolving, the heat produced may cause more intense effects as well as thermal burns.
SKIN CONTACT:	Prolonged or repeated contact with the dust may irritate the skin or cause burns especially if skin is moist or if material is confined to skin.
INGESTION:	Oral toxicity considered low. Swallowing solids may cause gastrointestinal irritation or ulceration.
INHALATION:	May cause irritation of the upper respiratory tract. This product contains crystalline silica. Breathing silica containing dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Chronic inhalation may cause silicosis, a progressive, disabling and sometimes fatal lung disease. Chronic inhalation exposure to crystalline silica quartz has been observed to cause lymph node effects, kidney effects and auto-immune disease.
CARCINOGENICITY:	Contains crystalline silica, which when inhaled from occupational sources, is considered as a human carcinogen by IARC (Class 1) and by NTP. ACGIH classifies crystalline silica, quartz, as a suspected human carcinogen (A2).
TERATOGENICITY:	No information available
REPRODUCTIVE TOXICITY:	No information available.
MUTAGENICITY:	Crystalline silica has been shown to cause mutagenic effects in human cells in-vitro.
SYNERGISTIC PRODUCTS:	No information available.

SECTION IV: FIRST AID MEASURES

SKIN CONTACT: EYE CONTACT:	If irritations occur or when shift end, wash with soap and water until clean. Wash affected area with soap and water. Remove contaminated clothing and shoes; wash before reuse. If irritation develops and persists obtain medical attention.
INGESTION:	If large amounts ingested, get immediate medical attention.
INHALATION:	Move to area free from dust. Apply oxygen or artificial respiration if required. If symptoms persist obtain medical attention.

Material Safety Data Sheet

SECTION V: PHYSICAL DATA

APPEARANCE AND ODOUR: SPECIFIC GRAVITY: BOILING POINT (°C): MELTING POINT (°C): SOLUBILITY IN WATER: PERCENT VOLATILE BY VOLUME: EVAPORATION RATE: VAPOUR PRESSURE (mmHg): VAPOUR DENSITY (air = 1): BULK DENSITY: Light gray powder; odouless Not applicable Not available Not available Partially soluble pH: Not available Not applicable Not applicable Not applicable Not applicable

SECTION VI: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: FLAMMABLE LIMITS: EXTINGUISHING MEDIA:

SPECIAL FIRE FIGHTING PROCEDURES:

UNUSUAL FIRE AND EXPLOSION HAZARDS: HAZARDOUS COMBUSTION PRODUCTS:

Not applicable. Not applicable. Use media suitable for packaging and surrounding materials. Self-contained breathing apparatus required for fire-fighting personnel. None known. No information available.

SECTION VII: REACTIVITY DATA

STABILITY: INCOMPATIBILITY (CONDITIONS TO AVOID): CONDITIONS OF REACTIVITY: HAZARDOUS DECOMPOSITION PRODUCTS: HAZARDOUS POLYMERIZATION:

✓ STABLE x UNSTABLE				
Avoid contact with strong oxidizing agents.				
Not available.				
None known.				
✓ WILL NOT OCCUR	x MAY OCCUR			

SECTION VIII: PREVENTIVE MEASURES

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: VENTILATION:

NIOSH/MESA approved respirators for silica bearing dust. Use local ventilation to maintain PEL's/TLV's.

BioZem Canada Corp.

Material Safety Data Sheet

PROTECTIVE GLOVES:

Generally not necessary; personal preference.

EYE PROTECTION: OTHER PROTECTIVE EQUIPMENT: Suggest goggles or safety glasses. Ensure eye wash station and safety shower are available.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Avoid creating dust. Avoid breathing dust; wear an approved respirator. Practice reasonable caution and personal cleanliness. Avoid eye contact. Store in cool, dry area. Empty packages contain residual hazardous material: Handle and store as if full.

STEPS TO BE TAKEN IN CASE THE MATERIAL IS SPILLED OR RELEASED

Wear an approved respirator. Vacuum if possible to avoid generating airborne dust. Collect uncontaminated material for repackaging. Collect contaminated material in an approved container for disposal. Avoid adding water; the product will become slippery when wet.

WASTE DISPOSAL METHOD

Dispose in accordance with federal, provincial and local regulations. It is the responsibility of the End-user to determine if material meets the criteria of hazardous waste at the time of disposal. It may be possible to dispose of uncontaminated zeolite in landfill; check with local operator. Empty packaging must be disposed of, or recycled, in accordance with local regulations.

SECTION IX: PREPARATION

The information contains herein is given in good faith, but no warranty, expressed or implied, is made.

DATE ISSUED: February 22, 2022 SUPERSEDES: N/A BY: Jordan Waddell



BioZem Toxicology Report

Leachate Inorganic- Toxicity characteristic leaching procedure (TCLP Leachate)

Toxicity characteristic leaching procedure is a soil sample extraction method for chemical analysis employed as an analytical method to simulate leaching through a landfill. All sample points are compliant with Alberta Tier 1 Soil Remediation Guidelines

Analyte		Units	Results	NDL
Antimony	TCLP Leachate	mg/L	0.015	0.005
Arsenic	TCLP Leachate	mg/L	0.003	0.002
Barium	TCLP Leachate	mg/L	0.83	0.05
Beryllium	TCLP Leachate	mg/L	<0.001	0.001
Boron	TCLP Leachate	mg/L	<0.2	0.2
Cadmium	TCLP Leachate	mg/L	<0.001	0.001
Chromium	TCLP Leachate	mg/L	0.038	0.005
Cobalt	TCLP Leachate	mg/L	0.004	0.001
Copper	TCLP Leachate	mg/L	<0.1	0.1
Iron	TCLP Leachate	mg/L	1.7	0.1
Lead	TCLP Leachate	mg/L	<0.05	0.05
Mercury	TCLP Leachate	mg/L	<0.001	0.0001
Nickel	TCLP Leachate	mg/L	<0.005	0.005
Selenium	TCLP Leachate	mg/L	<0.002	0.002
Silver	TCLP Leachate	mg/L	<0.005	0.005
Thallium	TCLP Leachate	mg/L	<0.0005	0.0005
Uranium	TCLP Leachate	mg/L	<0.005	0.005
Vanadium	TCLP Leachate	mg/L	0.01	0.01
Zinc	TCLP Leachate	mg/L	<0.1	0.1
Zirconium	TCLP Leachate	mg/L	<0.01	0.01
рН	Initial		10.4	
рН	Final		7.8	

BioZem Canada Corp. 202, 1001 – 1st Street SE Calgary, AB, T2G 5G3 www.biozem.ca



Microtox-1:1 Soil 15 Minute Multiple Concentration Bioassay

Microtox is an in vitro testing system which uses bioluminescent bacteria to detect toxic substances in different substrates such as water, air, soils, and sediments. Interpretation of Energy Resource Conservation Board guidelines through Directive 050 (ERCB D050) has passed.

Analyte		Units	Results
Interpretation (ERCB			
D050)			Pass
		%	
EC50	15 minutes	Sample	>100
		%	
EC50	5 minutes	Sample	>100
		%	
EC20	15 minutes	Sample	36
		%	
EC20	5 minutes	Sample	45
Lab Treatment			None
			Sludge
Sample Type	1:01		1:1
	Clarified Sample-		
рН	Initial		8.5
Turbidity	As Received		High
			Dark
Colour	As Received		Brown
Colour	As Tested		Clear
Turbidity	As Tested		None
	Clarified Sample-		
рН	Final		6.3
Colour Corrected Data			No

BioZem Canada Corp. 202, 1001 – 1st Street SE Calgary, AB, T2G 5G3 www.biozem.ca



Salinity

Water salinity testing is used to determine the concentration of salts dissolved in a water sample. Salinity is measured to determine the suitability of water for drinking and for ecological monitoring of aquatic habitats. Based on the Alberta Tier 1 Groundwater Remediation Guidelines (ABT1GL) under General and Inorganic Parameters, the salinity testing has passed.

Analyte		Units	Results	NDL
	Saturated			
рН	Paste	рН	11.6	
Electrical	Saturated	dS/m at		
Conductivity	Paste	25 C	1.97	0.01
	Saturated			
SAR	Paste		4.5	
% Saturation		%	42	
	Saturated			
Calcium	Paste	meq/L	7.19	0.01
	Saturated			
Calcium	Paste	mg/kg	60.6	
	Saturated			
Magnesium	Paste	meq/L	<0.02	0.02
	Saturated			
Magnesium	Paste	mg/kg	0.1	
	Saturated			
Sodium	Paste	meq/L	8.47	0.04
	Saturated			
Sodium	Paste	mg/kg	82	
	Saturated			
Potassium	Paste	meq/L	2.14	0.03
	Saturated			
Potassium	Paste	mg/kg	35	
	Saturated			
Chloride	Paste	meq/L	8.08	0.06
	Saturated			
Chloride	Paste	mg/kg	121	
	Saturated			
Sulfate-S	Paste	meq/L	1.14	0.06
	Saturated			
Sulfate-S	Paste	mg/kg	7.7	
Nitrate and Nitrite -	Saturated			
Ν	Paste	meq/L	<0.4	0.05
Nitrate and Nitrite -	Saturated			
Ν	Paste	mg/kg	<2	
	Saturated			
TGR	Paste	T/ac	<0.1	

BioZem Canada Corp. 202, 1001 – 1st Street SE Calgary, AB, T2G 5G3 www.biozem.ca