Attachment A

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240111020

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.: 240111020
Client PO:
Client Project: Revenue - Virginius

Date Received: 1/11/24
Date Reported: 1/19/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 1/10/24 9:23 AM
Lab Number: 240111020-01

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	1/17/24	QC70684	JCB
pH	**7.48 units**	SM 4500-H-B	0.01	0.01	1/11/24	-	ARH
Total Suspended Solids	**6 mg/L**	SM 2540-D	5	2	1/12/24	QC70580	ARH
Potentially Dissolved							
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	1/16/24	QC70643	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	1/16/24	QC70643	MBN
Lead	**0.0008 mg/L**	EPA 200.8	0.0001	0.000006	1/16/24	QC70643	MBN
Manganese	**0.0705 mg/L**	EPA 200.8	0.0008	0.00001	1/16/24	QC70643	MBN
Silver	**0.0005 mg/L**	EPA 200.8	0.0005	0.000003	1/16/24	QC70643	MBN
Zinc	**0.078 mg/L**	EPA 200.8	0.001	0.00003	1/16/24	QC70643	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	1/12/24	QC70596	MBN
Lead	**0.0008 mg/L**	EPA 200.8	0.0001	0.000006	1/16/24	QC70643	MBN
Total Recoverable							
Iron	**0.025 mg/L**	EPA 200.7	0.005	0.0005	1/16/24	QC70642	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240111020

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 1/11/24
Project Name: Revenue - Virginius

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC70684	Blank	ND	ASTM 2036-09C	1/17/24
Mercury	QC70596	Method Blank	ND	EPA 245.7	1/11/24
Cadmium	QC70643	Method Blank	ND	EPA 200.8	1/11/24
Copper	QC70643	Method Blank	ND	EPA 200.8	1/11/24
Lead	QC70643	Method Blank	ND	EPA 200.8	1/11/24
Manganese	QC70643	Method Blank	ND	EPA 200.8	1/11/24
Silver	QC70643	Method Blank	ND	EPA 200.8	1/11/24
Zinc	QC70643	Method Blank	ND	EPA 200.8	1/11/24
Iron	QC70642	Method Blank	ND	EPA 200.7	1/11/24
Total Suspended Solids	QC70580	Blank	ND	SM 2540-D	1/12/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC70684	Duplicate	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	95.5	-	
		MS	75 - 125	92.5	-	
Mercury	QC70596	Duplicate	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	103.8	-	
		MS	80 - 120	102.0	-	
Cadmium	QC70643	LCS	90 - 110	97.0	-	EPA 200.8
		MS	70 - 130	98.9	-	
		MSD	0 - 10	-	4.7	
Copper	QC70643	LCS	90 - 110	95.9	-	EPA 200.8
		MS	70 - 130	100.6	-	
		MSD	0 - 10	-	3.0	
Lead	QC70643	LCS	90 - 110	98.1	-	EPA 200.8
		MS	70 - 130	96.5	-	
		MSD	0 - 10	-	8.7	
Manganese	QC70643	LCS	90 - 110	98.7	-	EPA 200.8
		MS	70 - 130	102.0	-	
		MSD	0 - 10	-	0.8	
Silver	QC70643	LCS	90 - 110	95.4	-	EPA 200.8
		MS	70 - 130	92.9	-	
		MSD	0 - 10	-	2.6	
Zinc	QC70643	LCS	90 - 110	98.7	-	EPA 200.8
		MS	70 - 130	99.3	-	
		MSD	0 - 10	-	2.3	
Iron	QC70642	Duplicate	0 - 20	-	1.8	EPA 200.7
		LCS	90 - 110	91.6	-	
		MS	75 - 125	97.7	-	
Total Suspended Solids	QC70580	Duplicate	0 - 10	-	6.1	SM 2540-D
		LCS	90 - 110	98.3	-	

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.

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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Thorin Resources	Company Name: Thorin Resources	
Contact Name: CJ Dickerson	Contact Name: CJ Dickerson	
Address: 1900 Main St. Unit 1	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	CAL Task 240111020 RMB
Phone: (970) 316-2294	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: CJ Dickerson		
Sample Collector Phone: (602) 793-1321	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Tests Requested
1/10/24	9:23	OFOOZA	3		

* Project per history RS 1/11/24 (3)

* No tests indicated on COC. Tests per bottle order and bottles received.

Instructions:

C/S Info:

Deliver Via: UPS

C/S Charge ☒ x2 s

Seals Present Yes ☐ No ☐

Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	3:30/1/10	Adams	1/11/24	805			

Colorado Analytical LABORATORIES, INC.

Bottle Order Test Detail

Order ID: QBO23120014

Date Created: 12/4/23

Ship To: Thorin Resources, LLC
1900 Main St
Unit 1
Ouray CO 81427

CAL Task 240111020

RMB

Attention: CJ Dickerson

602-793-1321

Verify All Shipping Addresses*

Shipping Options:
Ship Via: UPS Cooler: Yes

Chain of Custody | Drinking Water: Standard: 2

Customer Needs By: 12/8/23

Ships From: Commerce City

Project:

Qty.	Bottle / Preservative / Test
1	***1l Amber - H2SO4***
	Oil & Grease - Water - Ground notRcd
2	***500 ml Cylinder - HNO3***
	Ag - PD - Water - Ground
	Cd - PD - Water - Ground
	Cu - PD - Water - Ground
	Fe - TR - Water - Ground
	Hg - Water - Ground
	Mn - PD - Water - Ground
	Pb - PD - Water - Ground
	Pb - Total - Water - Ground
	Zn - PD - Water - Ground
2	***500 ml Cylinder - NaOH***
	Cyanide-Weak Acid Dissociable - Water - Ground
2	***500 ml Cylinder - Unpreserved***
	Ph - Water - Ground
	TSS - Water - Ground

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Internal Shipping Instructions:

Bi-Monthly - Hg-Total

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

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240201014

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.: 240201014
Client PO:
Client Project: Revenue - Virginius

Date Received: 2/1/24
Date Reported: 2/9/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 1/30/24 9:39 AM
Lab Number: 240201014-01

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	2/5/24	QC71063	JCB
pH	**7.18 units**	SM 4500-H-B	0.01	0.01	2/1/24	-	ARH
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	2/2/24	QC71010	ARH
Potentially Dissolved							
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	2/2/24	QC71040	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	2/2/24	QC71040	MBN
Lead	**0.0004 mg/L**	EPA 200.8	0.0001	0.000006	2/2/24	QC71040	MBN
Manganese	**0.0998 mg/L**	EPA 200.8	0.0008	0.00001	2/2/24	QC71040	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	2/2/24	QC71040	MBN
Zinc	**0.073 mg/L**	EPA 200.8	0.001	0.00003	2/2/24	QC71040	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	2/8/24	QC71183	MBN
Lead	**0.0005 mg/L**	EPA 200.8	0.0001	0.000006	2/2/24	QC71040	MBN
Total Recoverable							
Iron	**0.023 mg/L**	EPA 200.7	0.005	0.0005	2/2/24	QC71038	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240201014

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 2/1/24
Project Name: Revenue - Virginius

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC71063	Blank	ND	ASTM 2036-09C	2/5/24
Mercury	QC71183	Method Blank	ND	EPA 245.7	2/8/24
Cadmium	QC71040	Method Blank	ND	EPA 200.8	2/1/24
Copper	QC71040	Method Blank	ND	EPA 200.8	2/1/24
Lead	QC71040	Method Blank	ND	EPA 200.8	2/1/24
Manganese	QC71040	Method Blank	ND	EPA 200.8	2/1/24
Silver	QC71040	Method Blank	ND	EPA 200.8	2/1/24
Zinc	QC71040	Method Blank	ND	EPA 200.8	2/1/24
Iron	QC71038	Method Blank	ND	EPA 200.7	2/1/24
Total Suspended Solids	QC71010	Blank	ND	SM 2540-D	2/1/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC71063	Duplicate	0 - 20	-	9.4	ASTM 2036-09C
		LCS	90 - 110	93.0	-	
		MS	75 - 125	96.5	-	
Mercury	QC71183	Duplicate	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	105.4	-	
		MS	80 - 120	98.0	-	
Cadmium	QC71040	LCS	90 - 110	99.5	-	EPA 200.8
		MS	70 - 130	102.1	-	
		MSD	0 - 10	-	5.1	
Copper	QC71040	LCS	90 - 110	100.8	-	EPA 200.8
		MS	70 - 130	104.4	-	
		MSD	0 - 10	-	3.0	
Lead	QC71040	LCS	90 - 110	101.2	-	EPA 200.8
		MS	70 - 130	74.1	-	
		MSD	0 - 10	-	0.8	
Manganese	QC71040	LCS	90 - 110	104.1	-	EPA 200.8
		MS	70 - 130	108.5	-	
		MSD	0 - 10	-	4.4	
Silver	QC71040	LCS	90 - 110	91.1	-	EPA 200.8
		MS	70 - 130	92.4	-	
		MSD	0 - 10	-	2.6	
Zinc	QC71040	LCS	90 - 110	101.9	-	EPA 200.8
		MS	70 - 130	108.2	-	
		MSD	0 - 10	-	4.4	
Iron	QC71038	Duplicate	0 - 20	-	0.6	EPA 200.7
		LCS	90 - 110	99.2	-	
		MS	75 - 125	93.1	-	
Total Suspended Solids	QC71010	Duplicate	0 - 10	-	8.1	SM 2540-D
		LCS	90 - 110	95.1	-	

Abbreviations/ References:

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MDL = Method Detection Limit
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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.

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
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mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

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Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Thorin Resources	Company Name: Thorin Resources	Revenue - Virginius Per history
Contact Name: CJ Dickerson	Contact Name: CJ Dickerson	
Address: 1900 Main St Unit 1	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240201014 JAK
Phone: (970) 316-2294	Phone:	
Email: cjdickerson@thorinresources@gmail	Email:	
Sample Collector: CJ Dickerson		
Sample Collector Phone: (602) 793-1321	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Logged as wastewater - per history.

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Tests Requested
1/30	9:39 am	0F002A	3		

~~*See Attached, NO 0/6. received *~~ 5

KA 2/1

Instructions: Please return empty Bottle Set

C/S Info:

Deliver Via: UPS

C/S Charge ☒ 5

Seals Present Yes ☐ No ☐

Temp. 3 °C/Ice 4

Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	3:30pm/1/31	KA	2/1/24				

QMG

CAL Task
240201014
JAK

Colorado Analytical LABORATORIES, INC.

Bottle Order Test Detail

Order ID: QBO23120014
Date Created: 12/4/23

Ship To: Thorin Resources, LLC
1900 Main St
Unit 1
Ouray CO 81427

Attention: CJ Dickerson

602-793-1321
Verify All Shipping Addresses*

Shipping Options:
Ship Via: UPS Cooler: Yes

Chain of Custody | Drinking Water: Standard: **2**

Customer Needs By: 12/8/23
Ships From: Commerce City

Project:

Qty.	Bottle / Preservative / Test
1	***1l Amber - H2SO4***
	Oil & Grease - Water - Ground — not received
2	***500 ml Cylinder - HNO3***
	Ag - PD - Water - Ground
	Cd - PD - Water - Ground
	Cu - PD - Water - Ground
	Fe - TR - Water - Ground
	Hg - Water - Ground
	Mn - PD - Water - Ground
	Pb - PD - Water - Ground
	Pb - Total - Water - Ground
	Zn - PD - Water - Ground
2	***500 ml Cylinder - NaOH***
	Cyanide-Weak Acid Dissociable - Water - Ground
2	***500 ml Cylinder - Unpreserved***
	Ph - Water - Ground
	TSS - Water - Ground

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Internal Shipping Instructions:
Bi-Monthly - Hg-Total

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

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240216004

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.: 240216004
Client PO:
Client Project: Revenue - Virginius

Date Received: 2/16/24
Date Reported: 2/23/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 2/15/24 9:50 AM
Lab Number: 240216004-01

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	2/20/24	QC71433	JCB
pH	**7.37 units**	SM 4500-H-B	0.01	0.01	2/16/24	-	JCB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	2/19/24	QC71396	ISG
Potentially Dissolved							
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	2/21/24	QC71430	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	2/21/24	QC71430	MBN
Lead	**0.0004 mg/L**	EPA 200.8	0.0001	0.000006	2/21/24	QC71430	MBN
Manganese	**0.0829 mg/L**	EPA 200.8	0.0008	0.00001	2/21/24	QC71430	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	2/21/24	QC71430	MBN
Zinc	**0.065 mg/L**	EPA 200.8	0.001	0.00003	2/21/24	QC71430	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	2/22/24	QC71507	JJA
Lead	**0.0006 mg/L**	EPA 200.8	0.0001	0.000006	2/21/24	QC71430	MBN
Total Recoverable							
Iron	**0.017 mg/L**	EPA 200.7	0.005	0.0005	2/21/24	QC71407	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240216004

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 2/16/24
Project Name: Revenue - Virginius

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC71433	Blank	ND	ASTM 2036-09C	2/20/24
Mercury	QC71507	Method Blank	ND	EPA 245.7	2/22/24
Cadmium	QC71430	Method Blank	ND	EPA 200.8	2/15/24
Copper	QC71430	Method Blank	ND	EPA 200.8	2/15/24
Lead	QC71430	Method Blank	ND	EPA 200.8	2/15/24
Manganese	QC71430	Method Blank	ND	EPA 200.8	2/15/24
Silver	QC71430	Method Blank	ND	EPA 200.8	2/15/24
Zinc	QC71430	Method Blank	ND	EPA 200.8	2/15/24
Iron	QC71407	Method Blank	ND	EPA 200.7	2/15/24
Total Suspended Solids	QC71396	Blank	ND	SM 2540-D	2/19/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC71433	Duplicate	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	100.1	-	
		MS	75 - 125	94.5	-	
Mercury	QC71507	Duplicate	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	109.4	-	
		MS	80 - 120	100.0	-	
Cadmium	QC71430	LCS	90 - 110	101.7	-	EPA 200.8
		MS	70 - 130	96.9	-	
		MSD	0 - 10	-	1.3	
Copper	QC71430	LCS	90 - 110	103.6	-	EPA 200.8
		MS	70 - 130	97.5	-	
		MSD	0 - 10	-	0.7	
Lead	QC71430	LCS	90 - 110	98.4	-	EPA 200.8
		MS	70 - 130	100.4	-	
		MSD	0 - 10	-	1.7	
Manganese	QC71430	LCS	90 - 110	108.8	-	EPA 200.8
		MS	70 - 130	102.0	-	
		MSD	0 - 10	-	1.3	
Silver	QC71430	LCS	90 - 110	98.5	-	EPA 200.8
		MS	70 - 130	94.6	-	
		MSD	0 - 10	-	1.7	
Zinc	QC71430	LCS	90 - 110	101.4	-	EPA 200.8
		MS	70 - 130	90.3	-	
		MSD	0 - 10	-	3.3	
Iron	QC71407	Duplicate	0 - 20	-	14.9	EPA 200.7
		LCS	90 - 110	103.0	-	
		MS	75 - 125	97.1	-	
Total Suspended Solids	QC71396	Duplicate	0 - 10	-	2.5	SM 2540-D
		LCS	90 - 110	94.4	-	

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.

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:

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mg/L = Milligrams Per Liter or PPM
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Date Analyzed = Date Test Completed

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(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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Thorin Resources	Company Name: Thorin Resources	Revenue-Virginius- Per history 2/16/24 SK
Contact Name: CJ Dickerson	Contact Name: CJ Dickerson	
Address: 1900 main St Unit 1	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240216004 JAK
Phone: 970 316 2294	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: CJ Dickerson		
Sample Collector Phone: 602 793 1321	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Per history
Ground Water ☐
Surface Water ☐
Soil ☐
Sludge ☐
Drinking Water ☐

Tests Requested

Date	Time	Sample ID	No. of Containers	Grab or (Check One Only) Composite	Order Attached															
2/15	9:50	OF002A	3	X	X															

(3)

Instructions:

C/S Info:
Deliver Via: UPS
C/S Charge ☒ 5

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y
Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	2/15 4:05pm					Adama	2/16/24 800

CAL Task
240216004

JAK

Colorado Analytical
LABORATORIES, INC.

Bottle Order Test Detail

Order ID: QBO23120014

Date Created: 12/4/23

Ship To: Thorin Resources, LLC
1900 Main St
Unit 1
Ouray CO 81427

Attention: CJ Dickerson

602-793-1321
Verify All Shipping Addresses*

Shipping Options:
Ship Via: UPS Cooler: Yes

Chain of Custody | Drinking Water: Standard: 2

Customer Needs By: 12/8/23
Ships From: Commerce City

Project:

Qty.	Bottle / Preservative / Test
1	***1l Amber - H2SO4***
	Oil & Grease - Water - Ground
2	***500 ml Cylinder - HNO3***
	Ag - PD - Water - Ground
	Cd - PD - Water - Ground
	Cu - PD - Water - Ground
	Fe - TR - Water - Ground
	Hg - Water - Ground
	Mn - PD - Water - Ground
	Pb - PD - Water - Ground
	Pb - Total - Water - Ground
	Zn - PD - Water - Ground
2	***500 ml Cylinder - NaOH***
	Cyanide-Weak Acid Dissociable - Water - Ground
2	***500 ml Cylinder - Unpreserved***
	Ph - Water - Ground
	TSS - Water - Ground

No Sample received. 2/16/24 JK

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Internal Shipping Instructions:

Bi-Monthly - Hg-Total

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240227003

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.: 240227003
Client PO:
Client Project: Revenue - Virginius

Date Received: 2/27/24
Date Reported: 3/6/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 2/26/24 2:00 PM
Lab Number: 240227003-01

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	2/29/24	QC71644	JCB
pH	**7.39 units**	SM 4500-H-B	0.01	0.01	2/27/24	-	ARH
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	2/28/24	QC71607	ARH
Potentially Dissolved							
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	2/28/24	QC71617	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	2/28/24	QC71617	MBN
Lead	**0.0005 mg/L**	EPA 200.8	0.0001	0.000006	2/28/24	QC71617	MBN
Manganese	**0.0790 mg/L**	EPA 200.8	0.0008	0.00001	2/28/24	QC71617	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	2/28/24	QC71617	MBN
Zinc	**0.060 mg/L**	EPA 200.8	0.001	0.00003	2/28/24	QC71617	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	2/29/24	QC71646	JJA
Lead	**0.0005 mg/L**	EPA 200.8	0.0001	0.000006	2/28/24	QC71617	MBN
Total Recoverable							
Iron	**0.026 mg/L**	EPA 200.7	0.005	0.0005	2/29/24	QC71622	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240227003

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 2/27/24
Project Name: Revenue - Virginius

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC71644	Blank	ND	ASTM 2036-09C	2/29/24
Mercury	QC71646	Method Blank	ND	EPA 245.7	2/29/24
Cadmium	QC71617	Method Blank	ND	EPA 200.8	2/27/24
Copper	QC71617	Method Blank	ND	EPA 200.8	2/27/24
Lead	QC71617	Method Blank	ND	EPA 200.8	2/27/24
Manganese	QC71617	Method Blank	ND	EPA 200.8	2/27/24
Silver	QC71617	Method Blank	ND	EPA 200.8	2/27/24
Zinc	QC71617	Method Blank	ND	EPA 200.8	2/27/24
Iron	QC71622	Method Blank	ND	EPA 200.7	2/26/24
Total Suspended Solids	QC71607	Blank	ND	SM 2540-D	2/28/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC71644	Duplicate	0 - 20	-	0.5	ASTM 2036-09C
		LCS	90 - 110	94.1	-	
		MS	75 - 125	86.0	-	
Mercury	QC71646	Duplicate	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	106.6	-	
		MS	80 - 120	98.0	-	
Cadmium	QC71617	LCS	90 - 110	93.6	-	EPA 200.8
		MS	70 - 130	104.3	-	
		MSD	0 - 10	-	1.0	
Copper	QC71617	LCS	90 - 110	94.9	-	EPA 200.8
		MS	70 - 130	100.0	-	
		MSD	0 - 10	-	1.6	
Lead	QC71617	LCS	90 - 110	101.9	-	EPA 200.8
		MS	70 - 130	84.9	-	
		MSD	0 - 10	-	3.5	
Manganese	QC71617	LCS	90 - 110	98.0	-	EPA 200.8
		MS	70 - 130	88.6	-	
		MSD	0 - 10	-	1.5	
Silver	QC71617	LCS	90 - 110	95.1	-	EPA 200.8
		MS	70 - 130	91.2	-	
		MSD	0 - 10	-	0.8	
Zinc	QC71617	LCS	90 - 110	97.8	-	EPA 200.8
		MS	70 - 130	96.9	-	
		MSD	0 - 10	-	1.5	
Iron	QC71622	Duplicate	0 - 20	-	0.0	EPA 200.7
		LCS	90 - 110	99.4	-	
		MS	75 - 125	97.8	-	
Total Suspended Solids	QC71607	Duplicate	0 - 10	-	4.2	SM 2540-D
		LCS	90 - 110	90.4	-	

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.

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
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ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Thorin Resources	Company Name: Thorin Resources	Revenue - Virginius per history 2/27/24 slm
Contact Name: CJ Dickerson	Contact Name: CJ Dickerson	
Address: 1900 Main St. Unit 1	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	CAL Task 240227003 SLM
Phone: (970) 316-2254	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: CJ Dickerson		
Sample Collector Phone: (602) 793-1821	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or (Check One Only) Composite		Tests Requested: Bottle Order Att.
2/26	2:00	OFOO2A	3	x		x

Instructions: Please send empty set back

C/S Info:
Deliver Via: UPS
C/S Charge ☒ S

Seals Present Yes ☐ No ☐
Temp. 0.1 °C/Ice Y
Sample Pres. Yes ☐ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	2/26/3:45pm					gmiller	2/27/24 0818

Colorado Analytical LABORATORIES, INC.

CAL Task 240227003

SLM

Bottle Order Test Detail

Order ID: QBO23120014

Date Created: 12/4/23

Ship To: Thorin Resources, LLC
1900 Main St
Unit 1
Ouray CO 81427

Attention: CJ Dickerson

602-793-1321
Verify All Shipping Addresses*

Shipping Options:
Ship Via: UPS Cooler: Yes

Chain of Custody | Drinking Water: Standard: 2

Customer Needs By: 12/8/23
Ships From: Commerce City

Project:

Qty.	Bottle / Preservative / Test
1	***1l Amber - H2SO4***
	Oil & Grease - Water - Ground
2	***500 ml Cylinder - HNO3***
	Ag - PD - Water - Ground
	Cd - PD - Water - Ground
	Cu - PD - Water - Ground
	Fe - TR - Water - Ground
	Hg - Water - Ground
	Mn - PD - Water - Ground
	Pb - PD - Water - Ground
	Pb - Total - Water - Ground
	Zn - PD - Water - Ground
2	***500 ml Cylinder - NaOH***
	Cyanide-Weak Acid Dissociable - Water - Ground
2	***500 ml Cylinder - Unpreserved***
	Ph - Water - Ground
	TSS - Water - Ground

No Sample received 2/27/24 SLM

Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.

Internal Shipping Instructions:

Bi-Monthly - Hg-Total

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

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240308002

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.: 240308002
Client PO:
Client Project: Revenue - Virginius

Date Received: 3/8/24
Date Reported: 3/20/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 3/6/24 1:00 PM
Lab Number: 240308002-01

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	3/13/24	QC71916	JCB
pH	**7.45 units**	SM 4500-H-B	0.01	0.01	3/8/24	-	AKF
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	3/11/24	QC71858	ISG
Potentially Dissolved							
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	3/14/24	QC71942	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	3/14/24	QC71942	MBN
Lead	**0.0008 mg/L**	EPA 200.8	0.0001	0.000006	3/14/24	QC71942	MBN
Manganese	**0.0978 mg/L**	EPA 200.8	0.0008	0.00001	3/14/24	QC71942	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	3/14/24	QC71942	MBN
Zinc	**0.058 mg/L**	EPA 200.8	0.001	0.00003	3/14/24	QC71942	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	3/18/24	QC72043	JJA
Lead	**0.0008 mg/L**	EPA 200.8	0.0001	0.000006	3/14/24	QC71942	MBN
Total Recoverable							
Iron	**0.026 mg/L**	EPA 200.7	0.005	0.0005	3/13/24	QC71899	JJA

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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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240308002

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 3/8/24
Project Name: Revenue - Virginius

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC71916	Blank	ND	ASTM 2036-09C	3/11/24
Mercury	QC72043	Method Blank	ND	EPA 245.7	3/18/24
Cadmium	QC71942	Method Blank	ND	EPA 200.8	3/8/24
Copper	QC71942	Method Blank	ND	EPA 200.8	3/8/24
Lead	QC71942	Method Blank	ND	EPA 200.8	3/8/24
Manganese	QC71942	Method Blank	ND	EPA 200.8	3/8/24
Silver	QC71942	Method Blank	ND	EPA 200.8	3/8/24
Zinc	QC71942	Method Blank	ND	EPA 200.8	3/8/24
Iron	QC71899	Method Blank	ND	EPA 200.7	3/8/24
Total Suspended Solids	QC71858	Blank	ND	SM 2540-D	3/11/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC71916	Duplicate	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	107.3	-	
		MS	75 - 125	98.5	-	
Mercury	QC72043	Duplicate	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	101.4	-	
		MS	80 - 120	94.0	-	
Cadmium	QC71942	LCS	90 - 110	103.5	-	EPA 200.8
		MS	70 - 130	107.2	-	
		MSD	0 - 10	-	0.6	
Copper	QC71942	LCS	90 - 110	106.1	-	EPA 200.8
		MS	70 - 130	106.7	-	
		MSD	0 - 10	-	0.5	
Lead	QC71942	LCS	90 - 110	93.8	-	EPA 200.8
		MS	70 - 130	92.6	-	
		MSD	0 - 10	-	2.6	
Manganese	QC71942	LCS	90 - 110	105.8	-	EPA 200.8
		MS	70 - 130	104.1	-	
		MSD	0 - 10	-	2.6	
Silver	QC71942	LCS	90 - 110	100.2	-	EPA 200.8
		MS	70 - 130	104.3	-	
		MSD	0 - 10	-	1.2	
Zinc	QC71942	LCS	90 - 110	103.9	-	EPA 200.8
		MS	70 - 130	108.2	-	
		MSD	0 - 10	-	1.4	
Iron	QC71899	Duplicate	0 - 20	-	0.0	EPA 200.7
		LCS	90 - 110	94.4	-	
		MS	75 - 125	90.5	-	
Total Suspended Solids	QC71858	Duplicate	0 - 10	-	8.6	SM 2540-D
		LCS	90 - 110	92.0	-	

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
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Date Analyzed = Date Test Completed

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

Chain of Custody Form

Colorado Analytical Laboratories, Inc.

Commerce City Lab
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

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Thorin Resources	Company Name: Thorin Resources	
Contact Name: CJ Dickerson	Contact Name: CJ Dickerson	
Address: 1900 Main St. Unit 1	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240308002 RMB
Phone: 970 316 2294	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: CJ Dickerson		
Sample Collector Phone: (602) 793-1321	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ per history RB 3/8
Ground Water ☐
Surface Water ☐
Soil ☐
Sludge ☐
Drinking Water ☐

Date	Time	Sample ID	No. of Containers	Grab or (Check One Only) Composite	Tests Requested: Order attached
3/6	1:00pm	OFOOZA	3	✓	✓
		Project per history. 3/8/24 JK			

(3)

Instructions:

C/S Info:

Deliver Via: UPS

C/S Charge ☑ 5

Seals Present Yes ☐ No ☐

Temp. 2 °C/Ice Y

Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	3/7 / 3:50pm					Adams	3/8/24

020

Colorado Analytical
LABORATORIES, INC.

Bottle Order
Test Detail

Order ID: QBO23120014
Date Created: 12/4/23

Ship To: Thorin Resources, LLC
1900 Main St
Unit 1
Ouray CO 81427

CAL Task
240308002
RMB

Attention: CJ Dickerson

602-793-1321
Verify All Shipping Addresses*

Shipping Options:
Ship Via: UPS Cooler: Yes

Chain of Custody | Drinking Water: Standard: 2

Customer Needs By: 12/8/23
Ships From: Commerce City

Project:

Qty.	Bottle / Preservative / Test
1	***1l Amber - H2SO4***
	Oil & Grease - Water - Ground
2	***500 ml Cylinder - HNO3***
	Ag - PD - Water - Ground
	Cd - PD - Water - Ground
	Cu - PD - Water - Ground
	Fe - TR - Water - Ground
	Hg - Water - Ground
	Mn - PD - Water - Ground
	Pb - PD - Water - Ground
	Pb - Total - Water - Ground
	Zn - PD - Water - Ground
2	***500 ml Cylinder - NaOH***
	Cyanide-Weak Acid Dissociable - Water - Ground
2	***500 ml Cylinder - Unpreserved***
	Ph - Water - Ground
	TSS - Water - Ground

*Sample not received RB 3/8.

Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.

Internal Shipping Instructions:
Bi-Monthly - Hg-Total

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240321003

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.: 240321003
Client PO:
Client Project: Revenue - Virginius

Date Received: 3/21/24
Date Reported: 3/29/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 3/19/24 9:00 AM
Lab Number: 240321003-01

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	3/27/24	QC72213	KRB
pH	**7.48 units**	SM 4500-H-B	0.01	0.01	3/21/24	-	JCB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	3/22/24	QC72151	ARH
Potentially Dissolved							
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	3/28/24	QC72246	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	3/28/24	QC72246	MBN
Lead	**0.0006 mg/L**	EPA 200.8	0.0001	0.000006	3/28/24	QC72246	MBN
Manganese	**0.0999 mg/L**	EPA 200.8	0.0008	0.00001	3/28/24	QC72246	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	3/28/24	QC72246	MBN
Zinc	**0.058 mg/L**	EPA 200.8	0.001	0.00003	3/28/24	QC72246	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	3/28/24	QC72280	JJA
Lead	**0.0006 mg/L**	EPA 200.8	0.0001	0.000006	3/28/24	QC72246	MBN
Total Recoverable							
Iron	**0.025 mg/L**	EPA 200.7	0.005	0.0005	3/25/24	QC72183	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240321003

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 3/21/24
Project Name: Revenue - Virginius

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC72213	Blank	ND	ASTM 2036-09C	3/26/24
Mercury	QC72280	Method Blank	ND	EPA 245.7	3/28/24
Cadmium	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Copper	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Lead	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Manganese	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Silver	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Zinc	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Iron	QC72183	Method Blank	ND	EPA 200.7	3/21/24
Total Suspended Solids	QC72151	Blank	ND	SM 2540-D	3/22/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC72213	Duplicate	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	99.9	-	
		MS	75 - 125	88.5	-	
Mercury	QC72280	Duplicate	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	101.8	-	
		MS	80 - 120	104.0	-	
Cadmium	QC72246	LCS	90 - 110	100.6	-	EPA 200.8
		MS	70 - 130	97.4	-	
		MSD	0 - 10	-	3.2	
Copper	QC72246	LCS	90 - 110	100.7	-	EPA 200.8
		MS	70 - 130	97.1	-	
		MSD	0 - 10	-	1.7	
Lead	QC72246	LCS	90 - 110	101.3	-	EPA 200.8
		MS	70 - 130	93.2	-	
		MSD	0 - 10	-	3.6	
Manganese	QC72246	LCS	90 - 110	104.0	-	EPA 200.8
		MS	70 - 130	123.0	-	
		MSD	0 - 10	-	0.5	
Silver	QC72246	LCS	90 - 110	92.3	-	EPA 200.8
		MS	70 - 130	72.2	-	
		MSD	0 - 10	-	0.4	
Zinc	QC72246	LCS	90 - 110	103.4	-	EPA 200.8
		MS	70 - 130	113.0	-	
		MSD	0 - 10	-	2.0	
Iron	QC72183	Duplicate	0 - 20	-	1.2	EPA 200.7
		LCS	90 - 110	90.7	-	
		MS	75 - 125	95.0	-	
Total Suspended Solids	QC72151	Duplicate	0 - 10	-	1.4	SM 2540-D
		LCS	90 - 110	90.2	-	

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.

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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Thorin Resources	Company Name:	Revenue - Virginius - Per History 3/21/24 JK
Contact Name: CJ Dickerson	Contact Name:	
Address: 1900 Main St Unit 1	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240321003 JAK
Phone: 970 316 2294	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: CJ Dickerson		
Sample Collector Phone: (602) 793-1521	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

OF002A logged as wastewater per history.

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Tests Requested: Bi-monthly Bottle order 4H.	DRMS *
3/19	9:00 am	OF002A - Bi-monthly	3	x	x	
3/19	10:00 am	UG-5	5	x		x
3/19	10:40 am	UG-2	5	x		x
3/19	11:00 am	UG-8	5	x		x

(18)

*Testing based on QB02401097G and bottles rcd.

Instructions: Please return bottles (OF002A only)

C/S Info:
Deliver Via: UPS
C/S Charge ☒ $5

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y
Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	3/20/3:30pm					[signature]	3/21/24

745

CAL Task
240321003

JAK

Colorado Analytical
LABORATORIES, INC.

Bottle Order Test Detail

Order ID: QBO23120014
Date Created: 12/4/23

Ship To: Thorin Resources, LLC
1900 Main St
Unit 1
Ouray CO 81427

Bi-Month

Attention: CJ Dickerson

602-793-1321
Verify All Shipping Addresses*

Shipping Options:
Ship Via: UPS
Cooler: Yes

Chain of Custody
Drinking Water:
Standard: 2

Customer Needs By: 12/8/23
Ships From: Commerce City

Project:

Qty.	Bottle / Preservative / Test
1	***1l Amber - H2SO4***
	Oil & Grease - Water - Ground — no sample received. 3/21/24 JK
2	***500 ml Cylinder - HNO3***
	Ag - PD - Water - Ground
	Cd - PD - Water - Ground
	Cu - PD - Water - Ground
	Fe - TR - Water - Ground
	Hg - Water - Ground
	Mn - PD - Water - Ground
	Pb - PD - Water - Ground
	Pb - Total - Water - Ground
	Zn - PD - Water - Ground
2	***500 ml Cylinder - NaOH***
	Cyanide-Weak Acid Dissociable - Water - Ground
2	***500 ml Cylinder - Unpreserved***
	Ph - Water - Ground
	TSS - Water - Ground

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Internal Shipping Instructions:

Bi-Monthly - Hg-Total

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240424001

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.: 240424001
Client PO:
Client Project: CDPS Quart WW

Date Received: 4/24/24
Date Reported: 5/3/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 4/23/24 11:30 AM
Lab Number: 240424001-01

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	4/26/24	QC72945	KRB
pH	**7.58 units**	SM 4500-H-B	0.01	0.01	4/24/24	-	ARH
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	4/24/24	QC72899	ISG
Potentially Dissolved							
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	4/30/24	QC73030	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	4/30/24	QC73030	MBN
Lead	**0.0012 mg/L**	EPA 200.8	0.0001	0.000006	4/30/24	QC73030	MBN
Manganese	**0.1058 mg/L**	EPA 200.8	0.0008	0.00001	4/30/24	QC73030	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	4/30/24	QC73030	MBN
Zinc	**0.040 mg/L**	EPA 200.8	0.001	0.00003	4/30/24	QC73030	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	4/25/24	QC72948	JJA
Lead	**0.0014 mg/L**	EPA 200.8	0.0001	0.000006	4/30/24	QC73030	MBN
Total Recoverable							
Iron	**0.067 mg/L**	EPA 200.7	0.005	0.0005	4/26/24	QC72973	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240424001

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.: 240424001
Client PO:
Client Project: CDPS Quart WW

Date Received: 4/24/24
Date Reported: 5/3/24
Matrix: Wastewater

Customer Sample ID CB- UG01
Sample Date/Time: 4/23/24 12:32 PM
Lab Number: 240424001-02

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	4/26/24	QC72945	KRB
pH	**7.69 units**	SM 4500-H-B	0.01	0.01	4/24/24	-	ARH
Total Dissolved Solids	**1118 mg/L**	SM 2540-C	5	2	4/25/24	QC72916	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	4/24/24	QC72899	ISG
Dissolved							
Chromium - Hexavalent	**ND mg/L**	SM 3500-Cr B	0.02	0.01	4/25/24	QC72903	AMJ
Potentially Dissolved							
Cadmium	**0.0009 mg/L**	EPA 200.8	0.0001	0.000006	4/30/24	QC73030	MBN
Copper	**0.0031 mg/L**	EPA 200.8	0.0008	0.00001	4/30/24	QC73030	MBN
Lead	**0.0032 mg/L**	EPA 200.8	0.0001	0.000006	4/30/24	QC73030	MBN
Manganese	**0.1365 mg/L**	EPA 200.8	0.0008	0.00001	4/30/24	QC73030	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	4/30/24	QC73030	MBN
Zinc	**0.198 mg/L**	EPA 200.8	0.001	0.00003	4/30/24	QC73030	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	4/25/24	QC72948	JJA
Cadmium	**0.0009 mg/L**	EPA 200.8	0.0001	0.000006	4/30/24	QC73030	MBN
Copper	**0.0037 mg/L**	EPA 200.8	0.0008	0.00001	4/30/24	QC73030	MBN
Lead	**0.0034 mg/L**	EPA 200.8	0.0001	0.000006	4/30/24	QC73030	MBN
Zinc	**0.199 mg/L**	EPA 200.8	0.001	0.00003	4/30/24	QC73030	MBN
Total Recoverable							
Chromium - Trivalent	**ND mg/L**	Calculation	0.02	0.01	4/26/24	-	MBN
Arsenic	**0.0011 mg/L**	EPA 200.8	0.0006	0.00006	4/30/24	QC73030	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	4/30/24	QC73030	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240424001

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.: 240424001
Client PO:
Client Project: CDPS Quart WW

Date Received: 4/24/24
Date Reported: 5/3/24
Matrix: Wastewater

Customer Sample ID CB- UG01
Sample Date/Time: 4/23/24 12:32 PM
Lab Number: 240424001-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Recoverable							
Iron	**0.199 mg/L**	EPA 200.7	0.005	0.0005	4/26/24	QC72973	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240424001

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.: 240424001
Client PO:
Client Project: CDPS Quart WW

Date Received: 4/24/24
Date Reported: 5/3/24
Matrix: Wastewater

Customer Sample ID CBOF
Sample Date/Time: 4/23/24 1:00 PM
Lab Number: 240424001-03

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	4/26/24	QC72945	KRB
pH	**7.74 units**	SM 4500-H-B	0.01	0.01	4/24/24	-	ARH
Total Dissolved Solids	**1139 mg/L**	SM 2540-C	5	2	4/25/24	QC72916	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	4/24/24	QC72899	ISG
Dissolved							
Chromium - Hexavalent	**ND mg/L**	SM 3500-Cr B	0.02	0.01	4/25/24	QC72903	AMJ
Potentially Dissolved							
Cadmium	**0.0022 mg/L**	EPA 200.8	0.0001	0.000006	4/30/24	QC73030	MBN
Copper	**0.0025 mg/L**	EPA 200.8	0.0008	0.00001	4/30/24	QC73030	MBN
Lead	**0.0031 mg/L**	EPA 200.8	0.0001	0.000006	4/30/24	QC73030	MBN
Manganese	**0.0967 mg/L**	EPA 200.8	0.0008	0.00001	4/30/24	QC73030	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	4/30/24	QC73030	MBN
Zinc	**0.523 mg/L**	EPA 200.8	0.001	0.00003	4/30/24	QC73030	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	4/25/24	QC72948	JJA
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	5/1/24	QC73081	NRP
Cadmium	**0.0023 mg/L**	EPA 200.8	0.0001	0.000006	4/30/24	QC73030	MBN
Copper	**0.0027 mg/L**	EPA 200.8	0.0008	0.00001	4/30/24	QC73030	MBN
Lead	**0.0033 mg/L**	EPA 200.8	0.0001	0.000006	4/30/24	QC73030	MBN
Zinc	**0.530 mg/L**	EPA 200.8	0.001	0.00003	4/30/24	QC73030	MBN
Total Recoverable							
Chromium - Trivalent	**ND mg/L**	Calculation	0.02	0.01	4/26/24	-	MBN
Arsenic	**0.0009 mg/L**	EPA 200.8	0.0006	0.00006	4/30/24	QC73030	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240424001

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.: 240424001
Client PO:
Client Project: CDPS Quart WW

Date Received: 4/24/24
Date Reported: 5/3/24
Matrix: Wastewater

Customer Sample ID CBOF
Sample Date/Time: 4/23/24 1:00 PM
Lab Number: 240424001-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Recoverable							
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	4/30/24	QC73030	MBN
Iron	**0.150 mg/L**	EPA 200.7	0.005	0.0005	4/26/24	QC72973	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240424001

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.: 240424001
Client PO:
Client Project: CDPS Quart WW

Date Received: 4/24/24
Date Reported: 5/3/24
Matrix: Wastewater

Customer Sample ID Hg LL Field Blank
Sample Date/Time: 4/23/24 1:00 PM
Lab Number: 240424001-04

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	5/1/24	QC73081	NRP

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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240424001

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 4/24/24
Project Name: CDPS Quart WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Chromium - Hexavalent	QC72903	Blank	ND	SM 3500-Cr B	4/24/24
Cyanide-Weak Acid Dissociable	QC72945	Blank	ND	ASTM 2036-09C	4/25/24
Mercury	QC72948	Method Blank	ND	EPA 245.7	4/25/24
	QC73081	Method Blank	ND	EPA 245.7	5/1/24
Arsenic	QC73030	Method Blank	ND	EPA 200.8	4/24/24
Cadmium	QC73030	Method Blank	ND	EPA 200.8	4/24/24
Chromium	QC73030	Method Blank	ND	EPA 200.8	4/24/24
Copper	QC73030	Method Blank	ND	EPA 200.8	4/24/24
Lead	QC73030	Method Blank	ND	EPA 200.8	4/24/24
Manganese	QC73030	Method Blank	ND	EPA 200.8	4/24/24
Silver	QC73030	Method Blank	ND	EPA 200.8	4/24/24
Zinc	QC73030	Method Blank	ND	EPA 200.8	4/24/24
Iron	QC72973	Method Blank	ND	EPA 200.7	4/24/24
Total Dissolved Solids	QC72916	Blank	ND	SM 2540-C	4/24/24
Total Suspended Solids	QC72899	Blank	ND	SM 2540-D	4/24/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chromium - Hexavalent	QC72903	Duplicate -240417083-01	0 - 20	-	0.0	SM 3500-Cr B
		LCS	90 - 110	97.2	-	
Cyanide-Weak Acid Dissociable	QC72945	Duplicate -240424063-01	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	94.6	-	
		MS -240424001-01C	75 - 125	110.5	-	
Mercury	QC72948	Duplicate -240419098-04	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	106.8	-	
		MS -240419098-04	80 - 120	92.0	-	
Mercury	QC73081	LCS	76 - 113	106.0	-	EPA 245.7
		MS -240424001-03F	63 - 111	83.0	-	
		MSD -240424001-03F	0 - 18	-	8.4	
Arsenic	QC73030	LCS	90 - 110	101.7	-	EPA 200.8
		MS -240423127-04	70 - 130	102.3	-	
		MSD -240423127-04	0 - 10	-	1.6	
Cadmium	QC73030	LCS	90 - 110	99.9	-	EPA 200.8
		MS -240423127-04	70 - 130	100.3	-	
		MSD -240423127-04	0 - 10	-	0.1	
Chromium	QC73030	LCS	90 - 110	106.2	-	EPA 200.8
		MS -240423127-04	70 - 130	102.9	-	
		MSD -240423127-04	0 - 10	-	1.0	
Copper	QC73030	LCS	90 - 110	100.5	-	EPA 200.8
		MS -240423127-04	70 - 130	99.0	-	
		MSD -240423127-04	0 - 10	-	0.1	
Lead	QC73030	LCS	90 - 110	100.8	-	EPA 200.8

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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -240423127-04	70 - 130	85.8	-	
		MSD -240423127-04	0 - 10	-	3.1	
Manganese	QC73030	LCS	90 - 110	103.6	-	EPA 200.8
		MS -240423127-04	70 - 130	98.3	-	
		MSD -240423127-04	0 - 10	-	4.3	
Silver	QC73030	LCS	90 - 110	100.0	-	EPA 200.8
		MS -240423127-04	70 - 130	87.7	-	
		MSD -240423127-04	0 - 10	-	2.3	
Zinc	QC73030	LCS	90 - 110	100.6	-	EPA 200.8
		MS -240423127-04	70 - 130	102.9	-	
		MSD -240423127-04	0 - 10	-	1.6	
Iron	QC72973	Duplicate -240424018-01	0 - 20	-	0.0	EPA 200.7
		LCS	90 - 110	104.6	-	
		MS -240423127-04	75 - 125	110.1	-	
Total Dissolved Solids	QC72916	Duplicate -240424001-02	0 - 10	-	1.6	SM 2540-C
		LCS	85 - 115	102.0	-	
Total Suspended Solids	QC72899	Duplicate -240423012-01	0 - 10	-	4.8	SM 2540-D
		LCS	90 - 110	94.8	-	

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

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(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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 1	Address:	Task Number (Lab Use Only) CAL Task 240424001 RMB
City Ouray State CO Zip 81427	City State Zip	
Phone: 970 316 2294	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: CJ Dickerson		
Sample Collector Phone: (970) 793-1321	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or (Check One Only) Composite	Tests Requested: GB023110033	GB023110034
4/23	11:30a	OFOOZA	3	X	X	← No HP
4/23	12:32p	GB-UG01	4	X	X	X
4/23	1:00p	CBOF	5	X	X	X

12 + blank

Low Level Hg - HCl Preserved Bottle
Lot #: U-3-333 -05AB
Sample ID: CBOF
Initials: JA Date: 4/24/24

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.
Initials: RB Date: 4/24

Instructions:

C/S Info:
Deliver Via: UPS
C/S Charge ☒ 5

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	4/23 3:48p					J Adams	4/24/24 803

CAL Task
240424001

RMB

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services

Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease – not provided.	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

$632.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

Colorado Analytical LABORATORIES, INC.

CAL Task 240424001

RMB

Quotation for Analytical Services

Quote ID: QBO23110034

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Quart WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Cr - Tri	Calculation	1	$0.00	$0.00
Water - Ground	As - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cd - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cu - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	TDS	SM 2540-C	1	$16.00	$16.00
Water - Ground	Zn - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - Hex	SM 3500-Cr B	1	$40.00	$40.00
Water - Ground	Hg LL * not provided for CB-UG01 sample.	EPA 245.7	1	$52.00	$52.00
Water - Ground	Hg LL Field Blank RLS 4/24	EPA 245.7	1	$52.00	$52.00
Shipping	Cooler Shipment - UPS	UPS	1	$30.00	$30.00

$270.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240501011

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.: 240501011
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 5/1/24
Date Reported: 5/8/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 4/30/24 12:00 PM
Lab Number: 240501011-01

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	5/2/24	QC73112	KRB
pH	**7.42 units**	SM 4500-H-B	0.01	0.01	5/1/24	-	ARH
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	5/1/24	QC73068	ARH
Potentially Dissolved							
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	5/7/24	QC73199	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	5/7/24	QC73199	MBN
Lead	**0.0014 mg/L**	EPA 200.8	0.0001	0.000006	5/7/24	QC73199	MBN
Manganese	**0.0827 mg/L**	EPA 200.8	0.0008	0.00001	5/7/24	QC73199	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	5/7/24	QC73199	MBN
Zinc	**0.031 mg/L**	EPA 200.8	0.001	0.00003	5/7/24	QC73199	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	5/2/24	QC73120	JJA
Lead	**0.0015 mg/L**	EPA 200.8	0.0001	0.000006	5/7/24	QC73199	MBN
Total Recoverable							
Iron	**0.079 mg/L**	EPA 200.7	0.005	0.0005	5/3/24	QC73133	MBN

Abbreviations/ References:

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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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240501011

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 5/1/24
Project Name: CDPS Bi Monthly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC73112	Blank	ND	ASTM 2036-09C	5/2/24
Mercury	QC73120	Method Blank	ND	EPA 245.7	5/2/24
Cadmium	QC73199	Method Blank	ND	EPA 200.8	5/1/24
Copper	QC73199	Method Blank	ND	EPA 200.8	5/1/24
Lead	QC73199	Method Blank	ND	EPA 200.8	5/1/24
Manganese	QC73199	Method Blank	ND	EPA 200.8	5/1/24
Silver	QC73199	Method Blank	ND	EPA 200.8	5/1/24
Zinc	QC73199	Method Blank	ND	EPA 200.8	5/1/24
Iron	QC73133	Method Blank	ND	EPA 200.7	5/1/24
Total Suspended Solids	QC73068	Blank	ND	SM 2540-D	5/1/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC73112	Duplicate -240501004-01	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	99.0	-	
		MS -240501109-02C	75 - 125	101.5	-	
Mercury	QC73120	Duplicate -240430044-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	107.0	-	
		MS -240430044-01B	80 - 120	96.0	-	
Cadmium	QC73199	LCS	90 - 110	97.9	-	EPA 200.8
		MS -240501004-01	70 - 130	97.0	-	
		MSD -240501004-01	0 - 10	-	1.0	
Copper	QC73199	LCS	90 - 110	99.5	-	EPA 200.8
		MS -240501004-01	70 - 130	96.9	-	
		MSD -240501004-01	0 - 10	-	0.4	
Lead	QC73199	LCS	90 - 110	101.8	-	EPA 200.8
		MS -240501004-01	70 - 130	97.5	-	
		MSD -240501004-01	0 - 10	-	0.4	
Manganese	QC73199	LCS	90 - 110	102.6	-	EPA 200.8
		MS -240501004-01	70 - 130	101.4	-	
		MSD -240501004-01	0 - 10	-	1.2	
Silver	QC73199	LCS	90 - 110	94.7	-	EPA 200.8
		MS -240501004-01	70 - 130	76.3	-	
		MSD -240501004-01	0 - 10	-	4.4	
Zinc	QC73199	LCS	90 - 110	100.5	-	EPA 200.8
		MS -240501004-01	70 - 130	101.3	-	
		MSD -240501004-01	0 - 10	-	2.0	
Iron	QC73133	Duplicate -240501004-01	0 - 20	-	4.1	EPA 200.7
		LCS	90 - 110	95.1	-	
		MS -240501004-03B	75 - 125	100.1	-	
Total Suspended Solids	QC73068	Duplicate -240501033-01	0 - 10	-	5.2	SM 2540-D
		LCS	90 - 110	94.0	-	

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

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(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.

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
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Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 L1	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240501011 JAK
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Tests Requested: 8B02311Ø033
4/30	12:00pm	OFOOZA	3	X	X

(3)

* No oil + grease rcd.

Instructions: Please send back w/ empty bottles. Thanks You!

C/S Info: 5
Deliver Via: UPS
C/S Charge ☒

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	4/30/3:40p					Adams	5/1/24 817

CAL Task
240501011

JAK

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services

Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Attn: **CJ Dickerson**

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

$632.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240507001

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.: 240507001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 5/7/24
Date Reported: 5/17/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 5/6/24 10:10 AM
Lab Number: 240507001-01

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	5/10/24	QC73292	KRB
pH	**7.76 units**	SM 4500-H-B	0.01	0.01	5/7/24	-	KRI
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	5/8/24	QC73212	ISG
Potentially Dissolved							
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	5/9/24	QC73273	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	5/9/24	QC73273	MBN
Lead	**0.0018 mg/L**	EPA 200.8	0.0001	0.000006	5/9/24	QC73273	MBN
Manganese	**0.0520 mg/L**	EPA 200.8	0.0008	0.00001	5/9/24	QC73273	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	5/9/24	QC73273	MBN
Zinc	**0.031 mg/L**	EPA 200.8	0.001	0.00003	5/9/24	QC73273	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	5/9/24	QC73280	JJA
Lead	**0.0019 mg/L**	EPA 200.8	0.0001	0.000006	5/9/24	QC73273	MBN
Total Recoverable							
Iron	**0.072 mg/L**	EPA 200.7	0.005	0.0005	5/9/24	QC73257	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240507001

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.: 240507001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 5/7/24
Date Reported: 5/17/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 5/6/24 10:00 AM
Lab Number: 240507001-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Dissolved Solids	**227 mg/L**	SM 2540-C	5	2	5/8/24	QC73202	ISG
Dissolved							
Chromium - Hexavalent	**ND mg/L**	SM 3500-Cr B	0.02	0.01	5/16/24	QC73406	AMJ
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	5/8/24	QC73249	NRP
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	5/9/24	QC73273	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	5/9/24	QC73273	MBN
Zinc	**0.031 mg/L**	EPA 200.8	0.001	0.00003	5/9/24	QC73273	MBN
Total Recoverable							
Chromium - Trivalent	**ND mg/L**	Calculation	0.02	0.01	5/15/24	-	MBN
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	5/9/24	QC73273	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	5/9/24	QC73273	MBN

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.

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

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240507001

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.: 240507001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 5/7/24
Date Reported: 5/17/24
Matrix: Wastewater

Customer Sample ID Hg LL Field Blank
Sample Date/Time: 5/6/24 10:00 AM
Lab Number: 240507001-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	5/8/24	QC73249	NRP

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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240507001

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 5/7/24
Project Name: CDPS Bi Monthly and Quarterly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Chromium - Hexavalent	QC73406	Blank	ND	SM 3500-Cr B	5/14/24
Cyanide-Weak Acid Dissociable	QC73292	Blank	ND	ASTM 2036-09C	5/9/24
Mercury	QC73280	Method Blank	ND	EPA 245.7	5/9/24
	QC73249	Method Blank	ND	EPA 245.7	5/8/24
Arsenic	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Cadmium	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Chromium	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Copper	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Lead	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Manganese	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Silver	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Zinc	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Iron	QC73257	Method Blank	ND	EPA 200.7	5/7/24
Total Dissolved Solids	QC73202	Blank	ND	SM 2540-C	5/7/24
Total Suspended Solids	QC73212	Blank	ND	SM 2540-D	5/8/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chromium - Hexavalent	QC73406	Duplicate -240507001-02	0 - 20	-	0.0	SM 3500-Cr B
		LCS	90 - 110	99.5	-	
Cyanide-Weak Acid Dissociable	QC73292	Duplicate -240507129-02	0 - 20	-	16.7	ASTM 2036-09C
		LCS	90 - 110	90.1	-	
		MS -240507001-01D	75 - 125	75.5	-	
Mercury	QC73280	Duplicate -240503044-23	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	106.0	-	
		MS -240503044-23	80 - 120	90.0	-	
Mercury	QC73249	LCS	76 - 113	89.0	-	EPA 245.7
		MS -240502131-01B	63 - 111	87.0	-	
		MSD -240502131-01B	0 - 18	-	14.4	
Arsenic	QC73273	LCS	90 - 110	94.6	-	EPA 200.8
		MS -240507001-01A	70 - 130	112.1	-	
		MSD -240507001-01A	0 - 10	-	0.8	
Cadmium	QC73273	LCS	90 - 110	95.6	-	EPA 200.8
		MS -240507001-01A	70 - 130	105.6	-	
		MSD -240507001-01A	0 - 10	-	0.7	
Chromium	QC73273	LCS	90 - 110	104.7	-	EPA 200.8
		MS -240507001-01A	70 - 130	106.3	-	
		MSD -240507001-01A	0 - 10	-	0.7	
Copper	QC73273	LCS	90 - 110	94.5	-	EPA 200.8
		MS -240507001-01A	70 - 130	101.9	-	
		MSD -240507001-01A	0 - 10	-	0.9	
Lead	QC73273	LCS	90 - 110	106.3	-	EPA 200.8

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Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -240507001-01A	70 - 130	100.7	-	
		MSD -240507001-01A	0 - 10	-	1.3	
Manganese	QC73273	LCS	90 - 110	99.8	-	EPA 200.8
		MS -240507001-01A	70 - 130	96.0	-	
		MSD -240507001-01A	0 - 10	-	1.0	
Silver	QC73273	LCS	90 - 110	96.5	-	EPA 200.8
		MS -240507001-01A	70 - 130	96.1	-	
		MSD -240507001-01A	0 - 10	-	0.6	
Zinc	QC73273	LCS	90 - 110	99.1	-	EPA 200.8
		MS -240507001-01A	70 - 130	104.1	-	
		MSD -240507001-01A	0 - 10	-	0.6	
Iron	QC73257	Duplicate -240507027-06	0 - 20	-	2.2	EPA 200.7
		LCS	90 - 110	101.2	-	
		MS -240507001-01B	75 - 125	104.6	-	
Total Dissolved Solids	QC73202	Duplicate -240507101-01	0 - 10	-	3.0	SM 2540-C
		LCS	85 - 115	96.6	-	
Total Suspended Solids	QC73212	Duplicate -240507011-02	0 - 10	-	5.7	SM 2540-D
		LCS	90 - 110	96.1	-	

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
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(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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 02	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	CAL Task 240507001 JAK
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Tests Requested: QBO 2311003 3	Tests Requested: QSO 2311003 4
5/6	10:00a	OF002A *	6	X		X
5/6	10:10a	6F002A	3	+	X	

Low Level Hg - HCl Preserved Bottle
Lot #: U-4-023-04AB
Sample ID: OF002A
Initials: JA Date: 5/7/24

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.
Initials: JK Date: 5/7/24

* no oil/grease Rcd. ja
* Cyanide bottle received and not needed per quote 5/7/24 JK 8 to bank

Instructions: Bottle Return Requested

C/S Info:
Deliver Via: UPS
C/S Charge ☒ 5

Seals Present Yes ☐ No ☐
Temp. 6 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	5/6/3:38pm						5/7/24 827

CAL Task
240507001

JAK

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services

Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Attn: **CJ Dickerson**

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

$632.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

CAL Task
240507001

JAK

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services

Quote ID: QBO23110034

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Attn: **CJ Dickerson**

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Project:
CDPS Quart WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Cr - Tri -TR	Calculation	1	$0.00	$0.00
Water - Ground	As - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cd - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cu - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	TDS	SM 2540-C	1	$16.00	$16.00
Water - Ground	Zn - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - Hex	SM 3500-Cr B	1	$40.00	$40.00
Water - Ground	Hg LL	EPA 245.7	1	$52.00	$52.00
Water - Ground	Hg LL Field Blank	EPA 245.7	1	$52.00	$52.00
Shipping	Cooler Shipment - UPS	UPS	1	$30.00	$30.00

$270.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240523001

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.: 240523001
Client PO:
Client Project: CDPS Quart WW

Date Received: 5/23/24
Date Reported: 6/5/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 5/22/24 12:30 PM
Lab Number: 240523001-01

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	5/28/24	QC73677	KRB
pH	**7.63 units**	SM 4500-H-B	0.01	0.01	5/23/24	-	ARH
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	5/24/24	QC73639	ARH
Potentially Dissolved							
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	5/24/24	QC73652	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	5/24/24	QC73652	MBN
Lead	**0.0011 mg/L**	EPA 200.8	0.0001	0.000006	5/24/24	QC73652	MBN
Manganese	**0.0610 mg/L**	EPA 200.8	0.0008	0.00001	5/24/24	QC73652	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	5/24/24	QC73652	MBN
Zinc	**0.033 mg/L**	EPA 200.8	0.001	0.00003	5/24/24	QC73652	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	5/29/24	QC73709	MNB
Lead	**0.0012 mg/L**	EPA 200.8	0.0001	0.000006	5/24/24	QC73652	MBN
Total Recoverable							
Iron	**0.055 mg/L**	EPA 200.7	0.005	0.0005	5/29/24	QC73688	MBN

Abbreviations/ References:

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ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240523001

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.: 240523001
Client PO:
Client Project: CDPS Quart WW

Date Received: 5/23/24
Date Reported: 6/5/24
Matrix: Wastewater

Customer Sample ID CB- UG01
Sample Date/Time: 5/22/24 11:00 AM
Lab Number: 240523001-02

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	5/28/24	QC73677	KRB
pH	**7.53 units**	SM 4500-H-B	0.01	0.01	5/23/24	-	ARH
Total Dissolved Solids	**1012 mg/L**	SM 2540-C	5	2	5/23/24	QC73628	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	5/24/24	QC73639	ARH
Dissolved							
Chromium - Hexavalent	**ND mg/L**	SM 3500-Cr B	0.02	0.01	5/30/24	QC73733	AMJ
Potentially Dissolved							
Cadmium	**0.0010 mg/L**	EPA 200.8	0.0001	0.000006	5/24/24	QC73652	MBN
Copper	**0.0031 mg/L**	EPA 200.8	0.0008	0.00001	5/24/24	QC73652	MBN
Lead	**0.0037 mg/L**	EPA 200.8	0.0001	0.000006	5/24/24	QC73652	MBN
Manganese	**0.1261 mg/L**	EPA 200.8	0.0008	0.00001	5/24/24	QC73652	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	5/24/24	QC73652	MBN
Zinc	**0.193 mg/L**	EPA 200.8	0.001	0.00003	5/24/24	QC73652	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	5/29/24	QC73709	MNB
Cadmium	**0.0010 mg/L**	EPA 200.8	0.0001	0.000006	5/24/24	QC73652	MBN
Copper	**0.0032 mg/L**	EPA 200.8	0.0008	0.00001	5/24/24	QC73652	MBN
Lead	**0.0037 mg/L**	EPA 200.8	0.0001	0.000006	5/24/24	QC73652	MBN
Zinc	**0.200 mg/L**	EPA 200.8	0.001	0.00003	5/24/24	QC73652	MBN
Total Recoverable							
Chromium - Trivalent	**ND mg/L**	Calculation	0.02	0.01	5/25/24	-	MBN
Arsenic	**0.0010 mg/L**	EPA 200.8	0.0006	0.00006	5/24/24	QC73652	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	5/24/24	QC73652	MBN

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240523001

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.: 240523001
Client PO:
Client Project: CDPS Quart WW

Date Received: 5/23/24
Date Reported: 6/5/24
Matrix: Wastewater

Customer Sample ID CB- UG01
Sample Date/Time: 5/22/24 11:00 AM
Lab Number: 240523001-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Recoverable							
Iron	**0.253 mg/L**	EPA 200.7	0.005	0.0005	5/29/24	QC73688	MBN

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.

Abbreviations/ References:

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ug/L = Micrograms Per Liter or PPB
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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240523001

Report To: CJ Dickerson
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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.: 240523001
Client PO:
Client Project: CDPS Quart WW

Date Received: 5/23/24
Date Reported: 6/5/24
Matrix: Wastewater

Customer Sample ID CBOF
Sample Date/Time: 5/22/24 11:30 AM
Lab Number: 240523001-03

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	5/28/24	QC73677	KRB
pH	**7.62 units**	SM 4500-H-B	0.01	0.01	5/23/24	-	ARH
Total Dissolved Solids	**997 mg/L**	SM 2540-C	5	2	5/23/24	QC73628	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	5/24/24	QC73639	ARH
Dissolved							
Chromium - Hexavalent	**ND mg/L**	SM 3500-Cr B	0.02	0.01	5/30/24	QC73733	AMJ
Potentially Dissolved							
Cadmium	**0.0012 mg/L**	EPA 200.8	0.0001	0.000006	5/24/24	QC73652	MBN
Copper	**0.0025 mg/L**	EPA 200.8	0.0008	0.00001	5/24/24	QC73652	MBN
Lead	**0.0020 mg/L**	EPA 200.8	0.0001	0.000006	5/24/24	QC73652	MBN
Manganese	**0.0983 mg/L**	EPA 200.8	0.0008	0.00001	5/24/24	QC73652	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	5/24/24	QC73652	MBN
Zinc	**0.272 mg/L**	EPA 200.8	0.001	0.00003	5/24/24	QC73652	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	5/29/24	QC73709	MNB
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	6/5/24	QC73829	MBN
Cadmium	**0.0012 mg/L**	EPA 200.8	0.0001	0.000006	5/24/24	QC73652	MBN
Copper	**0.0026 mg/L**	EPA 200.8	0.0008	0.00001	5/24/24	QC73652	MBN
Lead	**0.0029 mg/L**	EPA 200.8	0.0001	0.000006	5/24/24	QC73652	MBN
Zinc	**0.276 mg/L**	EPA 200.8	0.001	0.00003	5/24/24	QC73652	MBN
Total Recoverable							
Chromium - Trivalent	**ND mg/L**	Calculation	0.02	0.01	5/25/24	-	MBN
Arsenic	**0.0009 mg/L**	EPA 200.8	0.0006	0.00006	5/24/24	QC73652	MBN

Abbreviations/ References:

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MDL = Method Detection Limit
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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240523001

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.: 240523001
Client PO:
Client Project: CDPS Quart WW

Date Received: 5/23/24
Date Reported: 6/5/24
Matrix: Wastewater

Customer Sample ID CBOF
Sample Date/Time: 5/22/24 11:30 AM
Lab Number: 240523001-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Recoverable							
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	5/24/24	QC73652	MBN
Iron	**0.178 mg/L**	EPA 200.7	0.005	0.0005	5/29/24	QC73688	MBN

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.

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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240523001

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.: 240523001
Client PO:
Client Project: CDPS Quart WW

Date Received: 5/23/24
Date Reported: 6/5/24
Matrix: Wastewater

Customer Sample ID Hg LL Field Blank
Sample Date/Time: 5/22/24 11:30 AM
Lab Number: 240523001-04

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	6/5/24	QC73829	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
MDL = Method Detection Limit
mg/L = Milligrams Per Liter or PPM
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mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

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ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240523001

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 5/23/24
Project Name: CDPS Quart WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Chromium - Hexavalent	QC73733	Blank	ND	SM 3500-Cr B	5/30/24
Cyanide-Weak Acid Dissociable	QC73677	Blank	ND	ASTM 2036-09C	5/28/24
Mercury	QC73709	Method Blank	ND	EPA 245.7	5/29/24
	QC73829	Method Blank	ND	EPA 245.7	6/5/24
Arsenic	QC73652	Method Blank	ND	EPA 200.8	5/23/24
Cadmium	QC73652	Method Blank	ND	EPA 200.8	5/23/24
Chromium	QC73652	Method Blank	ND	EPA 200.8	5/23/24
Copper	QC73652	Method Blank	ND	EPA 200.8	5/23/24
Lead	QC73652	Method Blank	ND	EPA 200.8	5/23/24
Manganese	QC73652	Method Blank	ND	EPA 200.8	5/23/24
Silver	QC73652	Method Blank	ND	EPA 200.8	5/23/24
Zinc	QC73652	Method Blank	ND	EPA 200.8	5/23/24
Iron	QC73688	Method Blank	ND	EPA 200.7	5/23/24
Total Dissolved Solids	QC73628	Blank	ND	SM 2540-C	5/23/24
Total Suspended Solids	QC73639	Blank	ND	SM 2540-D	5/24/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chromium - Hexavalent	QC73733	Duplicate -240528144-01	0 - 20	-	0.0	SM 3500-Cr B
		LCS	90 - 110	99.5	-	
Cyanide-Weak Acid Dissociable	QC73677	Duplicate -240521073-01	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	95.0	-	
		MS -240523001-03E	75 - 125	91.0	-	
Mercury	QC73709	Duplicate -240516047-02	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	96.6	-	
		MS -240516059-01	80 - 120	98.0	-	
Mercury	QC73829	LCS	76 - 113	96.0	-	EPA 245.7
		MS -240515056-01	63 - 111	92.0	-	
		MSD -240515056-01	0 - 18	-	2.2	
Arsenic	QC73652	LCS	90 - 110	101.2	-	EPA 200.8
		MS -240523001-01A	70 - 130	109.8	-	
		MSD -240523001-01A	0 - 10	-	0.5	
Cadmium	QC73652	LCS	90 - 110	101.7	-	EPA 200.8
		MS -240523001-01A	70 - 130	106.9	-	
		MSD -240523001-01A	0 - 10	-	0.1	
Chromium	QC73652	LCS	90 - 110	102.0	-	EPA 200.8
		MS -240523001-01A	70 - 130	100.9	-	
		MSD -240523001-01A	0 - 10	-	2.1	
Copper	QC73652	LCS	90 - 110	99.3	-	EPA 200.8
		MS -240523001-01A	70 - 130	101.7	-	
		MSD -240523001-01A	0 - 10	-	1.4	
Lead	QC73652	LCS	90 - 110	101.6	-	EPA 200.8

Abbreviations/ References:

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ug/L = Micrograms Per Liter or PPB
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Date Analyzed = Date Test Completed

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(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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -240523001-01A	70 - 130	77.0	-	
		MSD -240523001-01A	0 - 10	-	1.7	
Manganese	QC73652	LCS	90 - 110	104.1	-	EPA 200.8
		MS -240523001-01A	70 - 130	93.2	-	
		MSD -240523001-01A	0 - 10	-	1.4	
Silver	QC73652	LCS	90 - 110	109.4	-	EPA 200.8
		MS -240523001-01A	70 - 130	90.5	-	
		MSD -240523001-01A	0 - 10	-	1.5	
Zinc	QC73652	LCS	90 - 110	102.6	-	EPA 200.8
		MS -240523001-01A	70 - 130	93.4	-	
		MSD -240523001-01A	0 - 10	-	0.8	
Iron	QC73688	Duplicate -240523001-02	0 - 20	-	11.7	EPA 200.7
		LCS	90 - 110	109.9	-	
		MS -240523003-01A	75 - 125	121.0	-	
Total Dissolved Solids	QC73628	Duplicate -240522030-03	0 - 10	-	3.9	SM 2540-C
		LCS	85 - 115	95.3	-	
Total Suspended Solids	QC73639	Duplicate -240523016-05	0 - 10	-	9.2	SM 2540-D
		LCS	90 - 110	97.4	-	

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

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(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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 01	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240523001 RMB
Phone: 602 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Tests Requested: QBO 23110033	Tests Requested: QBO 23110034
5/22	12:30p	OFOOZA	3	X	X	
5/22	11:30a	CBOF	6	X	X	X
5/22	11:00a	CB-UG01*	4	X	X	X
*No	Hg LL	bottle provided. RB 5/23				
		*no oil/grease rcd				
		12 + blank				

Low Level Hg - HCl Preserved Bottle
Lot #: U-4-023-04AB
Sample ID: CBOF
Initials: JA Date: 5/23/24

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.
Initials: RB Date: 5/23

Instructions: Bottle Return Requested

C/S Info: 5
Deliver Via: UPS C/S Charge ☒
Seals Present Yes ☐ No ☐
Temp. 6 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	5/22/3:40p					Adanna	5/23/24 800

Colorado Analytical LABORATORIES, INC.

CAL Task 240523001

RMB

Quotation for Analytical Services

Quote ID: QBO23110034

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Quart WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Cr - Tri	Calculation	1	$0.00	$0.00
Water - Ground	As - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cd - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cu - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	TDS	SM 2540-C	1	$16.00	$16.00
Water - Ground	Zn - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - Hex	SM 3500-Cr B	1	$40.00	$40.00
Water - Ground	Hg LL	EPA 245.7	1	$52.00	$52.00
Water - Ground	Hg LL Field Blank	EPA 245.7	1	$52.00	$52.00
Shipping	Cooler Shipment - UPS	UPS	1	$30.00	$30.00

$270.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

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

JML

Colorado Analytical LABORATORIES, INC.

CAL Task 240523001

RMB

Quotation for Analytical Services

Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Attn: **CJ Dickerson**

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease - not received.	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

$632.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240618001

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.: 240618001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 6/18/24
Date Reported: 6/26/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 6/17/24 11:00 AM
Lab Number: 240618001-01

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	6/20/24	QC74199	KRB
pH	**6.84 units**	SM 4500-H-B	0.01	0.01	6/18/24	-	ARH
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	6/19/24	QC74175	ISG
Potentially Dissolved							
Cadmium	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	6/19/24	QC74192	MBN
Copper	**0.0010 mg/L**	EPA 200.8	0.0008	0.00001	6/19/24	QC74192	MBN
Lead	**0.0021 mg/L**	EPA 200.8	0.0001	0.000006	6/19/24	QC74192	MBN
Manganese	**0.1176 mg/L**	EPA 200.8	0.0008	0.00001	6/19/24	QC74192	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	6/19/24	QC74192	MBN
Zinc	**0.059 mg/L**	EPA 200.8	0.001	0.00003	6/19/24	QC74192	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	6/20/24	QC74235	JJA
Lead	**0.0031 mg/L**	EPA 200.8	0.0001	0.000006	6/19/24	QC74192	MBN
Total Recoverable							
Iron	**0.038 mg/L**	EPA 200.7	0.005	0.0005	6/20/24	QC74204	MBN

Abbreviations/ References:

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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240618001

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.: 240618001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 6/18/24
Date Reported: 6/26/24
Matrix: Wastewater

Customer Sample ID CBOF
Sample Date/Time: 6/17/24 12:30 PM
Lab Number: 240618001-02

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	6/20/24	QC74199	KRB
pH	**7.03 units**	SM 4500-H-B	0.01	0.01	6/18/24	-	ARH
Total Dissolved Solids	**740 mg/L**	SM 2540-C	5	2	6/19/24	QC74150	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	6/19/24	QC74175	ISG
Dissolved							
Chromium - Hexavalent	**ND mg/L**	SM 3500-Cr B	0.02	0.01	6/19/24	QC74188	AMJ
Potentially Dissolved							
Cadmium	**0.0018 mg/L**	EPA 200.8	0.0001	0.000006	6/19/24	QC74192	MBN
Copper	**0.0050 mg/L**	EPA 200.8	0.0008	0.00001	6/19/24	QC74192	MBN
Lead	**0.0023 mg/L**	EPA 200.8	0.0001	0.000006	6/19/24	QC74192	MBN
Manganese	**0.1055 mg/L**	EPA 200.8	0.0008	0.00001	6/19/24	QC74192	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	6/19/24	QC74192	MBN
Zinc	**0.427 mg/L**	EPA 200.8	0.001	0.00003	6/19/24	QC74192	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	6/20/24	QC74235	JJA
Mercury	**0.012 ug/L**	EPA 245.7	0.002	0.0002	6/24/24	QC74292	NRP
Cadmium	**0.0019 mg/L**	EPA 200.8	0.0001	0.000006	6/19/24	QC74192	MBN
Copper	**0.0050 mg/L**	EPA 200.8	0.0008	0.00001	6/19/24	QC74192	MBN
Lead	**0.0024 mg/L**	EPA 200.8	0.0001	0.000006	6/19/24	QC74192	MBN
Zinc	**0.432 mg/L**	EPA 200.8	0.001	0.00003	6/19/24	QC74192	MBN
Total Recoverable							
Chromium - Trivalent	**ND mg/L**	Calculation	0.02	0.01	6/19/24	-	MBN
Arsenic	**0.0007 mg/L**	EPA 200.8	0.0006	0.00006	6/19/24	QC74192	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240618001

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.: 240618001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 6/18/24
Date Reported: 6/26/24
Matrix: Wastewater

Customer Sample ID CBOF
Sample Date/Time: 6/17/24 12:30 PM
Lab Number: 240618001-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Recoverable							
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	6/19/24	QC74192	MBN
Iron	**0.171 mg/L**	EPA 200.7	0.005	0.0005	6/20/24	QC74204	MBN

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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ug/L = Micrograms Per Liter or PPB
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Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240618001

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.: 240618001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 6/18/24
Date Reported: 6/26/24
Matrix: Wastewater

Customer Sample ID CB-UG01
Sample Date/Time: 6/17/24 1:00 PM
Lab Number: 240618001-03

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	6/20/24	QC74199	KRB
pH	**7.19 units**	SM 4500-H-B	0.01	0.01	6/18/24	-	ARH
Total Dissolved Solids	**735 mg/L**	SM 2540-C	5	2	6/19/24	QC74150	ISG
Total Suspended Solids	**5 mg/L**	SM 2540-D	5	2	6/19/24	QC74175	ISG
Dissolved							
Chromium - Hexavalent	**ND mg/L**	SM 3500-Cr B	0.02	0.01	6/19/24	QC74188	AMJ
Potentially Dissolved							
Cadmium	**0.0022 mg/L**	EPA 200.8	0.0001	0.000006	6/19/24	QC74192	MBN
Copper	**0.0062 mg/L**	EPA 200.8	0.0008	0.00001	6/19/24	QC74192	MBN
Lead	**0.0070 mg/L**	EPA 200.8	0.0001	0.000006	6/19/24	QC74192	MBN
Manganese	**0.1495 mg/L**	EPA 200.8	0.0008	0.00001	6/19/24	QC74192	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	6/19/24	QC74192	MBN
Zinc	**0.477 mg/L**	EPA 200.8	0.001	0.00003	6/19/24	QC74192	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	6/20/24	QC74235	JJA
Cadmium	**0.0023 mg/L**	EPA 200.8	0.0001	0.000006	6/19/24	QC74192	MBN
Copper	**0.0063 mg/L**	EPA 200.8	0.0008	0.00001	6/19/24	QC74192	MBN
Lead	**0.0072 mg/L**	EPA 200.8	0.0001	0.000006	6/19/24	QC74192	MBN
Zinc	**0.568 mg/L**	EPA 200.8	0.001	0.00003	6/19/24	QC74192	MBN
Total Recoverable							
Chromium - Trivalent	**ND mg/L**	Calculation	0.02	0.01	6/19/24	-	MBN
Arsenic	**0.0007 mg/L**	EPA 200.8	0.0006	0.00006	6/19/24	QC74192	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	6/19/24	QC74192	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240618001

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.: 240618001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 6/18/24
Date Reported: 6/26/24
Matrix: Wastewater

Customer Sample ID CB-UG01
Sample Date/Time: 6/17/24 1:00 PM
Lab Number: 240618001-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Recoverable							
Iron	**0.182 mg/L**	EPA 200.7	0.005	0.0005	6/20/24	QC74204	MBN

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.

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

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240618001

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.: 240618001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 6/18/24
Date Reported: 6/26/24
Matrix: Wastewater

Customer Sample ID Hg LL Field Blank
Sample Date/Time: 6/17/24 12:30 PM
Lab Number: 240618001-04

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	6/24/24	QC74292	NRP

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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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

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Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240618001

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 6/18/24
Project Name: CDPS Bi Monthly and Quarterly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Chromium - Hexavalent	QC74188	Blank	ND	SM 3500-Cr B	6/19/24
Cyanide-Weak Acid Dissociable	QC74199	Blank	ND	ASTM 2036-09C	6/19/24
Mercury	QC74235	Method Blank	ND	EPA 245.7	6/20/24
	QC74292	Method Blank	ND	EPA 245.7	6/24/24
Arsenic	QC74192	Method Blank	ND	EPA 200.8	6/18/24
Cadmium	QC74192	Method Blank	ND	EPA 200.8	6/18/24
Chromium	QC74192	Method Blank	ND	EPA 200.8	6/18/24
Copper	QC74192	Method Blank	ND	EPA 200.8	6/18/24
Lead	QC74192	Method Blank	ND	EPA 200.8	6/18/24
Manganese	QC74192	Method Blank	ND	EPA 200.8	6/18/24
Silver	QC74192	Method Blank	ND	EPA 200.8	6/18/24
Zinc	QC74192	Method Blank	ND	EPA 200.8	6/18/24
Iron	QC74204	Method Blank	ND	EPA 200.7	6/18/24
Total Dissolved Solids	QC74150	Blank	ND	SM 2540-C	6/18/24
Total Suspended Solids	QC74175	Blank	ND	SM 2540-D	6/19/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chromium - Hexavalent	QC74188	Duplicate -240612072-01	0 - 20	-	0.0	SM 3500-Cr B
		LCS	90 - 110	98.6	-	
Cyanide-Weak Acid Dissociable	QC74199	Duplicate -240613095-02	0 - 20	-	15.4	ASTM 2036-09C
		LCS	90 - 110	103.5	-	
		MS -240613095-02	75 - 125	105.0	-	
Mercury	QC74235	Duplicate -240613049-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	104.2	-	
		MS -240613049-01B	80 - 120	96.0	-	
Mercury	QC74292	LCS	76 - 113	102.0	-	EPA 245.7
		MS -240620021-01G	63 - 111	108.0	-	
		MSD -240620021-01G	0 - 18	-	12.7	
Arsenic	QC74192	LCS	90 - 110	101.8	-	EPA 200.8
		MS -240618001-01A	70 - 130	118.9	-	
		MSD -240618001-01A	0 - 10	-	4.5	
Cadmium	QC74192	LCS	90 - 110	100.1	-	EPA 200.8
		MS -240618001-01A	70 - 130	115.6	-	
		MSD -240618001-01A	0 - 10	-	0.5	
Chromium	QC74192	LCS	90 - 110	108.1	-	EPA 200.8
		MS -240618001-01A	70 - 130	112.9	-	
		MSD -240618001-01A	0 - 10	-	0.2	
Copper	QC74192	LCS	90 - 110	100.2	-	EPA 200.8
		MS -240618001-01A	70 - 130	110.5	-	
		MSD -240618001-01A	0 - 10	-	3.2	
Lead	QC74192	LCS	90 - 110	109.6	-	EPA 200.8

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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mg/L = Milligrams Per Liter or PPM
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mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

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(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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -240618001-01A	70 - 130	92.2	-	
		MSD -240618001-01A	0 - 10	-	0.4	
Manganese	QC74192	LCS	90 - 110	106.6	-	EPA 200.8
		MS -240618001-01A	70 - 130	98.0	-	
		MSD -240618001-01A	0 - 10	-	1.6	
Silver	QC74192	LCS	90 - 110	94.1	-	EPA 200.8
		MS -240618001-01A	70 - 130	80.9	-	
		MSD -240618001-01A	0 - 10	-	5.1	
Zinc	QC74192	LCS	90 - 110	106.2	-	EPA 200.8
		MS -240618001-01A	70 - 130	105.2	-	
		MSD -240618001-01A	0 - 10	-	1.1	
Iron	QC74204	Duplicate -240618026-05	0 - 20	-	0.0	EPA 200.7
		LCS	90 - 110	100.6	-	
		MS -240618108-01B	75 - 125	112.4	-	
Total Dissolved Solids	QC74150	Duplicate -240617002-01	0 - 10	-	3.2	SM 2540-C
		LCS	85 - 115	98.0	-	
Total Suspended Solids	QC74175	Duplicate -240618030-02	0 - 10	-	2.7	SM 2540-D
		LCS	90 - 110	98.1	-	

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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 #1	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240618001 JAK
Phone: 602 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: CJ Dickerson		
Sample Collector Phone: " "	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Tests Requested: 0802311Ø033	0802311Ø034	
6/17	11:00	CFOOZA	3	X	X		
6/17	12:30	CBOF	5	X	X	X	w/ blank
6/17	1:00	CB-UGO1 *	4	X	X	X	

Low Level Hg - HCl Preserved Bottle
Lot #: U-4-023-04AB
Sample ID: CBOF
Initials: JA Date: 6/18/24

12 + blank

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.
Initials: JK Date: 6/18/24

* Hg Hg samples not received for CB-UGO1. JK 6/18/24

Instructions: Bottle Return Requested

Deliver via: UPS C/S Charge ☒ 5

Seals Present Yes ☐ No ☐

Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	6/17 4:00 p.m.					J Adams	6/18/24 800

CAL Task
240618001

JAK

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

$632.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

no oil/grease received. JK 6/18/24

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

JML

CAL Task
240618001

JAK

Colorado Analytical LABORATORIES, INC.

Bottle Order Test Detail

Order ID: QBO23110034

Date Created: 11/10/23

Ship To: Thorin Resources, LLC
1900 Main St
Unit 1
Ouray CO 81427

Attention: CJ Dickerson

602-793-1321
Verify All Shipping Addresses*

Shipping Options:
Ship Via: UPS Cooler: Yes

Chain of Custody | Drinking Water: Standard: 1

Customer Needs By: 3/15/24
Ships From: Commerce City

Project:
CDPS Quart WW

Qty.	Bottle / Preservative / Test
1	***250 ml Cylinder - Unpreserved***
	TDS - Water - Ground
1	***250 ml Glass - HCl***
	Hg LL - Water - Ground
1	***250 ml Glass - HCl Blank***
	Hg LL Field Blank - Water - Ground
1	***500 ml Cylinder - HNO3***
	As - TR - Water - Ground
	Cd - Total - Water - Ground
	Cr - TR - Water - Ground
	Cr - Tri - Water - Ground — TR
	Cu - Total - Water - Ground
	Zn - Total - Water - Ground
1	***500 ml Cylinder - Unpreserved***
	Cr - Hex - Water - Ground

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Internal Shipping Instructions:

Quarterly ***Ship to Thorin Resources Attn CJ Dickerson 1900 Main St Unit 1 Ouray, CO 81427***

Shipped By: _____
Date: _____
Checked By: _____

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

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240625002

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.: 240625002
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 6/25/24
Date Reported: 7/2/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 6/24/24 10:00 AM
Lab Number: 240625002-01

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	6/27/24	QC74393	KRB
pH	**7.74 units**	SM 4500-H-B	0.01	0.01	6/25/24	-	ARH
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	6/25/24	QC74312	ARH
Potentially Dissolved							
Cadmium	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	6/27/24	QC74388	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	6/27/24	QC74388	MBN
Lead	**0.0005 mg/L**	EPA 200.8	0.0001	0.000006	6/27/24	QC74388	MBN
Manganese	**0.0773 mg/L**	EPA 200.8	0.0008	0.00001	6/27/24	QC74388	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	6/27/24	QC74388	MBN
Zinc	**0.024 mg/L**	EPA 200.8	0.001	0.00003	6/27/24	QC74388	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	6/27/24	QC74397	JJA
Lead	**0.0017 mg/L**	EPA 200.8	0.0001	0.000006	6/27/24	QC74388	MBN
Total Recoverable							
Iron	**0.037 mg/L**	EPA 200.7	0.005	0.0005	6/27/24	QC74390	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240625002

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 6/25/24
Project Name: CDPS Bi Monthly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC74393	Blank	ND	ASTM 2036-09C	6/27/24
Mercury	QC74397	Method Blank	ND	EPA 245.7	6/27/24
Cadmium	QC74388	Method Blank	ND	EPA 200.8	6/25/24
Copper	QC74388	Method Blank	ND	EPA 200.8	6/25/24
Lead	QC74388	Method Blank	ND	EPA 200.8	6/25/24
Manganese	QC74388	Method Blank	ND	EPA 200.8	6/25/24
Silver	QC74388	Method Blank	ND	EPA 200.8	6/25/24
Zinc	QC74388	Method Blank	ND	EPA 200.8	6/25/24
Iron	QC74390	Method Blank	ND	EPA 200.7	6/25/24
Total Suspended Solids	QC74312	Blank	ND	SM 2540-D	6/25/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC74393	Duplicate -240625002-01	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	97.3	-	
		MS -240626053-02	75 - 125	97.0	-	
Mercury	QC74397	Duplicate -240621087-03	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	102.6	-	
		MS -240621087-03	80 - 120	86.0	-	
Cadmium	QC74388	LCS	90 - 110	99.2	-	EPA 200.8
		MS -240625001-01	70 - 130	107.0	-	
		MSD -240625001-01	0 - 10	-	1.8	
Copper	QC74388	LCS	90 - 110	99.8	-	EPA 200.8
		MS -240625001-01	70 - 130	110.6	-	
		MSD -240625001-01	0 - 10	-	0.3	
Lead	QC74388	LCS	90 - 110	101.6	-	EPA 200.8
		MS -240625001-01	70 - 130	93.5	-	
		MSD -240625001-01	0 - 10	-	3.8	
Manganese	QC74388	LCS	90 - 110	104.8	-	EPA 200.8
		MS -240625001-01	70 - 130	125.6	-	
		MSD -240625001-01	0 - 10	-	0.9	
Silver	QC74388	LCS	90 - 110	100.0	-	EPA 200.8
		MS -240625001-01	70 - 130	99.9	-	
		MSD -240625001-01	0 - 10	-	2.7	
Zinc	QC74388	LCS	90 - 110	101.3	-	EPA 200.8
		MS -240625001-01	70 - 130	110.9	-	
		MSD -240625001-01	0 - 10	-	1.9	
Iron	QC74390	Duplicate -240625001-01	0 - 20	-	4.9	EPA 200.7
		LCS	90 - 110	100.4	-	
		MS -240625001-01	75 - 125	101.6	-	
Total Suspended Solids	QC74312	Duplicate -240624009-01	0 - 10	-	2.5	SM 2540-D
		LCS	90 - 110	102.0	-	

Abbreviations/ References:

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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.

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
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ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Therin Resources	Company Name:	
Contact Name: CJ Dickerson	Contact Name:	
Address: 1900 Main St Unit 1	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240625002 RMB
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@therinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Tests Requested: QBG231Ø033	Tests Requested: GRO2400976 "DRMS"
6/24	10:00am	OFØØ2A	3	X	X	
6/24	11:00am	UG-5	5			X
6/24	11:30am	UG-2	5			X
6/24	11:50a	UG-8	5			X

*No o/g bottle rcd (18)

Waste: Water per history RB 6/25

Instructions: Return of OFØØ2A Bottle only please

C/S Info:
Deliver Via: UPS C/S Charge ☒ 5

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	6/24 3:30pm					Adams	6/25/24 800

CAL Task
240625002

RMB

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease -not rcd.	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS RB	UPS	2	$30.00	$60.00

$632.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240718025

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.: 240718025
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 7/18/24
Date Reported: 7/26/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 7/17/24 7:00 AM
Lab Number: 240718025-01

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	7/24/24	QC74944	KRB
pH	**7.74 units**	SM 4500-H-B	0.01	0.01	7/18/24	-	KJP
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	7/18/24	QC74842	ISG
Potentially Dissolved							
Cadmium	**0.0003 mg/L**	EPA 200.8	0.0001	0.000006	7/23/24	QC74900	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/23/24	QC74900	MBN
Lead	**0.0010 mg/L**	EPA 200.8	0.0001	0.000006	7/23/24	QC74900	MBN
Manganese	**0.2233 mg/L**	EPA 200.8	0.0008	0.00001	7/23/24	QC74900	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	7/23/24	QC74900	MBN
Zinc	**0.090 mg/L**	EPA 200.8	0.001	0.00003	7/23/24	QC74900	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	7/25/24	QC75001	JJA
Lead	**0.0010 mg/L**	EPA 200.8	0.0001	0.000006	7/23/24	QC74900	MBN
Total Recoverable							
Iron	**0.068 mg/L**	EPA 200.7	0.005	0.0005	7/22/24	QC74874	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240718025

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 7/18/24
Project Name: CDPS Bi Monthly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC74944	Blank	ND	ASTM 2036-09C	7/24/24
Mercury	QC75001	Method Blank	ND	EPA 245.7	7/25/24
Cadmium	QC74900	Method Blank	ND	EPA 200.8	7/18/24
Copper	QC74900	Method Blank	ND	EPA 200.8	7/18/24
Lead	QC74900	Method Blank	ND	EPA 200.8	7/18/24
Manganese	QC74900	Method Blank	ND	EPA 200.8	7/18/24
Silver	QC74900	Method Blank	ND	EPA 200.8	7/18/24
Zinc	QC74900	Method Blank	ND	EPA 200.8	7/18/24
Iron	QC74874	Method Blank	ND	EPA 200.7	7/18/24
Total Suspended Solids	QC74842	Blank	ND	SM 2540-D	7/18/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC74944	Duplicate -240722041-01	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	92.0	-	
		MS -240717035-02	75 - 125	88.5	-	
Mercury	QC75001	Duplicate -240718005-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	110.0	-	
		MS -240718005-01	80 - 120	98.0	-	
Cadmium	QC74900	LCS	90 - 110	98.4	-	EPA 200.8
		MS -240718002-01A	70 - 130	106.8	-	
		MSD -240718002-01A	0 - 10	-	0.0	
Copper	QC74900	LCS	90 - 110	95.1	-	EPA 200.8
		MS -240718002-01A	70 - 130	86.3	-	
		MSD -240718002-01A	0 - 10	-	1.5	
Lead	QC74900	LCS	90 - 110	94.0	-	EPA 200.8
		MS -240718002-01A	70 - 130	93.0	-	
		MSD -240718002-01A	0 - 10	-	1.6	
Manganese	QC74900	LCS	90 - 110	106.5	-	EPA 200.8
		MS -240718002-01A	70 - 130	111.7	-	
		MSD -240718002-01A	0 - 10	-	0.2	
Silver	QC74900	LCS	90 - 110	105.4	-	EPA 200.8
		MS -240718002-01A	70 - 130	87.3	-	
		MSD -240718002-01A	0 - 10	-	2.3	
Zinc	QC74900	LCS	90 - 110	102.6	-	EPA 200.8
		MS -240718002-01A	70 - 130	103.9	-	
		MSD -240718002-01A	0 - 10	-	0.7	
Iron	QC74874	Duplicate -240718048-01	0 - 20	-	0.0	EPA 200.7
		LCS	90 - 110	107.4	-	
		MS -240718005-01	75 - 125	101.2	-	
Total Suspended Solids	QC74842	Duplicate -240717011-01	0 - 10	-	3.4	SM 2540-D
		LCS	90 - 110	101.0	-	

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.

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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Thorn Resources	Company Name:	
Contact Name: CJ Dickerson	Contact Name:	
Address: 1900 Main St Unit 1	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240718025 RMB
Phone: (602) 793-1321	Phone:	
Email: CJdickerson@thornresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

Waste Water [X] Soil [ ] Drinking Water [ ]
Ground Water [ ] Sludge [ ]
Surface Water [ ]

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)		Tests Requested: QR023110033
7/17	7:00a	OFOOZA	3	X		X

*no o/g bottle rcd (3)

Instructions: Please Return Bottles

C/S Info: 5

Deliver Via: UPS C/S Charge [X]

Seals Present Yes [ ] No [ ]

Temp. 2 °C/Ice Y Sample Pres. Yes [X] No [ ]

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CT Dickerson	7/17 12:00					JAdams	7/18/24 800

CAL Task
2407180025

RMB

Colorado Analytical
LABORATORIES, INC.

Quotation for Analytical Services

Quote ID: QBO2311003 3

Prepared For:
Thorin Resources, LLC
1900 Main St
Unit 1
Ouray, CO 81427

Attn: **CJ Dickerson**

Quote Date **Friday, November 10, 2023**
Turn Around Time **10 Working Days**

Project
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

$632.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240730006

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.: 240730006
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 7/30/24
Date Reported: 8/9/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 7/29/24 11:00 AM
Lab Number: 240730006-01

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	8/7/24	QC75238	KRB
pH	**7.38 units**	SM 4500-H-B	0.01	0.01	7/30/24	-	ARH
Total Dissolved Solids	**207 mg/L**	SM 2540-C	5	2	8/1/24	QC75146	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	7/31/24	QC75114	ISG
Potentially Dissolved							
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	7/31/24	QC75122	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/31/24	QC75122	MBN
Lead	**0.0012 mg/L**	EPA 200.8	0.0001	0.000006	7/31/24	QC75122	MBN
Manganese	**0.1696 mg/L**	EPA 200.8	0.0008	0.00001	7/31/24	QC75122	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	7/31/24	QC75122	MBN
Zinc	**0.070 mg/L**	EPA 200.8	0.001	0.00003	7/31/24	QC75122	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	8/1/24	QC75142	JJA
Lead	**0.0012 mg/L**	EPA 200.8	0.0001	0.000006	7/31/24	QC75122	MBN
Total Recoverable							
Iron	**0.029 mg/L**	EPA 200.7	0.005	0.0005	7/31/24	QC75118	JJA

Abbreviations/ References:

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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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240730006

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 7/30/24
Project Name: CDPS Bi Monthly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC75238	Blank	ND	ASTM 2036-09C	8/6/24
Mercury	QC75142	Method Blank	ND	EPA 245.7	8/1/24
Cadmium	QC75122	Method Blank	ND	EPA 200.8	7/30/24
Copper	QC75122	Method Blank	ND	EPA 200.8	7/30/24
Lead	QC75122	Method Blank	ND	EPA 200.8	7/30/24
Manganese	QC75122	Method Blank	ND	EPA 200.8	7/30/24
Silver	QC75122	Method Blank	ND	EPA 200.8	7/30/24
Zinc	QC75122	Method Blank	ND	EPA 200.8	7/30/24
Iron	QC75118	Method Blank	ND	EPA 200.7	7/30/24
Total Dissolved Solids	QC75146	Blank	ND	SM 2540-C	8/1/24
Total Suspended Solids	QC75114	Blank	ND	SM 2540-D	7/31/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC75238	Duplicate -240802021-01	0 - 20	-	9.5	ASTM 2036-09C
		LCS	90 - 110	101.1	-	
		MS -240805162-01D	75 - 125	107.5	-	
Mercury	QC75142	Duplicate -240729039-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	104.6	-	
		MS -240729039-01C	80 - 120	94.0	-	
Cadmium	QC75122	LCS	90 - 110	97.3	-	EPA 200.8
		MS -240730002-01	70 - 130	111.9	-	
		MSD -240730002-01	0 - 10	-	0.3	
Copper	QC75122	LCS	90 - 110	98.2	-	EPA 200.8
		MS -240730002-01	70 - 130	97.4	-	
		MSD -240730002-01	0 - 10	-	0.0	
Lead	QC75122	LCS	90 - 110	98.3	-	EPA 200.8
		MS -240730002-01	70 - 130	103.3	-	
		MSD -240730002-01	0 - 10	-	1.1	
Manganese	QC75122	LCS	90 - 110	102.9	-	EPA 200.8
		MS -240730002-01	70 - 130	113.2	-	
		MSD -240730002-01	0 - 10	-	0.5	
Silver	QC75122	LCS	90 - 110	97.0	-	EPA 200.8
		MS -240730002-01	70 - 130	93.1	-	
		MSD -240730002-01	0 - 10	-	2.6	
Zinc	QC75122	LCS	90 - 110	98.6	-	EPA 200.8
		MS -240730002-01	70 - 130	108.7	-	
		MSD -240730002-01	0 - 10	-	2.6	
Iron	QC75118	Duplicate -240730110-01	0 - 20	-	0.0	EPA 200.7
		LCS	90 - 110	100.9	-	
		MS -240730006-01B	75 - 125	103.7	-	
Total Dissolved Solids	QC75146	Duplicate -240729062-01	0 - 10	-	6.6	SM 2540-C

Abbreviations/ References:

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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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		LCS	85 - 115	101.2	-	
Total Suspended Solids	QC75114	Duplicate -240730012-01	0 - 10	-	3.1	SM 2540-D
		LCS	90 - 110	99.6	-	

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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 Ø1	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240730006 RMB
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: CJ Dickerson		
Sample Collector Phone: (602) 793-1321	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)		Tests Requested: Ø8023110033
7/29	11:00am	OFØØ2A	3	X		X

*no oil/grease rcd (3)

Instructions: Please Return Bottles w/ Extra COC's

C/S Info:
Deliver Via: UPS
C/S Charge ☒ S

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	7/29 4:30p					Adams	7/30/24 745

CAL Task
240730006

RMB

Colorado Analytical
LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TDS	SM 2540-C	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	~~Oil & Grease~~	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

$664.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240823002

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.: 240823002
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 8/23/24
Date Reported: 8/30/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 8/22/24 11:00 AM
Lab Number: 240823002-01

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	8/28/24	QC75799	KRB
pH	**7.66 units**	SM 4500-H-B	0.01	0.01	8/23/24	-	ARH
Total Dissolved Solids	**229 mg/L**	SM 2540-C	5	2	8/29/24	QC75804	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	8/26/24	QC75726	RLP
Potentially Dissolved							
Cadmium	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	8/27/24	QC75756	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	8/27/24	QC75756	MBN
Lead	**0.0031 mg/L**	EPA 200.8	0.0001	0.000006	8/27/24	QC75756	MBN
Manganese	**0.1267 mg/L**	EPA 200.8	0.0008	0.00001	8/27/24	QC75756	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	8/27/24	QC75756	MBN
Zinc	**0.063 mg/L**	EPA 200.8	0.001	0.00003	8/27/24	QC75756	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	8/29/24	QC75837	JJA
Lead	**0.0031 mg/L**	EPA 200.8	0.0001	0.000006	8/27/24	QC75756	MBN
Total Recoverable							
Iron	**0.048 mg/L**	EPA 200.7	0.005	0.0005	8/27/24	QC75740	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240823002

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.: 240823002
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 8/23/24
Date Reported: 8/30/24
Matrix: Water

Customer Sample ID CBOF
Sample Date/Time: 8/22/24 11:30 AM
Lab Number: 240823002-02

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	8/28/24	QC75799	KRB
pH	**7.61 units**	SM 4500-H-B	0.01	0.01	8/23/24	-	ARH
Total Dissolved Solids	**886 mg/L**	SM 2540-C	5	2	8/29/24	QC75804	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	8/26/24	QC75726	RLP
Potentially Dissolved							
Cadmium	**0.0017 mg/L**	EPA 200.8	0.0001	0.000006	8/27/24	QC75756	MBN
Copper	**0.0163 mg/L**	EPA 200.8	0.0008	0.00001	8/27/24	QC75756	MBN
Lead	**0.0153 mg/L**	EPA 200.8	0.0001	0.000006	8/27/24	QC75756	MBN
Manganese	**0.0978 mg/L**	EPA 200.8	0.0008	0.00001	8/27/24	QC75756	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	8/27/24	QC75756	MBN
Zinc	**0.395 mg/L**	EPA 200.8	0.001	0.00003	8/27/24	QC75756	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	8/29/24	QC75837	JJA
Lead	**0.0159 mg/L**	EPA 200.8	0.0001	0.000006	8/27/24	QC75756	MBN
Total Recoverable							
Iron	**0.239 mg/L**	EPA 200.7	0.005	0.0005	8/27/24	QC75740	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240823002

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.: 240823002
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 8/23/24
Date Reported: 8/30/24
Matrix: Water

Customer Sample ID CB_UG01
Sample Date/Time: 8/22/24 11:45 AM
Lab Number: 240823002-03

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	8/28/24	QC75799	KRB
pH	**7.71 units**	SM 4500-H-B	0.01	0.01	8/23/24	-	ARH
Total Dissolved Solids	**904 mg/L**	SM 2540-C	5	2	8/29/24	QC75804	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	8/26/24	QC75726	RLP
Potentially Dissolved							
Cadmium	**0.0014 mg/L**	EPA 200.8	0.0001	0.000006	8/27/24	QC75756	MBN
Copper	**0.0156 mg/L**	EPA 200.8	0.0008	0.00001	8/27/24	QC75756	MBN
Lead	**0.0031 mg/L**	EPA 200.8	0.0001	0.000006	8/27/24	QC75756	MBN
Manganese	**0.1104 mg/L**	EPA 200.8	0.0008	0.00001	8/27/24	QC75756	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	8/27/24	QC75756	MBN
Zinc	**0.326 mg/L**	EPA 200.8	0.001	0.00003	8/27/24	QC75756	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	8/29/24	QC75837	JJA
Lead	**0.0034 mg/L**	EPA 200.8	0.0001	0.000006	8/27/24	QC75756	MBN
Total Recoverable							
Iron	**0.231 mg/L**	EPA 200.7	0.005	0.0005	8/27/24	QC75740	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240823002

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 8/23/24
Project Name: CDPS Bi Monthly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC75799	Blank	ND	ASTM 2036-09C	8/28/24
Mercury	QC75837	Method Blank	ND	EPA 245.7	8/29/24
Cadmium	QC75756	Method Blank	ND	EPA 200.8	8/23/24
Copper	QC75756	Method Blank	ND	EPA 200.8	8/23/24
Lead	QC75756	Method Blank	ND	EPA 200.8	8/23/24
Manganese	QC75756	Method Blank	ND	EPA 200.8	8/23/24
Silver	QC75756	Method Blank	ND	EPA 200.8	8/23/24
Zinc	QC75756	Method Blank	ND	EPA 200.8	8/23/24
Iron	QC75740	Method Blank	ND	EPA 200.7	8/23/24
Total Dissolved Solids	QC75804	Blank	ND	SM 2540-C	8/28/24
Total Suspended Solids	QC75726	Blank	ND	SM 2540-D	8/26/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC75799	Duplicate -240823002-03	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	94.5	-	
		MS -240822022-02A	75 - 125	96.0	-	
Mercury	QC75837	Duplicate -240822035-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	107.8	-	
		MS -240822035-01D	80 - 120	100.0	-	
Cadmium	QC75756	LCS	90 - 110	97.8	-	EPA 200.8
		MS -240823002-01B	70 - 130	106.7	-	
		MSD -240823002-01B	0 - 10	-	3.0	
Copper	QC75756	LCS	90 - 110	99.8	-	EPA 200.8
		MS -240823002-01B	70 - 130	106.8	-	
		MSD -240823002-01B	0 - 10	-	2.9	
Lead	QC75756	LCS	90 - 110	93.6	-	EPA 200.8
		MS -240823002-01B	70 - 130	93.1	-	
		MSD -240823002-01B	0 - 10	-	1.9	
Manganese	QC75756	LCS	90 - 110	103.0	-	EPA 200.8
		MS -240823002-01B	70 - 130	116.9	-	
		MSD -240823002-01B	0 - 10	-	3.0	
Silver	QC75756	LCS	90 - 110	90.3	-	EPA 200.8
		MS -240823002-01B	70 - 130	79.8	-	
		MSD -240823002-01B	0 - 10	-	5.5	
Zinc	QC75756	LCS	90 - 110	98.1	-	EPA 200.8
		MS -240823002-01B	70 - 130	112.2	-	
		MSD -240823002-01B	0 - 10	-	2.7	
Iron	QC75740	Duplicate -240823019-01	0 - 20	-	4.0	EPA 200.7
		LCS	90 - 110	100.0	-	
		MS -240823085-02A	75 - 125	106.3	-	
Total Dissolved Solids	QC75804	Duplicate -240827005-01	0 - 10	-	3.0	SM 2540-C

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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		LCS	85 - 115	101.7	-	
Total Suspended Solids	QC75726	Duplicate -240823001-01	0 - 10	-	2.6	SM 2540-D
		LCS	90 - 110	105.5	-	

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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 1	Address:	Task Number (Lab Us: CAL Task 240823002 RMB
City Ouray State CO Zip 81427	City State Zip	
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: " "		
Sample Collector Phone: " "	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or (Check One Only) Composite		Tests Requested: 8260231100033
8/22	11:00a	OF002A	3	X		X
8/22	11:30a	CBOF	3	X		X
8/22	11:45a	CB_UGO1	3	X		X
		*NO oil/grease Req (9)				

Instructions: Please Return Bottles

C/S Info: 5

Deliver Via: UPS C/S Charge ☒

Seals Present Yes ☐ No ☐

Temp. 4 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	8/22 4:30p					Adams	8/23/24 820

Colorado Analytical LABORATORIES, INC.

CAL Task 240823002

RMB

Quotation for Analytical Services

Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TDS	SM 2540-C	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	~~Oil & Grease~~ not rcd.	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

$664.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240830022

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.: 240830022
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 8/30/24
Date Reported: 9/6/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 8/29/24 10:00 AM
Lab Number: 240830022-01

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	9/5/24	QC75983	KRB
pH	**7.60 units**	SM 4500-H-B	0.01	0.01	8/30/24	-	ARH
Total Dissolved Solids	**208 mg/L**	SM 2540-C	5	2	9/4/24	QC75917	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/3/24	QC75887	ISG
Potentially Dissolved							
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	9/4/24	QC75954	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/4/24	QC75954	MBN
Lead	**0.0012 mg/L**	EPA 200.8	0.0001	0.000006	9/4/24	QC75954	MBN
Manganese	**0.1796 mg/L**	EPA 200.8	0.0008	0.00001	9/4/24	QC75954	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/4/24	QC75954	MBN
Zinc	**0.091 mg/L**	EPA 200.8	0.001	0.00003	9/4/24	QC75954	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/5/24	QC75988	JJA
Lead	**0.0013 mg/L**	EPA 200.8	0.0001	0.000006	9/4/24	QC75954	MBN
Total Recoverable							
Iron	**0.035 mg/L**	EPA 200.7	0.005	0.0005	9/3/24	QC75914	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240830022

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 8/30/24
Project Name: CDPS Bi Monthly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC75983	Blank	ND	ASTM 2036-09C	9/5/24
Mercury	QC75988	Method Blank	ND	EPA 245.7	9/5/24
Cadmium	QC75954	Method Blank	ND	EPA 200.8	8/30/24
Copper	QC75954	Method Blank	ND	EPA 200.8	8/30/24
Lead	QC75954	Method Blank	ND	EPA 200.8	8/30/24
Manganese	QC75954	Method Blank	ND	EPA 200.8	8/30/24
Silver	QC75954	Method Blank	ND	EPA 200.8	8/30/24
Zinc	QC75954	Method Blank	ND	EPA 200.8	8/30/24
Iron	QC75914	Method Blank	ND	EPA 200.7	8/30/24
Total Dissolved Solids	QC75917	Blank	ND	SM 2540-C	9/3/24
Total Suspended Solids	QC75887	Blank	ND	SM 2540-D	9/3/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC75983	Duplicate -240828017-02	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	101.6	-	
		MS -240903037-03	75 - 125	95.0	-	
Mercury	QC75988	Duplicate -240903054-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	101.8	-	
		MS -240903054-01C	80 - 120	86.0	-	
Cadmium	QC75954	LCS	90 - 110	101.6	-	EPA 200.8
		MS -240830002-01	70 - 130	103.6	-	
		MSD -240830002-01	0 - 10	-	2.1	
Copper	QC75954	LCS	90 - 110	104.6	-	EPA 200.8
		MS -240830002-01	70 - 130	115.8	-	
		MSD -240830002-01	0 - 10	-	0.4	
Lead	QC75954	LCS	90 - 110	102.2	-	EPA 200.8
		MS -240830002-01	70 - 130	97.5	-	
		MSD -240830002-01	0 - 10	-	2.2	
Manganese	QC75954	LCS	90 - 110	108.9	-	EPA 200.8
		MS -240830002-01	70 - 130	114.6	-	
		MSD -240830002-01	0 - 10	-	2.2	
Silver	QC75954	LCS	90 - 110	100.2	-	EPA 200.8
		MS -240830002-01	70 - 130	78.1	-	
		MSD -240830002-01	0 - 10	-	0.4	
Zinc	QC75954	LCS	90 - 110	105.9	-	EPA 200.8
		MS -240830002-01	70 - 130	94.2	-	
		MSD -240830002-01	0 - 10	-	0.2	
Iron	QC75914	Duplicate -240830072-01	0 - 20	-	4.4	EPA 200.7
		LCS	90 - 110	91.0	-	
		MS -240830022-01C	75 - 125	92.9	-	
Total Dissolved Solids	QC75917	Duplicate -240829051-01	0 - 10	-	1.5	SM 2540-C

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
MDL = Method Detection Limit
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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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		LCS	85 - 115	103.6	-	
Total Suspended Solids	QC75887	Duplicate -240830025-01	0 - 10	-	7.4	SM 2540-D
		LCS	90 - 110	101.0	-	

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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 01	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	CAL Task 240830022 CJF
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

- **Water ☒ (CWA / NPDES)** — Includes wastewater, non-potable samples not intended for drinking water use.
- **Drinking Water ☐ (SDWA)** — Includes finished drinking water, raw (untreated) water samples intended for human consumption.
- **Solid (Sludge) ☐ (503 Regs / RCRA/ SW-846)**

Date	Time	Sample ID	No. of Containers	Grab or (Check One Only) Composite	Tests Requested: QBO2311 0033
8/29	10:00am	OFØØZA	3	X	

3

*NO TDS container provided, will aliquot in lab. CF 8/30/24

*NO oil & grease container received. CF 8/30/24

Instructions: Please Return Bottles

C/S Info: Deliver Via: UPS C/S Charge ☐ X

Seals Present Yes ☐ No ☐

Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	8/29 4:30p					MA	8/30/24

4.18

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Attn: **CJ Dickerson**

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

CAL Task
240830022

CJF

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TDS	SM 2540-C	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

$664.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240917001

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.: 240917001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 9/17/24
Date Reported: 9/24/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 9/16/24 2:40 PM
Lab Number: 240917001-01

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	9/18/24	QC76275	KRB
pH	**7.58 units**	SM 4500-H-B	0.01	0.01	9/17/24	-	KJP
Total Dissolved Solids	**186 mg/L**	SM 2540-C	5	2	9/18/24	QC76238	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/18/24	QC76249	ISG
Potentially Dissolved							
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76378	JJA
Lead	**0.0010 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Manganese	**0.1309 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76378	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76378	JJA
Zinc	**0.075 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76378	JJA
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Lead	**0.0011 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Total Recoverable							
Iron	**0.056 mg/L**	EPA 200.7	0.005	0.0005	9/19/24	QC76292	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240917001

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.: 240917001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 9/17/24
Date Reported: 9/24/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 9/16/24 2:40 PM
Lab Number: 240917001-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Dissolved Solids	**195 mg/L**	SM 2540-C	5	2	9/18/24	QC76238	ISG
Dissolved							
Chromium - Hexavalent	**ND mg/L**	SM 3500-Cr B	0.02	0.01	9/19/24	QC76323	AMJ
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	9/23/24	QC76366	NRP
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76378	JJA
Zinc	**0.077 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76378	JJA
Total Recoverable							
Chromium - Trivalent	**ND mg/L**	Calculation	0.02	0.01	9/23/24	-	MBN
Arsenic	**0.0016 mg/L**	EPA 200.8	0.0006	0.00006	9/23/24	QC76378	JJA
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/23/24	QC76378	JJA

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.

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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240917001

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.: 240917001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 9/17/24
Date Reported: 9/24/24
Matrix: Water

Customer Sample ID CBOF
Sample Date/Time: 9/16/24 2:10 PM
Lab Number: 240917001-03

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	9/18/24	QC76275	KRB
pH	**7.17 units**	SM 4500-H-B	0.01	0.01	9/17/24	-	KJP
Total Dissolved Solids	**905 mg/L**	SM 2540-C	5	2	9/18/24	QC76238	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/18/24	QC76249	ISG
Potentially Dissolved							
Cadmium	**0.0011 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Copper	**0.0118 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76378	JJA
Lead	**0.0034 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Manganese	**0.0752 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76378	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76378	JJA
Zinc	**0.232 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76378	JJA
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Lead	**0.0035 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Total Recoverable							
Iron	**0.189 mg/L**	EPA 200.7	0.005	0.0005	9/19/24	QC76292	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240917001

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.: 240917001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 9/17/24
Date Reported: 9/24/24
Matrix: Water

Customer Sample ID CB_UG01
Sample Date/Time: 9/16/24 2:25 PM
Lab Number: 240917001-04

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	9/18/24	QC76275	KRB
pH	**7.44 units**	SM 4500-H-B	0.01	0.01	9/17/24	-	KJP
Total Dissolved Solids	**926 mg/L**	SM 2540-C	5	2	9/18/24	QC76238	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/18/24	QC76249	ISG
Potentially Dissolved							
Cadmium	**0.0010 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Copper	**0.0121 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76378	JJA
Lead	**0.0022 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Manganese	**0.0788 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76378	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76378	JJA
Zinc	**0.225 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76378	JJA
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Lead	**0.0022 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Total Recoverable							
Iron	**0.198 mg/L**	EPA 200.7	0.005	0.0005	9/19/24	QC76292	JJA

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240917001

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.: 240917001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 9/17/24
Date Reported: 9/24/24
Matrix: Water

Customer Sample ID Hg LL Field Blank
Sample Date/Time: 9/16/24 2:40 PM
Lab Number: 240917001-05

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	9/23/24	QC76366	NRP

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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240917001

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 9/17/24
Project Name: CDPS Bi Monthly and Quarterly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Chromium - Hexavalent	QC76323	Blank	ND	SM 3500-Cr B	9/19/24
Cyanide-Weak Acid Dissociable	QC76275	Blank	ND	ASTM 2036-09C	9/18/24
Mercury	QC76315	Method Blank	ND	EPA 245.7	9/19/24
	QC76366	Method Blank	ND	EPA 245.7	9/23/24
Arsenic	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Cadmium	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Chromium	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Copper	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Lead	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Manganese	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Silver	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Zinc	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Iron	QC76292	Method Blank	ND	EPA 200.7	9/17/24
Total Dissolved Solids	QC76238	Blank	ND	SM 2540-C	9/17/24
Total Suspended Solids	QC76249	Blank	ND	SM 2540-D	9/18/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chromium - Hexavalent	QC76323	Duplicate -240913036-01	0 - 20	-	0.0	SM 3500-Cr B
		LCS	90 - 110	88.3	-	
Cyanide-Weak Acid Dissociable	QC76275	Duplicate -240912164-01	0 - 20	-	13.3	ASTM 2036-09C
		LCS	90 - 110	100.3	-	
		MS -240917108-01	75 - 125	99.5	-	
Mercury	QC76315	Duplicate -240913036-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	106.8	-	
		MS -240913036-01F	80 - 120	100.0	-	
Mercury	QC76366	LCS	76 - 113	106.0	-	EPA 245.7
		MS -240920103-01	63 - 111	67.0	-	
		MSD -240920103-01	0 - 18	-	0.0	
Arsenic	QC76378	LCS	90 - 110	101.6	-	EPA 200.8
		MS -240917001-01B	70 - 130	111.2	-	
		MSD -240917001-01B	0 - 10	-	2.7	
Cadmium	QC76378	LCS	90 - 110	98.3	-	EPA 200.8
		MS -240917001-01B	70 - 130	111.0	-	
		MSD -240917001-01B	0 - 10	-	0.1	
Chromium	QC76378	LCS	90 - 110	101.2	-	EPA 200.8
		MS -240917001-01B	70 - 130	109.3	-	
		MSD -240917001-01B	0 - 10	-	2.5	
Copper	QC76378	LCS	90 - 110	102.1	-	EPA 200.8
		MS -240917001-01B	70 - 130	107.8	-	
		MSD -240917001-01B	0 - 10	-	0.9	
Lead	QC76378	LCS	90 - 110	102.7	-	EPA 200.8

Abbreviations/ References:

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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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -240917001-01B	70 - 130	106.3	-	
		MSD -240917001-01B	0 - 10	-	1.3	
Manganese	QC76378	LCS	90 - 110	102.7	-	EPA 200.8
		MS -240917001-01B	70 - 130	94.3	-	
		MSD -240917001-01B	0 - 10	-	0.9	
Silver	QC76378	LCS	90 - 110	94.5	-	EPA 200.8
		MS -240917001-01B	70 - 130	93.1	-	
		MSD -240917001-01B	0 - 10	-	1.1	
Zinc	QC76378	LCS	90 - 110	99.7	-	EPA 200.8
		MS -240917001-01B	70 - 130	91.9	-	
		MSD -240917001-01B	0 - 10	-	0.0	
Iron	QC76292	Duplicate -240917020-01	0 - 20	-	4.7	EPA 200.7
		LCS	90 - 110	94.3	-	
		MS -240917001-01C	75 - 125	105.9	-	
Total Dissolved Solids	QC76238	Duplicate -240917077-05	0 - 10	-	0.5	SM 2540-C
		LCS	85 - 115	93.4	-	
Total Suspended Solids	QC76249	Duplicate -240917010-01	0 - 10	-	9.8	SM 2540-D
		LCS	90 - 110	97.4	-	

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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 1	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	CAL Task 240917001 RMB
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: " "		
Sample Collector Phone: " "	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Tests Requested: GB023110033	Tests Requested: GB023110034
9/16	2:40	OF00ZA	3	X	X	
9/16	2:40	OF00ZA	5	X		X
9/16	2:10	CBOF	3	X	X	
9/16	2:25	CB_LG01	3	X	X	
		* EXTRA containers rcd for OF002A (unpres, metals + cyanide) 15 + blank				

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days. RB 9/17/24

Low Level Hg - HCl Preserved Bottle
Lot #: U-4-0716-02AB
Sample ID: OF002A
Initials: JA Date: 9/17/24

Instructions: Please Return Bottles

C/S Info:
Deliver Via: UPS C/S Charge ☒ $

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	9/16 5:00p					Adama	9/17/24

805

CAL Task
240917001

RMB

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TDS	SM 2540-C	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease ~~not~~ rcd PB	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

$664.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

CAL Task
240917001

RMB

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO23110034

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Quart WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Cr - Tri	Calculation	1	$0.00	$0.00
Water - Ground	As - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cd - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cu - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	TDS	SM 2540-C	1	$16.00	$16.00
Water - Ground	Zn - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - Hex	SM 3500-Cr B	1	$40.00	$40.00
Water - Ground	Hg LL	EPA 245.7	1	$52.00	$52.00
Water - Ground	Hg LL Field Blank	EPA 245.7	1	$52.00	$52.00
Shipping	Cooler Shipment - UPS	UPS	1	$30.00	$30.00

$270.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240926007

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.: 240926007
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 9/26/24
Date Reported: 10/4/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 9/25/24 11:00 AM
Lab Number: 240926007-01

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	10/2/24	QC76588	KRB
pH	**7.61 units**	SM 4500-H-B	0.01	0.01	9/26/24	-	ARH
Total Dissolved Solids	**261 mg/L**	SM 2540-C	5	2	10/1/24	QC76551	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/26/24	QC76493	ISG
Potentially Dissolved							
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	10/1/24	QC76562	JJA
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	10/1/24	QC76562	JJA
Lead	**0.0011 mg/L**	EPA 200.8	0.0001	0.000006	10/1/24	QC76562	JJA
Manganese	**0.1249 mg/L**	EPA 200.8	0.0008	0.00001	10/1/24	QC76562	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	10/1/24	QC76562	JJA
Zinc	**0.077 mg/L**	EPA 200.8	0.001	0.00003	10/1/24	QC76562	JJA
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	10/3/24	QC76644	JJA
Lead	**0.0011 mg/L**	EPA 200.8	0.0001	0.000006	10/1/24	QC76562	JJA
Total Recoverable							
Iron	**0.026 mg/L**	EPA 200.7	0.005	0.0005	9/30/24	QC76514	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240926007

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 9/26/24
Project Name: CDPS Bi Monthly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC76588	Blank	ND	ASTM 2036-09C	10/2/24
Mercury	QC76644	Method Blank	ND	EPA 245.7	10/3/24
	QC76644	Method Blank	ND	EPA 245.7	10/3/24
Cadmium	QC76562	Method Blank	ND	EPA 200.8	9/26/24
Copper	QC76562	Method Blank	ND	EPA 200.8	9/26/24
Lead	QC76562	Method Blank	ND	EPA 200.8	9/26/24
Manganese	QC76562	Method Blank	ND	EPA 200.8	9/26/24
Silver	QC76562	Method Blank	ND	EPA 200.8	9/26/24
Zinc	QC76562	Method Blank	ND	EPA 200.8	9/26/24
Iron	QC76514	Method Blank	ND	EPA 200.7	9/26/24
Total Dissolved Solids	QC76551	Blank	ND	SM 2540-C	9/30/24
Total Suspended Solids	QC76493	Blank	ND	SM 2540-D	9/26/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC76588	Duplicate -241001082-03	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	99.8	-	
		MS -240926041-02	75 - 125	89.0	-	
Mercury	QC76644	Duplicate -240926007-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	106.2	-	
		MS -240926007-01D	80 - 120	98.0	-	
Cadmium	QC76562	LCS	90 - 110	96.3	-	EPA 200.8
		MS -240926007-01B	70 - 130	101.9	-	
		MSD -240926007-01B	0 - 10	-	3.6	
Copper	QC76562	LCS	90 - 110	100.9	-	EPA 200.8
		MS -240926007-01B	70 - 130	102.3	-	
		MSD -240926007-01B	0 - 10	-	1.2	
Lead	QC76562	LCS	90 - 110	99.0	-	EPA 200.8
		MS -240926007-01B	70 - 130	98.9	-	
		MSD -240926007-01B	0 - 10	-	0.3	
Manganese	QC76562	LCS	90 - 110	103.0	-	EPA 200.8
		MS -240926007-01B	70 - 130	76.6	-	
		MSD -240926007-01B	0 - 10	-	0.2	
Silver	QC76562	LCS	90 - 110	104.2	-	EPA 200.8
		MS -240926007-01B	70 - 130	98.6	-	
		MSD -240926007-01B	0 - 10	-	1.0	
Zinc	QC76562	LCS	90 - 110	100.9	-	EPA 200.8
		MS -240926007-01B	70 - 130	78.9	-	
		MSD -240926007-01B	0 - 10	-	1.2	
Iron	QC76514	Duplicate -240926107-01	0 - 20	-	15.4	EPA 200.7
		LCS	90 - 110	91.7	-	
		MS -240926058-04B	75 - 125	101.5	-	

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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Dissolved Solids	QC76551	Duplicate -240926069-01	0 - 10	-	0.9	SM 2540-C
		LCS	85 - 115	99.1	-	
Total Suspended Solids	QC76493	Duplicate -240926010-01	0 - 10	-	6.2	SM 2540-D
		LCS	90 - 110	102.6	-	

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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Thoria Resources	Company Name:	
Contact Name: CJ Dickerson	Contact Name:	
Address: 1960 Main St Unit L 1	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	CAL Task 240926007 RMB
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thoriaresources.com	Email:	
Sample Collector: CJ Dickerson		
Sample Collector Phone: 602 793-1321	PO No.:	

Sample Matrix (Select One Only)

- **Water** ☒ **(CWA / NPDES)** — Includes wastewater, non-potable samples not intended for drinking water use.
- **Drinking Water** ☐ **(SDWA)** — Includes finished drinking water, raw (untreated) water samples intended for human consumption.
- **Solid (Sludge)** ☐ **(503 Regs / RCRA/ SW-846)**

Tests Requested

Date	Time	Sample ID	No. of Containers	Grab or Composite	8021311B033
9/25	11:00	OF002A	3	X	X

(3)

*NO oil/grease bottle req.

Page 4 of 5

Instructions: Please Return Bottles

C/S Info:

Deliver Via: UPS

C/S Charge ☒ 5

Seals Present Yes ☐ No ☐

Temp. 2 °C/Ice Y

Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	9/25 1145:00					g Adams	9/26/24 754

Colorado Analytical LABORATORIES, INC.

CAL Task 240926007

RMB

Quotation for Analytical Services

Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: ***CJ Dickerson***

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TDS	SM 2540-C	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

$664.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241023001

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.: 241023001
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 10/23/24
Date Reported: 10/30/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 10/22/24 11:00 AM
Lab Number: 241023001-01

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	10/29/24	QC77200	KRB
pH	**7.60 units**	SM 4500-H-B	0.01	0.01	10/23/24	-	KJP
Total Dissolved Solids	**255 mg/L**	SM 2540-C	5	2	10/24/24	QC77095	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	10/24/24	QC77100	ISG
Potentially Dissolved							
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	10/24/24	QC77137	JJA
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	10/24/24	QC77137	JJA
Lead	**0.0015 mg/L**	EPA 200.8	0.0001	0.000006	10/24/24	QC77137	JJA
Manganese	**0.1183 mg/L**	EPA 200.8	0.0008	0.00001	10/24/24	QC77137	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	10/24/24	QC77137	JJA
Zinc	**0.085 mg/L**	EPA 200.8	0.001	0.00003	10/24/24	QC77137	JJA
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	10/24/24	QC77134	JJA
Lead	**0.0015 mg/L**	EPA 200.8	0.0001	0.000006	10/24/24	QC77137	JJA
Total Recoverable							
Iron	**0.029 mg/L**	EPA 200.7	0.005	0.0005	10/28/24	QC77169	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 241023001

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 10/23/24
Project Name: CDPS Bi Monthly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC77200	Blank	ND	ASTM 2036-09C	10/29/24
Mercury	QC77134	Method Blank	ND	EPA 245.7	10/24/24
	QC77134	Method Blank	ND	EPA 245.7	10/24/24
Cadmium	QC77137	Method Blank	ND	EPA 200.8	10/23/24
Copper	QC77137	Method Blank	ND	EPA 200.8	10/23/24
Lead	QC77137	Method Blank	ND	EPA 200.8	10/23/24
Manganese	QC77137	Method Blank	ND	EPA 200.8	10/23/24
Silver	QC77137	Method Blank	ND	EPA 200.8	10/23/24
Zinc	QC77137	Method Blank	ND	EPA 200.8	10/23/24
Iron	QC77169	Method Blank	ND	EPA 200.7	10/23/24
Total Dissolved Solids	QC77095	Blank	ND	SM 2540-C	10/23/24
Total Suspended Solids	QC77100	Blank	ND	SM 2540-D	10/24/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC77200	Duplicate -241022105-01	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	105.0	-	
		MS -241023001-01E	75 - 125	103.5	-	
Mercury	QC77134	Duplicate -241021027-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	107.4	-	
		MS -241021027-01C	80 - 120	86.0	-	
Cadmium	QC77137	LCS	90 - 110	99.0	-	EPA 200.8
		MS -241023001-01B	70 - 130	101.9	-	
		MSD -241023001-01B	0 - 10	-	1.5	
Copper	QC77137	LCS	90 - 110	108.9	-	EPA 200.8
		MS -241023001-01B	70 - 130	104.9	-	
		MSD -241023001-01B	0 - 10	-	0.5	
Lead	QC77137	LCS	90 - 110	108.6	-	EPA 200.8
		MS -241023001-01B	70 - 130	95.7	-	
		MSD -241023001-01B	0 - 10	-	2.7	
Manganese	QC77137	LCS	90 - 110	108.0	-	EPA 200.8
		MS -241023001-01B	70 - 130	100.1	-	
		MSD -241023001-01B	0 - 10	-	1.8	
Silver	QC77137	LCS	90 - 110	107.2	-	EPA 200.8
		MS -241023001-01B	70 - 130	93.0	-	
		MSD -241023001-01B	0 - 10	-	2.3	
Zinc	QC77137	LCS	90 - 110	103.2	-	EPA 200.8
		MS -241023001-01B	70 - 130	91.2	-	
		MSD -241023001-01B	0 - 10	-	1.2	
Iron	QC77169	Duplicate -241023070-01	0 - 20	-	2.1	EPA 200.7
		LCS	90 - 110	94.3	-	
		MS -241023120-01	75 - 125	102.4	-	

Abbreviations/ References:

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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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Dissolved Solids	QC77095	Duplicate -241023093-01	0 - 10	-	0.6	SM 2540-C
		LCS	85 - 115	101.2	-	
Total Suspended Solids	QC77100	Duplicate -241023010-01	0 - 10	-	2.1	SM 2540-D
		LCS	90 - 110	97.5	-	

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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 01	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 241023001 RMB
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

- **Water ☒ (CWA / NPDES)** Includes wastewater, non-potable samples not intended for drinking water use.
- **Drinking Water ☐ (SDWA)** Includes finished drinking water, raw (untreated) water samples intended for human consumption.
- **Solid (Sludge) ☐ (503 Regs / RCRA/ SW-846)**

Date	Time	Sample ID	No. of Containers	Grab or (Check One Only) Composite	Tests Requested: QBO231100033
10/22	11:00	OF002A	3	X	X
		*ND container rcd for TDS - no o/g container rcd. (3)			

Instructions: Please Return Bottles

C/S Info: Deliver Via: UPS C/S Charge ☒ 5

Seals Present Yes ☐ No ☐ Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	10/22 4:45p					Adam MA	10/23/24

Colorado Analytical LABORATORIES, INC.

CAL Task 241023001

RMB

Quotation for Analytical Services

Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Attn: **CJ Dickerson**

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TDS	SM 2540-C	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease	EPA 1664 (B)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

Bi-Monthly - Hg-Total

$664.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241101009

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.: 241101009
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 11/1/24
Date Reported: 11/8/24
Matrix: Water

Customer Sample ID CB_UG01
Sample Date/Time: 10/31/24 11:00 AM
Lab Number: 241101009-01

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	11/5/24	QC77352	KRB
pH	**7.83 units**	SM 4500-H-B	0.01	0.01	11/1/24	-	ARH
Total Dissolved Solids	**1072 mg/L**	SM 2540-C	5	2	11/6/24	QC77364	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	11/4/24	QC77311	RLP
Potentially Dissolved							
Cadmium	**0.0008 mg/L**	EPA 200.8	0.0001	0.000006	11/5/24	QC77346	AMJ
Copper	**0.0086 mg/L**	EPA 200.8	0.0008	0.00001	11/5/24	QC77346	AMJ
Lead	**0.0009 mg/L**	EPA 200.8	0.0001	0.000006	11/5/24	QC77346	AMJ
Manganese	**0.0858 mg/L**	EPA 200.8	0.0008	0.00001	11/5/24	QC77346	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	11/5/24	QC77346	AMJ
Zinc	**0.199 mg/L**	EPA 200.8	0.001	0.00003	11/5/24	QC77346	AMJ
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	11/6/24	QC77384	JJA
Lead	**0.0019 mg/L**	EPA 200.8	0.0001	0.000006	11/5/24	QC77346	AMJ
Total Recoverable							
Iron	**0.179 mg/L**	EPA 200.7	0.005	0.0005	11/5/24	QC77347	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241101009

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.: 241101009
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 11/1/24
Date Reported: 11/8/24
Matrix: Water

Customer Sample ID CBOF
Sample Date/Time: 10/31/24 12:00 PM
Lab Number: 241101009-02

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	11/5/24	QC77352	KRB
pH	**7.81 units**	SM 4500-H-B	0.01	0.01	11/1/24	-	ARH
Total Dissolved Solids	**1069 mg/L**	SM 2540-C	5	2	11/6/24	QC77364	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	11/4/24	QC77311	RLP
Potentially Dissolved							
Cadmium	**0.0009 mg/L**	EPA 200.8	0.0001	0.000006	11/5/24	QC77346	AMJ
Copper	**0.0081 mg/L**	EPA 200.8	0.0008	0.00001	11/5/24	QC77346	AMJ
Lead	**0.0009 mg/L**	EPA 200.8	0.0001	0.000006	11/5/24	QC77346	AMJ
Manganese	**0.0784 mg/L**	EPA 200.8	0.0008	0.00001	11/5/24	QC77346	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	11/5/24	QC77346	AMJ
Zinc	**0.214 mg/L**	EPA 200.8	0.001	0.00003	11/5/24	QC77346	AMJ
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	11/6/24	QC77384	JJA
Lead	**0.0018 mg/L**	EPA 200.8	0.0001	0.000006	11/5/24	QC77346	AMJ
Total Recoverable							
Iron	**0.170 mg/L**	EPA 200.7	0.005	0.0005	11/5/24	QC77347	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241101009

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.: 241101009
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 11/1/24
Date Reported: 11/8/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 10/31/24 1:00 PM
Lab Number: 241101009-03

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	11/5/24	QC77352	KRB
pH	**7.76 units**	SM 4500-H-B	0.01	0.01	11/1/24	-	ARH
Total Dissolved Solids	**246 mg/L**	SM 2540-C	5	2	11/6/24	QC77364	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	11/4/24	QC77311	RLP
Potentially Dissolved							
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	11/5/24	QC77346	AMJ
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	11/5/24	QC77346	AMJ
Lead	**0.0005 mg/L**	EPA 200.8	0.0001	0.000006	11/5/24	QC77346	AMJ
Manganese	**0.1200 mg/L**	EPA 200.8	0.0008	0.00001	11/5/24	QC77346	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	11/5/24	QC77346	AMJ
Zinc	**0.085 mg/L**	EPA 200.8	0.001	0.00003	11/5/24	QC77346	AMJ
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	11/6/24	QC77384	JJA
Lead	**0.0009 mg/L**	EPA 200.8	0.0001	0.000006	11/5/24	QC77346	AMJ
Total Recoverable							
Iron	**0.033 mg/L**	EPA 200.7	0.005	0.0005	11/5/24	QC77347	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 241101009

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 11/1/24
Project Name: CDPS Bi Monthly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC77352	Blank	ND	ASTM 2036-09C	11/5/24
Mercury	QC77384	Method Blank	ND	EPA 245.7	11/6/24
Cadmium	QC77346	Method Blank	ND	EPA 200.8	11/1/24
Copper	QC77346	Method Blank	ND	EPA 200.8	11/1/24
Lead	QC77346	Method Blank	ND	EPA 200.8	11/1/24
Manganese	QC77346	Method Blank	ND	EPA 200.8	11/1/24
Silver	QC77346	Method Blank	ND	EPA 200.8	11/1/24
Zinc	QC77346	Method Blank	ND	EPA 200.8	11/1/24
Iron	QC77347	Method Blank	ND	EPA 200.7	11/1/24
Total Dissolved Solids	QC77364	Blank	ND	SM 2540-C	11/5/24
Total Suspended Solids	QC77311	Blank	ND	SM 2540-D	11/4/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC77352	Duplicate -241104107-01	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	99.4	-	
		MS -241029035-02	75 - 125	103.5	-	
Mercury	QC77384	Duplicate -241031063-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	96.8	-	
		MS -241031063-01B	80 - 120	88.0	-	
Cadmium	QC77346	LCS	90 - 110	99.5	-	EPA 200.8
		MS -241101006-05	70 - 130	99.0	-	
		MSD -241101006-05	0 - 10	-	2.4	
Copper	QC77346	LCS	90 - 110	101.5	-	EPA 200.8
		MS -241101006-05	70 - 130	105.0	-	
		MSD -241101006-05	0 - 10	-	0.3	
Lead	QC77346	LCS	90 - 110	102.7	-	EPA 200.8
		MS -241101006-05	70 - 130	101.4	-	
		MSD -241101006-05	0 - 10	-	6.4	
Manganese	QC77346	LCS	90 - 110	102.2	-	EPA 200.8
		MS -241101006-05	70 - 130	106.6	-	
		MSD -241101006-05	0 - 10	-	0.1	
Silver	QC77346	LCS	90 - 110	100.2	-	EPA 200.8
		MS -241101006-05	70 - 130	82.9	-	
		MSD -241101006-05	0 - 10	-	4.8	
Zinc	QC77346	LCS	90 - 110	100.8	-	EPA 200.8
		MS -241101006-05	70 - 130	104.2	-	
		MSD -241101006-05	0 - 10	-	1.2	
Iron	QC77347	Duplicate -241101009-02	0 - 20	-	3.0	EPA 200.7
		LCS	90 - 110	104.9	-	
		MS -241101008-01B	75 - 125	102.1	-	
Total Dissolved Solids	QC77364	Duplicate -241031117-01	0 - 10	-	6.5	SM 2540-C

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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		LCS	85 - 115	102.8	-	
Total Suspended Solids	QC77311	Duplicate -241101010-01	0 - 10	-	6.1	SM 2540-D
		LCS	90 - 110	92.3	-	

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.

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services

Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Attn: **CJ Dickerson**

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

CAL Task
241101009

RMB

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TDS	SM 2540-C	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease	EPA 1664 (B)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

Bi-Monthly - Hg-Total

$664.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

Company: Thorin Resources

Contact Name: CJ Dickerson

Address: 1900 Main St Unit 1

City Ouray State Co Zip 81427

Phone: (602) 793-1321

Email: cjdickerson@thorinresources.com

Sample Collector:

Sample Collector Phone:

Company:

Contact Name:

Address:

City State Zip

Phone:

Email:

PO No.:

Turnaround Time (Lab Use Only)

CAL Task 241101009

RMB

Commerce City Lab
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

Sample Matrix (Select One Only)

Waste Water [X] Soil [ ] Drinking Water [ ]
Ground Water [ ] Sludge [ ]
Surface Water [ ]

Date	Time	Sample ID	No. of Containers	Grab or Composite	8260 23110033	Tests Requested
10/31	11:00	CB_UGO1	3	X	X	
10/31	12:00	CB_OF	3	X	X	
10/31	13:00	OFBDZA	3	X	X	

No oil/grease rcd

(a)

Instructions: Please Preserve Bottles

C/S Info:

Deliver Via: UPS

C/S Charge [X] 5

Seals Present Yes [ ] No [ ]

Temp. 2 °C/Ice Y Sample Pres. Yes [X] No [ ]

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	[illegible] 1330p					Adams	11/1/24 800

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241119018

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.: 241119018
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 11/19/24
Date Reported: 11/27/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 11/18/24 11:00 AM
Lab Number: 241119018-01

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	11/26/24	QC77873	KRB
pH	**7.48 units**	SM 4500-H-B	0.01	0.01	11/19/24	-	KRI
Total Dissolved Solids	**242 mg/L**	SM 2540-C	5	2	11/21/24	QC77748	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	11/20/24	QC77721	ISG
Potentially Dissolved							
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	11/21/24	QC77781	JJA
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	11/21/24	QC77781	JJA
Lead	**0.0009 mg/L**	EPA 200.8	0.0001	0.000006	11/21/24	QC77781	JJA
Manganese	**0.1382 mg/L**	EPA 200.8	0.0008	0.00001	11/21/24	QC77781	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	11/21/24	QC77781	JJA
Zinc	**0.109 mg/L**	EPA 200.8	0.001	0.00003	11/21/24	QC77781	JJA
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	11/21/24	QC77789	JJA
Lead	**0.0009 mg/L**	EPA 200.8	0.0001	0.000006	11/21/24	QC77781	JJA
Total Recoverable							
Iron	**0.027 mg/L**	EPA 200.7	0.005	0.0005	11/21/24	QC77779	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 241119018

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 11/19/24
Project Name: CDPS Bi Monthly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC77873	Blank	ND	ASTM 2036-09C	11/26/24
Mercury	QC77789	Method Blank	ND	EPA 245.7	11/21/24
	QC77789	Method Blank	ND	EPA 245.7	11/21/24
Cadmium	QC77781	Method Blank	ND	EPA 200.8	11/19/24
Copper	QC77781	Method Blank	ND	EPA 200.8	11/19/24
Lead	QC77781	Method Blank	ND	EPA 200.8	11/19/24
Manganese	QC77781	Method Blank	ND	EPA 200.8	11/19/24
Silver	QC77781	Method Blank	ND	EPA 200.8	11/19/24
Zinc	QC77781	Method Blank	ND	EPA 200.8	11/19/24
Iron	QC77779	Method Blank	ND	EPA 200.7	11/19/24
Total Dissolved Solids	QC77748	Blank	ND	SM 2540-C	11/20/24
Total Suspended Solids	QC77721	Blank	ND	SM 2540-D	11/20/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC77873	Duplicate -241121118-01	0 - 20	-	18.2	ASTM 2036-09C
		LCS	90 - 110	97.6	-	
		MS -241119018-01E	75 - 125	90.5	-	
Mercury	QC77789	Duplicate -241114017-03	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	106.2	-	
		MS -241114017-03B	80 - 120	92.0	-	
Cadmium	QC77781	LCS	90 - 110	108.5	-	EPA 200.8
		MS -241119003-01	70 - 130	97.5	-	
		MSD -241119003-01	0 - 10	-	0.9	
Copper	QC77781	LCS	90 - 110	100.1	-	EPA 200.8
		MS -241119003-01	70 - 130	102.4	-	
		MSD -241119003-01	0 - 10	-	0.6	
Lead	QC77781	LCS	90 - 110	109.9	-	EPA 200.8
		MS -241119003-01	70 - 130	94.9	-	
		MSD -241119003-01	0 - 10	-	0.7	
Manganese	QC77781	LCS	90 - 110	101.2	-	EPA 200.8
		MS -241119003-01	70 - 130	99.2	-	
		MSD -241119003-01	0 - 10	-	2.0	
Silver	QC77781	LCS	90 - 110	106.1	-	EPA 200.8
		MS -241119003-01	70 - 130	72.0	-	
		MSD -241119003-01	0 - 10	-	6.1	
Zinc	QC77781	LCS	90 - 110	100.8	-	EPA 200.8
		MS -241119003-01	70 - 130	93.1	-	
		MSD -241119003-01	0 - 10	-	4.6	
Iron	QC77779	Duplicate -241119005-06	0 - 20	-	1.8	EPA 200.7
		LCS	90 - 110	101.4	-	
		MS -241119018-01C	75 - 125	93.2	-	

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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Dissolved Solids	QC77748	Duplicate -241119027-01	0 - 10	-	0.1	SM 2540-C
		LCS	85 - 115	98.0	-	
Total Suspended Solids	QC77721	Duplicate -241119061-01	0 - 10	-	5.1	SM 2540-D
		LCS	90 - 110	90.6	-	

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.

email: cjdickerson@thorinresources.com **Chain of Custody Form**

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 L 1	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 241119018 RMB
Phone: (602) 793-1321	Phone:	
Email: ~~cjdickerson~~	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or (Check One Only) Composite	Tests Requested: QB0231/0033
11/18	11:00a	OF00ZA	3	X	+
		O/G container not rcd. TDS container not rcd, will aliquot @ lab. RB 11/19/24 (3)			

Instructions: Please Return Bottles

C/S Info:
Deliver Via: UPS C/S Charge ☒ $

Seals Present Yes ☐ No ☐
Temp. 4 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	11/18 4:00p					Adams	11/19/24

Colorado Analytical LABORATORIES, INC.

CAL Task 241119018

RMB

Quotation for Analytical Services

Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Attn: **CJ Dickerson**

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TDS - not rcd	SM 2540-C	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease — not rcd	EPA 1664 (B)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

Bi-Monthly - Hg-Total **$664.00**

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

JML

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241126020

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.: 241126020
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 11/26/24
Date Reported: 12/6/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 11/25/24 9:21 AM
Lab Number: 241126020-01

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	11/27/24	QC77895	KRB
pH	**7.56 units**	SM 4500-H-B	0.01	0.01	11/26/24	-	ARH
Total Dissolved Solids	**224 mg/L**	SM 2540-C	5	2	11/26/24	QC77877	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	11/26/24	QC77866	ISG
Potentially Dissolved							
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	12/3/24	QC77959	AMJ
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	12/3/24	QC77959	AMJ
Lead	**0.0007 mg/L**	EPA 200.8	0.0001	0.000006	12/3/24	QC77959	AMJ
Manganese	**0.1176 mg/L**	EPA 200.8	0.0008	0.00001	12/3/24	QC77959	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	12/3/24	QC77959	AMJ
Zinc	**0.097 mg/L**	EPA 200.8	0.001	0.00003	12/3/24	QC77959	AMJ
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	12/5/24	QC78039	JJA
Lead	**0.0008 mg/L**	EPA 200.8	0.0001	0.000006	12/3/24	QC77959	AMJ
Total Recoverable							
Iron	**0.028 mg/L**	EPA 200.7	0.005	0.0005	12/2/24	QC77921	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 241126020

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 11/26/24
Project Name: CDPS Bi Monthly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC77895	Blank	ND	ASTM 2036-09C	11/27/24
Mercury	QC78039	Method Blank	ND	EPA 245.7	12/5/24
	QC78039	Method Blank	ND	EPA 245.7	12/5/24
Cadmium	QC77959	Method Blank	ND	EPA 200.8	11/26/24
Copper	QC77959	Method Blank	ND	EPA 200.8	11/26/24
Lead	QC77959	Method Blank	ND	EPA 200.8	11/26/24
Manganese	QC77959	Method Blank	ND	EPA 200.8	11/26/24
Silver	QC77959	Method Blank	ND	EPA 200.8	11/26/24
Zinc	QC77959	Method Blank	ND	EPA 200.8	11/26/24
Iron	QC77921	Method Blank	ND	EPA 200.7	11/26/24
Total Dissolved Solids	QC77877	Blank	ND	SM 2540-C	11/26/24
Total Suspended Solids	QC77866	Blank	ND	SM 2540-D	11/26/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC77895	Duplicate -241126145-01	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	96.9	-	
		MS -241126006-02	75 - 125	94.5	-	
Mercury	QC78039	Duplicate -241126157-02	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	108.0	-	
		MS -241126157-02C	80 - 120	102.0	-	
Cadmium	QC77959	LCS	90 - 110	95.3	-	EPA 200.8
		MS -241126002-01	70 - 130	108.2	-	
		MSD -241126002-01	0 - 10	-	1.3	
Copper	QC77959	LCS	90 - 110	90.4	-	EPA 200.8
		MS -241126002-01	70 - 130	96.5	-	
		MSD -241126002-01	0 - 10	-	0.3	
Lead	QC77959	LCS	90 - 110	99.3	-	EPA 200.8
		MS -241126002-01	70 - 130	89.1	-	
		MSD -241126002-01	0 - 10	-	1.0	
Manganese	QC77959	LCS	90 - 110	101.3	-	EPA 200.8
		MS -241126002-01	70 - 130	108.3	-	
		MSD -241126002-01	0 - 10	-	0.1	
Silver	QC77959	LCS	90 - 110	101.3	-	EPA 200.8
		MS -241126002-01	70 - 130	96.4	-	
		MSD -241126002-01	0 - 10	-	1.7	
Zinc	QC77959	LCS	90 - 110	105.0	-	EPA 200.8
		MS -241126002-01	70 - 130	120.8	-	
		MSD -241126002-01	0 - 10	-	0.9	
Iron	QC77921	Duplicate -241126024-01	0 - 20	-	2.0	EPA 200.7
		LCS	90 - 110	108.1	-	
		MS -241126002-01	75 - 125	114.0	-	

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mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

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(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

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Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Dissolved Solids	QC77877	Duplicate -241125152-04	0 - 10	-	3.0	SM 2540-C
		LCS	85 - 115	98.5	-	
Total Suspended Solids	QC77866	Duplicate -241126014-01	0 - 10	-	8.9	SM 2540-D
		LCS	90 - 110	95.7	-	

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.



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

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ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 1	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81401	City State Zip	CAL Task 241126020 RMB
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)		Tests Requested: QBO2311(033
11/25	09:21	OFØØ2A	3	X		X
O/G	container not received.					
TDS	container not received, will aliquot @ lab. RB 11/26/24					

3

Instructions: Please Return Bottles

C/S Info:
Deliver Via: UPS
C/S Charge ☒ 5

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	11/25 01:30?					Adams	11/26/24 813

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services

Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Attn: **CJ Dickerson**

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

CAL Task
241126020

RMB

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TDS - not rcd	SM 2540-C	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease - not rcd	EPA 1664 (B)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

Bi-Monthly - Hg-Total

$664.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

JML

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241210008

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.: 241210008
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 12/10/24
Date Reported: 12/17/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 12/9/24 11:45 AM
Lab Number: 241210008-01

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	12/11/24	QC78183	KRB
pH	**7.36 units**	SM 4500-H-B	0.01	0.01	12/10/24	-	ARH
Total Dissolved Solids	**265 mg/L**	SM 2540-C	5	2	12/11/24	QC78158	KRI
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	12/10/24	QC78146	ARH
Potentially Dissolved							
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	12/11/24	QC78187	AMJ
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	12/11/24	QC78187	AMJ
Lead	**0.0008 mg/L**	EPA 200.8	0.0001	0.000006	12/11/24	QC78187	AMJ
Manganese	**0.0764 mg/L**	EPA 200.8	0.0008	0.00001	12/11/24	QC78187	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	12/11/24	QC78187	AMJ
Zinc	**0.077 mg/L**	EPA 200.8	0.001	0.00003	12/11/24	QC78187	AMJ
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	12/13/24	QC78237	MBN
Lead	**0.0013 mg/L**	EPA 200.8	0.0001	0.000006	12/11/24	QC78187	AMJ
Total Recoverable							
Iron	**0.028 mg/L**	EPA 200.7	0.005	0.0005	12/12/24	QC78215	JJA

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241210008

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.: 241210008
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 12/10/24
Date Reported: 12/17/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 12/9/24 11:45 AM
Lab Number: 241210008-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Dissolved Solids	**256 mg/L**	SM 2540-C	5	2	12/11/24	QC78158	KRI
Dissolved							
Chromium - Hexavalent	**ND mg/L**	SM 3500-Cr B	0.02	0.01	12/11/24	QC78180	NRP
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	12/16/24	QC78266	NRP
Cadmium	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	12/11/24	QC78187	AMJ
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	12/11/24	QC78187	AMJ
Zinc	**0.073 mg/L**	EPA 200.8	0.001	0.00003	12/11/24	QC78187	AMJ
Total Recoverable							
Chromium - Trivalent	**ND mg/L**	Calculation	0.02	0.01	12/17/24	-	MBN
Arsenic	**0.0014 mg/L**	EPA 200.8	0.0006	0.00006	12/11/24	QC78187	AMJ
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	12/11/24	QC78187	AMJ

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.

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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241210008

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.: 241210008
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 12/10/24
Date Reported: 12/17/24
Matrix: Water

Customer Sample ID Hg LL Field Blank
Sample Date/Time: 12/9/24 11:45 AM
Lab Number: 241210008-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	12/16/24	QC78266	NRP

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

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ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 241210008

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 12/10/24
Project Name: CDPS Bi Monthly and Quarterly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Chromium - Hexavalent	QC78180	Blank	ND	SM 3500-Cr B	12/11/24
Cyanide-Weak Acid Dissociable	QC78183	Blank	ND	ASTM 2036-09C	12/11/24
Mercury	QC78237	Method Blank	ND	EPA 245.7	12/13/24
	QC78266	Method Blank	ND	EPA 245.7	12/16/24
Arsenic	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Cadmium	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Chromium	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Copper	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Lead	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Manganese	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Silver	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Zinc	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Iron	QC78215	Method Blank	ND	EPA 200.7	12/10/24
Total Dissolved Solids	QC78158	Blank	ND	SM 2540-C	12/10/24
Total Suspended Solids	QC78146	Blank	ND	SM 2540-D	12/10/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chromium - Hexavalent	QC78180	Duplicate -241204066-01	0 - 20	-	0.0	SM 3500-Cr B
		LCS	90 - 110	99.5	-	
Cyanide-Weak Acid Dissociable	QC78183	Duplicate -241204104-02	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	104.4	-	
		MS -241205104-04A	75 - 125	95.0	-	
Mercury	QC78237	Duplicate -241205071-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	101.4	-	
		MS -241205071-01A	80 - 120	100.0	-	
Mercury	QC78266	LCS	76 - 113	99.0	-	EPA 245.7
		MS -241210100-02	63 - 111	86.0	-	
		MSD -241210100-02	0 - 18	-	0.0	
Arsenic	QC78187	LCS	90 - 110	104.9	-	EPA 200.8
		MS -241210006-01	70 - 130	92.7	-	
		MSD -241210006-01	0 - 10	-	8.0	
Cadmium	QC78187	LCS	90 - 110	99.1	-	EPA 200.8
		MS -241210006-01	70 - 130	94.3	-	
		MSD -241210006-01	0 - 10	-	5.0	
Chromium	QC78187	LCS	90 - 110	104.0	-	EPA 200.8
		MS -241210006-01	70 - 130	92.2	-	
		MSD -241210006-01	0 - 10	-	7.1	
Copper	QC78187	LCS	90 - 110	105.3	-	EPA 200.8
		MS -241210006-01	70 - 130	98.6	-	
		MSD -241210006-01	0 - 10	-	2.0	
Lead	QC78187	LCS	90 - 110	104.2	-	EPA 200.8

Abbreviations/ References:

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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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -241210006-01	70 - 130	93.0	-	
		MSD -241210006-01	0 - 10	-	8.1	
Manganese	QC78187	LCS	90 - 110	105.7	-	EPA 200.8
		MS -241210006-01	70 - 130	113.3	-	
		MSD -241210006-01	0 - 10	-	0.4	
Silver	QC78187	LCS	90 - 110	101.4	-	EPA 200.8
		MS -241210006-01	70 - 130	97.5	-	
		MSD -241210006-01	0 - 10	-	5.4	
Zinc	QC78187	LCS	90 - 110	109.6	-	EPA 200.8
		MS -241210006-01	70 - 130	117.7	-	
		MSD -241210006-01	0 - 10	-	0.1	
Iron	QC78215	Duplicate -241210012-01	0 - 20	-	0.7	EPA 200.7
		LCS	90 - 110	104.0	-	
		MS -241210006-01D	75 - 125	109.1	-	
Total Dissolved Solids	QC78158	Duplicate -241210029-02	0 - 10	-	0.4	SM 2540-C
		LCS	85 - 115	100.1	-	
Total Suspended Solids	QC78146	Duplicate -241210020-01	0 - 10	-	7.0	SM 2540-D
		LCS	90 - 110	91.4	-	

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 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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 01	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	CAL Task 241210008 CJF
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: Andrew Skibo		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

- **Water** ☐ **(CWA / NPDES)** Includes wastewater, non-potable samples not intended for drinking water use.
- **Drinking Water** ☐ **(SDWA)** Includes finished drinking water, raw (untreated) water samples intended for human consumption.
- **Solid (Sludge)** ☐ **(503 Regs / RCRA/ SW-846)**

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Tests Requested: Q8023110033	Q8023110034	Q8023110976
12/9	11:45	OFOO2A	3	X	X		
12/9	11:45	OFOO2A	5	X		X	
12/9	10:28	LG-5	5	X			X
12/9	10:52	LG-2	5	X			X
12/9	11:18	LG-8	5	X			X

*NO oil/grease Red.

Low Level Hg - HCl Preserved Bottle
Lot # U-4-076-02AB
Sample ID: OFOO2A
Initials: JA Date: 12/10/24

23 + blank

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.
Initials: C.F. Date: 12/10/24

Instructions: Please Return Bottles

C/S Info:
Deliver Via: UPS
C/S Charge ☒ 5

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	4:45p					Adams	12/10/24

823

Colorado Analytical LABORATORIES, INC.

CAL Task
241210008

CJF

Quotation for Analytical Services
Quote ID: QBO23110034

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Quart WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Cr - Tri	Calculation	1	$0.00	$0.00
Water - Ground	As - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cd - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cu - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	TDS	SM 2540-C	1	$16.00	$16.00
Water - Ground	Zn - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - Hex	SM 3500-Cr B	1	$40.00	$40.00
Water - Ground	Hg LL	EPA 245.7	1	$52.00	$52.00
Water - Ground	Hg LL Field Blank	EPA 245.7	1	$52.00	$52.00
Shipping	Cooler Shipment - UPS	UPS	1	$30.00	$30.00

$270.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313

JML

CAL Task
241210008
CJF

Colorado Analytical
LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TDS	SM 2540-C	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease	EPA 1664 (B)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

Bi-Monthly - Hg-Total

$664.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241220006

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.: 241220006
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 12/20/24
Date Reported: 12/31/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 12/18/24 12:00 PM
Lab Number: 241220006-01

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	12/26/24	QC78500	KRB
pH	**7.62 units**	SM 4500-H-B	0.01	0.01	12/20/24	-	ARH
Total Dissolved Solids	**270 mg/L**	SM 2540-C	5	2	12/24/24	QC78477	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	12/23/24	QC78422	ISG
Potentially Dissolved							
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	12/27/24	QC78514	AMJ
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	12/27/24	QC78514	AMJ
Lead	**0.0007 mg/L**	EPA 200.8	0.0001	0.000006	12/27/24	QC78514	AMJ
Manganese	**0.0846 mg/L**	EPA 200.8	0.0008	0.00001	12/27/24	QC78514	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	12/27/24	QC78514	AMJ
Zinc	**0.065 mg/L**	EPA 200.8	0.001	0.00003	12/27/24	QC78514	AMJ
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	12/24/24	QC78472	JJA
Lead	**0.0007 mg/L**	EPA 200.8	0.0001	0.000006	12/27/24	QC78514	AMJ
Total Recoverable							
Iron	**0.024 mg/L**	EPA 200.7	0.005	0.0005	12/27/24	QC78515	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 241220006

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 12/20/24
Project Name: CDPS Bi Monthly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC78500	Blank	ND	ASTM 2036-09C	12/26/24
Mercury	QC78472	Method Blank	ND	EPA 245.7	12/24/24
	QC78472	Method Blank	ND	EPA 245.7	12/24/24
Cadmium	QC78514	Method Blank	ND	EPA 200.8	12/20/24
Copper	QC78514	Method Blank	ND	EPA 200.8	12/20/24
Lead	QC78514	Method Blank	ND	EPA 200.8	12/20/24
Manganese	QC78514	Method Blank	ND	EPA 200.8	12/20/24
Silver	QC78514	Method Blank	ND	EPA 200.8	12/20/24
Zinc	QC78514	Method Blank	ND	EPA 200.8	12/20/24
Iron	QC78515	Method Blank	ND	EPA 200.7	12/20/24
Total Dissolved Solids	QC78477	Blank	ND	SM 2540-C	12/24/24
Total Suspended Solids	QC78422	Blank	ND	SM 2540-D	12/23/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC78500	Duplicate -241219099-01	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	98.9	-	
		MS -241220006-01E	75 - 125	92.5	-	
Mercury	QC78472	Duplicate -241219060-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	103.4	-	
		MS -241219060-01D	80 - 120	94.0	-	
Cadmium	QC78514	LCS	90 - 110	100.0	-	EPA 200.8
		MS -241220003-05	70 - 130	101.9	-	
		MSD -241220003-05	0 - 10	-	0.3	
Copper	QC78514	LCS	90 - 110	98.3	-	EPA 200.8
		MS -241220003-05	70 - 130	117.0	-	
		MSD -241220003-05	0 - 10	-	1.7	
Lead	QC78514	LCS	90 - 110	102.3	-	EPA 200.8
		MS -241220003-05	70 - 130	105.2	-	
		MSD -241220003-05	0 - 10	-	2.9	
Manganese	QC78514	LCS	90 - 110	98.4	-	EPA 200.8
		MS -241220003-05	70 - 130	121.2	-	
		MSD -241220003-05	0 - 10	-	0.9	
Silver	QC78514	LCS	90 - 110	109.1	-	EPA 200.8
		MS -241220003-05	70 - 130	96.0	-	
		MSD -241220003-05	0 - 10	-	0.9	
Zinc	QC78514	LCS	90 - 110	102.6	-	EPA 200.8
		MS -241220003-05	70 - 130	94.3	-	
		MSD -241220003-05	0 - 10	-	1.3	
Iron	QC78515	Duplicate -241220002-02	0 - 20	-	6.5	EPA 200.7
		LCS	90 - 110	100.1	-	
		MS -241220006-01C	75 - 125	99.8	-	

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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Dissolved Solids	QC78477	Duplicate -241224019-01	0 - 10	-	0.8	SM 2540-C
		LCS	85 - 115	95.6	-	
Total Suspended Solids	QC78422	Duplicate -241219107-01	0 - 10	-	6.6	SM 2540-D
		LCS	90 - 110	93.8	-	

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 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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Thorin Resources	Company Name:	
Contact Name: CJ Dicherson	Contact Name:	
Address: 1900 Main St. Unit 1	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	CAL Task 241220006 LMG
Phone: (602) 793-1321	Phone:	
Email: cjdicherson@thorinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

- **Water ☐ (CWA / NPDES)** Includes wastewater, non-potable samples not intended for drinking water use.
- **Drinking Water ☐ (SDWA)** Includes finished drinking water, raw (untreated) water samples intended for human consumption.
- **Solid (Sludge) ☐ (503 Regs / RCRA/ SW-846)**

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	QB0231100033	Tests Requested
12/18	12:00	OF002A	3	+	X	
		Per history O/G not needed no 1L amber received	3			
		will aliquot in lab for TDS -LO 12/20/24				

Instructions: Please Return Bottles

C/S Info:

Deliver Via: UPS

C/S Charge ☒ 5

Seals Present Yes ☐ No ☐

Temp. 1 °C/Ice Y

Sample Pres. Yes ☐ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
~~CJ Dicherson~~	~~12/18 3:30p~~					KA	12/20/24

CJ Dicherson 12/18 3:45

858

CAL Task
241220006

LMG

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Attn: **CJ Dickerson**

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TDS	SM 2540-C	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease	EPA 1664 (B)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

Bi-Monthly - Hg-Total

$664.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240319008

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.: 240319008
Client PO:
Client Project: CDPS Quart WW

Date Received: 3/19/24
Date Reported: 3/29/24
Matrix: Wastewater

Customer Sample ID OF002A - CDPS Quart WW
Sample Date/Time: 3/18/24 11:00 AM
Lab Number: 240319008-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Chromium - Hexavalent	**ND mg/L**	SM 3500-Cr B	0.02	0.01	3/27/24	QC72233	AMJ
Total Dissolved Solids	**283 mg/L**	SM 2540-C	5	2	3/21/24	QC72088	ISG
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	3/20/24	QC72097	NRP
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	3/20/24	QC72096	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	3/20/24	QC72096	MBN
Zinc	**0.057 mg/L**	EPA 200.8	0.001	0.00003	3/20/24	QC72096	MBN
Total Recoverable							
Chromium - Trivalent	**ND mg/L**	Calculation	0.02	0.01	3/29/24	-	MBN
Arsenic	**0.0008 mg/L**	EPA 200.8	0.0006	0.00006	3/20/24	QC72096	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	3/20/24	QC72096	MBN

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.

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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240319008

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.: 240319008
Client PO:
Client Project: CDPS Quart WW

Date Received: 3/19/24
Date Reported: 3/29/24
Matrix: Wastewater

Customer Sample ID Hg LL Field Blank
Sample Date/Time: 3/18/24 11:00 AM
Lab Number: 240319008-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	3/20/24	QC72097	NRP

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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240319008

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 3/19/24
Project Name: CDPS Quart WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Chromium - Hexavalent	QC72233	Blank	ND	SM 3500-Cr B	3/27/24
Mercury	QC72097	Method Blank	ND	EPA 245.7	3/20/24
Arsenic	QC72096	Method Blank	ND	EPA 200.8	3/19/24
Cadmium	QC72096	Method Blank	ND	EPA 200.8	3/19/24
Chromium	QC72096	Method Blank	ND	EPA 200.8	3/19/24
Copper	QC72096	Method Blank	ND	EPA 200.8	3/19/24
Zinc	QC72096	Method Blank	ND	EPA 200.8	3/19/24
Total Dissolved Solids	QC72088	Blank	ND	SM 2540-C	3/20/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chromium - Hexavalent	QC72233	Duplicate	0 - 20	-	12.8	SM 3500-Cr B
		LCS	90 - 110	98.6	-	
Mercury	QC72097	LCS	76 - 113	107.0	-	EPA 245.7
		MS	63 - 111	67.0	-	
		MSD	0 - 18	-	3.0	
Arsenic	QC72096	LCS	90 - 110	103.8	-	EPA 200.8
		MS	70 - 130	96.7	-	
		MSD	0 - 10	-	5.8	
Cadmium	QC72096	LCS	90 - 110	101.9	-	EPA 200.8
		MS	70 - 130	91.2	-	
		MSD	0 - 10	-	6.6	
Chromium	QC72096	LCS	90 - 110	107.0	-	EPA 200.8
		MS	70 - 130	104.5	-	
		MSD	0 - 10	-	2.5	
Copper	QC72096	LCS	90 - 110	102.9	-	EPA 200.8
		MS	70 - 130	96.9	-	
		MSD	0 - 10	-	4.4	
Zinc	QC72096	LCS	90 - 110	103.7	-	EPA 200.8
		MS	70 - 130	114.3	-	
		MSD	0 - 10	-	7.1	
Total Dissolved Solids	QC72088	Duplicate	0 - 10	-	1.5	SM 2540-C
		LCS	85 - 115	103.6	-	

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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 1	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240319008
Phone: 970 316-2294	Phone:	
Email: cjdickerson@thorinresources.com	Email:	CJF
Sample Collector: CJ Dickerson		
Sample Collector Phone: (602) 793-1321	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or (Check One Only) Composite	Tests Requested: COPS-Quart-WW
3/18	11:00a	OF002A-COPS Quart WW	5	X	X

471

Low Level Hg - HCl Preserved Bottle
Lot #: U-3-333-0SAB
Sample ID: OF002A-COPS
Initials: KA Date: 3/19

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.
Initials: C.F. Date: 3/19/24

Instructions: Logged per Quote QB0323/1/0324 CF 3/19/24

C/S Info:
Deliver Via: UPS
C/S Charge ☐ S

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y
Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	3/18 13:30p					KA	3/19/24

844

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240507001

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.: 240507001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 5/7/24
Date Reported: 5/17/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 5/6/24 10:10 AM
Lab Number: 240507001-01

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	5/10/24	QC73292	KRB
pH	**7.76 units**	SM 4500-H-B	0.01	0.01	5/7/24	-	KRI
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	5/8/24	QC73212	ISG
Potentially Dissolved							
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	5/9/24	QC73273	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	5/9/24	QC73273	MBN
Lead	**0.0018 mg/L**	EPA 200.8	0.0001	0.000006	5/9/24	QC73273	MBN
Manganese	**0.0520 mg/L**	EPA 200.8	0.0008	0.00001	5/9/24	QC73273	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	5/9/24	QC73273	MBN
Zinc	**0.031 mg/L**	EPA 200.8	0.001	0.00003	5/9/24	QC73273	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	5/9/24	QC73280	JJA
Lead	**0.0019 mg/L**	EPA 200.8	0.0001	0.000006	5/9/24	QC73273	MBN
Total Recoverable							
Iron	**0.072 mg/L**	EPA 200.7	0.005	0.0005	5/9/24	QC73257	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240507001

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.: 240507001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 5/7/24
Date Reported: 5/17/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 5/6/24 10:00 AM
Lab Number: 240507001-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Dissolved Solids	**227 mg/L**	SM 2540-C	5	2	5/8/24	QC73202	ISG
Dissolved							
Chromium - Hexavalent	**ND mg/L**	SM 3500-Cr B	0.02	0.01	5/16/24	QC73406	AMJ
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	5/8/24	QC73249	NRP
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	5/9/24	QC73273	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	5/9/24	QC73273	MBN
Zinc	**0.031 mg/L**	EPA 200.8	0.001	0.00003	5/9/24	QC73273	MBN
Total Recoverable							
Chromium - Trivalent	**ND mg/L**	Calculation	0.02	0.01	5/15/24	-	MBN
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	5/9/24	QC73273	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	5/9/24	QC73273	MBN

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.

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

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ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240507001

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.: 240507001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 5/7/24
Date Reported: 5/17/24
Matrix: Wastewater

Customer Sample ID Hg LL Field Blank
Sample Date/Time: 5/6/24 10:00 AM
Lab Number: 240507001-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	5/8/24	QC73249	NRP

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

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ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240507001

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 5/7/24
Project Name: CDPS Bi Monthly and Quarterly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Chromium - Hexavalent	QC73406	Blank	ND	SM 3500-Cr B	5/14/24
Cyanide-Weak Acid Dissociable	QC73292	Blank	ND	ASTM 2036-09C	5/9/24
Mercury	QC73280	Method Blank	ND	EPA 245.7	5/9/24
	QC73249	Method Blank	ND	EPA 245.7	5/8/24
Arsenic	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Cadmium	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Chromium	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Copper	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Lead	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Manganese	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Silver	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Zinc	QC73273	Method Blank	ND	EPA 200.8	5/7/24
Iron	QC73257	Method Blank	ND	EPA 200.7	5/7/24
Total Dissolved Solids	QC73202	Blank	ND	SM 2540-C	5/7/24
Total Suspended Solids	QC73212	Blank	ND	SM 2540-D	5/8/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chromium - Hexavalent	QC73406	Duplicate -240507001-02	0 - 20	-	0.0	SM 3500-Cr B
		LCS	90 - 110	99.5	-	
Cyanide-Weak Acid Dissociable	QC73292	Duplicate -240507129-02	0 - 20	-	16.7	ASTM 2036-09C
		LCS	90 - 110	90.1	-	
		MS -240507001-01D	75 - 125	75.5	-	
Mercury	QC73280	Duplicate -240503044-23	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	106.0	-	
		MS -240503044-23	80 - 120	90.0	-	
Mercury	QC73249	LCS	76 - 113	89.0	-	EPA 245.7
		MS -240502131-01B	63 - 111	87.0	-	
		MSD -240502131-01B	0 - 18	-	14.4	
Arsenic	QC73273	LCS	90 - 110	94.6	-	EPA 200.8
		MS -240507001-01A	70 - 130	112.1	-	
		MSD -240507001-01A	0 - 10	-	0.8	
Cadmium	QC73273	LCS	90 - 110	95.6	-	EPA 200.8
		MS -240507001-01A	70 - 130	105.6	-	
		MSD -240507001-01A	0 - 10	-	0.7	
Chromium	QC73273	LCS	90 - 110	104.7	-	EPA 200.8
		MS -240507001-01A	70 - 130	106.3	-	
		MSD -240507001-01A	0 - 10	-	0.7	
Copper	QC73273	LCS	90 - 110	94.5	-	EPA 200.8
		MS -240507001-01A	70 - 130	101.9	-	
		MSD -240507001-01A	0 - 10	-	0.9	
Lead	QC73273	LCS	90 - 110	106.3	-	EPA 200.8

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(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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -240507001-01A	70 - 130	100.7	-	
		MSD -240507001-01A	0 - 10	-	1.3	
Manganese	QC73273	LCS	90 - 110	99.8	-	EPA 200.8
		MS -240507001-01A	70 - 130	96.0	-	
		MSD -240507001-01A	0 - 10	-	1.0	
Silver	QC73273	LCS	90 - 110	96.5	-	EPA 200.8
		MS -240507001-01A	70 - 130	96.1	-	
		MSD -240507001-01A	0 - 10	-	0.6	
Zinc	QC73273	LCS	90 - 110	99.1	-	EPA 200.8
		MS -240507001-01A	70 - 130	104.1	-	
		MSD -240507001-01A	0 - 10	-	0.6	
Iron	QC73257	Duplicate -240507027-06	0 - 20	-	2.2	EPA 200.7
		LCS	90 - 110	101.2	-	
		MS -240507001-01B	75 - 125	104.6	-	
Total Dissolved Solids	QC73202	Duplicate -240507101-01	0 - 10	-	3.0	SM 2540-C
		LCS	85 - 115	96.6	-	
Total Suspended Solids	QC73212	Duplicate -240507011-02	0 - 10	-	5.7	SM 2540-D
		LCS	90 - 110	96.1	-	

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

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(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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 02	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	CAL Task 240507001 JAK
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Tests Requested: QBO 2311003 3	Tests Requested: QSO 2311003 4
5/6	10:00a	OF002A *	6	X		X
5/6	10:10a	6F002A	3	+	X	

Low Level Hg - HCl Preserved Bottle
Lot #: U-4-023-04AB
Sample ID: OF002A
Initials: JA Date: 5/7/24

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.
Initials: JK Date: 5/7/24

* no oil/grease Rcd. ja
* Cyanide bottle received and not needed per quote 5/7/24 JK 8 to bank

Instructions: Bottle Return Requested

C/S Info:
Deliver Via: UPS
C/S Charge ☒ 5

Seals Present Yes ☐ No ☐
Temp. 6 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	5/6/3:38pm						5/7/24 827

CAL Task
240507001

JAK

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services

Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Attn: **CJ Dickerson**

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

$632.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

CAL Task
240507001

JAK

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services

Quote ID: QBO23110034

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Attn: **CJ Dickerson**

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Project:
CDPS Quart WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Cr - Tri -TR	Calculation	1	$0.00	$0.00
Water - Ground	As - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cd - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cu - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	TDS	SM 2540-C	1	$16.00	$16.00
Water - Ground	Zn - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - Hex	SM 3500-Cr B	1	$40.00	$40.00
Water - Ground	Hg LL	EPA 245.7	1	$52.00	$52.00
Water - Ground	Hg LL Field Blank	EPA 245.7	1	$52.00	$52.00
Shipping	Cooler Shipment - UPS	UPS	1	$30.00	$30.00

$270.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240917001

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.: 240917001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 9/17/24
Date Reported: 9/24/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 9/16/24 2:40 PM
Lab Number: 240917001-01

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	9/18/24	QC76275	KRB
pH	**7.58 units**	SM 4500-H-B	0.01	0.01	9/17/24	-	KJP
Total Dissolved Solids	**186 mg/L**	SM 2540-C	5	2	9/18/24	QC76238	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/18/24	QC76249	ISG
Potentially Dissolved							
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76378	JJA
Lead	**0.0010 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Manganese	**0.1309 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76378	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76378	JJA
Zinc	**0.075 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76378	JJA
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Lead	**0.0011 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Total Recoverable							
Iron	**0.056 mg/L**	EPA 200.7	0.005	0.0005	9/19/24	QC76292	JJA

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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mg/L = Milligrams Per Liter or PPM
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Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240917001

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.: 240917001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 9/17/24
Date Reported: 9/24/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 9/16/24 2:40 PM
Lab Number: 240917001-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Dissolved Solids	**195 mg/L**	SM 2540-C	5	2	9/18/24	QC76238	ISG
Dissolved							
Chromium - Hexavalent	**ND mg/L**	SM 3500-Cr B	0.02	0.01	9/19/24	QC76323	AMJ
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	9/23/24	QC76366	NRP
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76378	JJA
Zinc	**0.077 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76378	JJA
Total Recoverable							
Chromium - Trivalent	**ND mg/L**	Calculation	0.02	0.01	9/23/24	-	MBN
Arsenic	**0.0016 mg/L**	EPA 200.8	0.0006	0.00006	9/23/24	QC76378	JJA
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/23/24	QC76378	JJA

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.

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

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ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240917001

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.: 240917001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 9/17/24
Date Reported: 9/24/24
Matrix: Water

Customer Sample ID CBOF
Sample Date/Time: 9/16/24 2:10 PM
Lab Number: 240917001-03

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	9/18/24	QC76275	KRB
pH	**7.17 units**	SM 4500-H-B	0.01	0.01	9/17/24	-	KJP
Total Dissolved Solids	**905 mg/L**	SM 2540-C	5	2	9/18/24	QC76238	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/18/24	QC76249	ISG
Potentially Dissolved							
Cadmium	**0.0011 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Copper	**0.0118 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76378	JJA
Lead	**0.0034 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Manganese	**0.0752 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76378	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76378	JJA
Zinc	**0.232 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76378	JJA
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Lead	**0.0035 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Total Recoverable							
Iron	**0.189 mg/L**	EPA 200.7	0.005	0.0005	9/19/24	QC76292	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240917001

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.: 240917001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 9/17/24
Date Reported: 9/24/24
Matrix: Water

Customer Sample ID CB_UG01
Sample Date/Time: 9/16/24 2:25 PM
Lab Number: 240917001-04

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	9/18/24	QC76275	KRB
pH	**7.44 units**	SM 4500-H-B	0.01	0.01	9/17/24	-	KJP
Total Dissolved Solids	**926 mg/L**	SM 2540-C	5	2	9/18/24	QC76238	ISG
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/18/24	QC76249	ISG
Potentially Dissolved							
Cadmium	**0.0010 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Copper	**0.0121 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76378	JJA
Lead	**0.0022 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Manganese	**0.0788 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76378	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76378	JJA
Zinc	**0.225 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76378	JJA
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Lead	**0.0022 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76378	JJA
Total Recoverable							
Iron	**0.198 mg/L**	EPA 200.7	0.005	0.0005	9/19/24	QC76292	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240917001

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.: 240917001
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 9/17/24
Date Reported: 9/24/24
Matrix: Water

Customer Sample ID Hg LL Field Blank
Sample Date/Time: 9/16/24 2:40 PM
Lab Number: 240917001-05

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	9/23/24	QC76366	NRP

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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240917001

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 9/17/24
Project Name: CDPS Bi Monthly and Quarterly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Chromium - Hexavalent	QC76323	Blank	ND	SM 3500-Cr B	9/19/24
Cyanide-Weak Acid Dissociable	QC76275	Blank	ND	ASTM 2036-09C	9/18/24
Mercury	QC76315	Method Blank	ND	EPA 245.7	9/19/24
	QC76366	Method Blank	ND	EPA 245.7	9/23/24
Arsenic	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Cadmium	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Chromium	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Copper	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Lead	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Manganese	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Silver	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Zinc	QC76378	Method Blank	ND	EPA 200.8	9/17/24
Iron	QC76292	Method Blank	ND	EPA 200.7	9/17/24
Total Dissolved Solids	QC76238	Blank	ND	SM 2540-C	9/17/24
Total Suspended Solids	QC76249	Blank	ND	SM 2540-D	9/18/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chromium - Hexavalent	QC76323	Duplicate -240913036-01	0 - 20	-	0.0	SM 3500-Cr B
		LCS	90 - 110	88.3	-	
Cyanide-Weak Acid Dissociable	QC76275	Duplicate -240912164-01	0 - 20	-	13.3	ASTM 2036-09C
		LCS	90 - 110	100.3	-	
		MS -240917108-01	75 - 125	99.5	-	
Mercury	QC76315	Duplicate -240913036-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	106.8	-	
		MS -240913036-01F	80 - 120	100.0	-	
Mercury	QC76366	LCS	76 - 113	106.0	-	EPA 245.7
		MS -240920103-01	63 - 111	67.0	-	
		MSD -240920103-01	0 - 18	-	0.0	
Arsenic	QC76378	LCS	90 - 110	101.6	-	EPA 200.8
		MS -240917001-01B	70 - 130	111.2	-	
		MSD -240917001-01B	0 - 10	-	2.7	
Cadmium	QC76378	LCS	90 - 110	98.3	-	EPA 200.8
		MS -240917001-01B	70 - 130	111.0	-	
		MSD -240917001-01B	0 - 10	-	0.1	
Chromium	QC76378	LCS	90 - 110	101.2	-	EPA 200.8
		MS -240917001-01B	70 - 130	109.3	-	
		MSD -240917001-01B	0 - 10	-	2.5	
Copper	QC76378	LCS	90 - 110	102.1	-	EPA 200.8
		MS -240917001-01B	70 - 130	107.8	-	
		MSD -240917001-01B	0 - 10	-	0.9	
Lead	QC76378	LCS	90 - 110	102.7	-	EPA 200.8

Abbreviations/ References:

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Date Analyzed = Date Test Completed

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(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

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Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -240917001-01B	70 - 130	106.3	-	
		MSD -240917001-01B	0 - 10	-	1.3	
Manganese	QC76378	LCS	90 - 110	102.7	-	EPA 200.8
		MS -240917001-01B	70 - 130	94.3	-	
		MSD -240917001-01B	0 - 10	-	0.9	
Silver	QC76378	LCS	90 - 110	94.5	-	EPA 200.8
		MS -240917001-01B	70 - 130	93.1	-	
		MSD -240917001-01B	0 - 10	-	1.1	
Zinc	QC76378	LCS	90 - 110	99.7	-	EPA 200.8
		MS -240917001-01B	70 - 130	91.9	-	
		MSD -240917001-01B	0 - 10	-	0.0	
Iron	QC76292	Duplicate -240917020-01	0 - 20	-	4.7	EPA 200.7
		LCS	90 - 110	94.3	-	
		MS -240917001-01C	75 - 125	105.9	-	
Total Dissolved Solids	QC76238	Duplicate -240917077-05	0 - 10	-	0.5	SM 2540-C
		LCS	85 - 115	93.4	-	
Total Suspended Solids	QC76249	Duplicate -240917010-01	0 - 10	-	9.8	SM 2540-D
		LCS	90 - 110	97.4	-	

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

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(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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 1	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	CAL Task 240917001 RMB
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: " "		
Sample Collector Phone: " "	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Tests Requested: GB023110033	Tests Requested: GB023110034
9/16	2:40	OF00ZA	3	X	X	
9/16	2:40	OF00ZA	5	X		X
9/16	2:10	CBOF	3	X	X	
9/16	2:25	CB_LG01	3	X	X	
		* EXTRA containers rcd for OF002A (unpres, metals + cyanide) 15 + blank				

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days. RB 9/17/24

Low Level Hg - HCl Preserved Bottle
Lot #: U-4-0716-02AB
Sample ID: OF002A
Initials: JA Date: 9/17/24

Instructions: Please Return Bottles

C/S Info:
Deliver Via: UPS C/S Charge ☒ $

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	9/16 5:00p					Adama	9/17/24

805

CAL Task
240917001

RMB

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TDS	SM 2540-C	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease ~~not~~ rcd PB	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

$664.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

CAL Task
240917001

RMB

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO23110034

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Quart WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Cr - Tri	Calculation	1	$0.00	$0.00
Water - Ground	As - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cd - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cu - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	TDS	SM 2540-C	1	$16.00	$16.00
Water - Ground	Zn - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - Hex	SM 3500-Cr B	1	$40.00	$40.00
Water - Ground	Hg LL	EPA 245.7	1	$52.00	$52.00
Water - Ground	Hg LL Field Blank	EPA 245.7	1	$52.00	$52.00
Shipping	Cooler Shipment - UPS	UPS	1	$30.00	$30.00

$270.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241210008

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.: 241210008
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 12/10/24
Date Reported: 12/17/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 12/9/24 11:45 AM
Lab Number: 241210008-01

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	12/11/24	QC78183	KRB
pH	**7.36 units**	SM 4500-H-B	0.01	0.01	12/10/24	-	ARH
Total Dissolved Solids	**265 mg/L**	SM 2540-C	5	2	12/11/24	QC78158	KRI
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	12/10/24	QC78146	ARH
Potentially Dissolved							
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	12/11/24	QC78187	AMJ
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	12/11/24	QC78187	AMJ
Lead	**0.0008 mg/L**	EPA 200.8	0.0001	0.000006	12/11/24	QC78187	AMJ
Manganese	**0.0764 mg/L**	EPA 200.8	0.0008	0.00001	12/11/24	QC78187	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	12/11/24	QC78187	AMJ
Zinc	**0.077 mg/L**	EPA 200.8	0.001	0.00003	12/11/24	QC78187	AMJ
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	12/13/24	QC78237	MBN
Lead	**0.0013 mg/L**	EPA 200.8	0.0001	0.000006	12/11/24	QC78187	AMJ
Total Recoverable							
Iron	**0.028 mg/L**	EPA 200.7	0.005	0.0005	12/12/24	QC78215	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241210008

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.: 241210008
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 12/10/24
Date Reported: 12/17/24
Matrix: Water

Customer Sample ID OF002A
Sample Date/Time: 12/9/24 11:45 AM
Lab Number: 241210008-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Dissolved Solids	**256 mg/L**	SM 2540-C	5	2	12/11/24	QC78158	KRI
Dissolved							
Chromium - Hexavalent	**ND mg/L**	SM 3500-Cr B	0.02	0.01	12/11/24	QC78180	NRP
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	12/16/24	QC78266	NRP
Cadmium	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	12/11/24	QC78187	AMJ
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	12/11/24	QC78187	AMJ
Zinc	**0.073 mg/L**	EPA 200.8	0.001	0.00003	12/11/24	QC78187	AMJ
Total Recoverable							
Chromium - Trivalent	**ND mg/L**	Calculation	0.02	0.01	12/17/24	-	MBN
Arsenic	**0.0014 mg/L**	EPA 200.8	0.0006	0.00006	12/11/24	QC78187	AMJ
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	12/11/24	QC78187	AMJ

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.

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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241210008

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.: 241210008
Client PO:
Client Project: CDPS Bi Monthly and Quarterly WW

Date Received: 12/10/24
Date Reported: 12/17/24
Matrix: Water

Customer Sample ID Hg LL Field Blank
Sample Date/Time: 12/9/24 11:45 AM
Lab Number: 241210008-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total							
Mercury	**ND ug/L**	EPA 245.7	0.002	0.0002	12/16/24	QC78266	NRP

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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 241210008

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 12/10/24
Project Name: CDPS Bi Monthly and Quarterly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Chromium - Hexavalent	QC78180	Blank	ND	SM 3500-Cr B	12/11/24
Cyanide-Weak Acid Dissociable	QC78183	Blank	ND	ASTM 2036-09C	12/11/24
Mercury	QC78237	Method Blank	ND	EPA 245.7	12/13/24
	QC78266	Method Blank	ND	EPA 245.7	12/16/24
Arsenic	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Cadmium	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Chromium	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Copper	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Lead	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Manganese	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Silver	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Zinc	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Iron	QC78215	Method Blank	ND	EPA 200.7	12/10/24
Total Dissolved Solids	QC78158	Blank	ND	SM 2540-C	12/10/24
Total Suspended Solids	QC78146	Blank	ND	SM 2540-D	12/10/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chromium - Hexavalent	QC78180	Duplicate -241204066-01	0 - 20	-	0.0	SM 3500-Cr B
		LCS	90 - 110	99.5	-	
Cyanide-Weak Acid Dissociable	QC78183	Duplicate -241204104-02	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	104.4	-	
		MS -241205104-04A	75 - 125	95.0	-	
Mercury	QC78237	Duplicate -241205071-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	101.4	-	
		MS -241205071-01A	80 - 120	100.0	-	
Mercury	QC78266	LCS	76 - 113	99.0	-	EPA 245.7
		MS -241210100-02	63 - 111	86.0	-	
		MSD -241210100-02	0 - 18	-	0.0	
Arsenic	QC78187	LCS	90 - 110	104.9	-	EPA 200.8
		MS -241210006-01	70 - 130	92.7	-	
		MSD -241210006-01	0 - 10	-	8.0	
Cadmium	QC78187	LCS	90 - 110	99.1	-	EPA 200.8
		MS -241210006-01	70 - 130	94.3	-	
		MSD -241210006-01	0 - 10	-	5.0	
Chromium	QC78187	LCS	90 - 110	104.0	-	EPA 200.8
		MS -241210006-01	70 - 130	92.2	-	
		MSD -241210006-01	0 - 10	-	7.1	
Copper	QC78187	LCS	90 - 110	105.3	-	EPA 200.8
		MS -241210006-01	70 - 130	98.6	-	
		MSD -241210006-01	0 - 10	-	2.0	
Lead	QC78187	LCS	90 - 110	104.2	-	EPA 200.8

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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -241210006-01	70 - 130	93.0	-	
		MSD -241210006-01	0 - 10	-	8.1	
Manganese	QC78187	LCS	90 - 110	105.7	-	EPA 200.8
		MS -241210006-01	70 - 130	113.3	-	
		MSD -241210006-01	0 - 10	-	0.4	
Silver	QC78187	LCS	90 - 110	101.4	-	EPA 200.8
		MS -241210006-01	70 - 130	97.5	-	
		MSD -241210006-01	0 - 10	-	5.4	
Zinc	QC78187	LCS	90 - 110	109.6	-	EPA 200.8
		MS -241210006-01	70 - 130	117.7	-	
		MSD -241210006-01	0 - 10	-	0.1	
Iron	QC78215	Duplicate -241210012-01	0 - 20	-	0.7	EPA 200.7
		LCS	90 - 110	104.0	-	
		MS -241210006-01D	75 - 125	109.1	-	
Total Dissolved Solids	QC78158	Duplicate -241210029-02	0 - 10	-	0.4	SM 2540-C
		LCS	85 - 115	100.1	-	
Total Suspended Solids	QC78146	Duplicate -241210020-01	0 - 10	-	7.0	SM 2540-D
		LCS	90 - 110	91.4	-	

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 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
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(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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 01	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	CAL Task 241210008 CJF
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: Andrew Skibo		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

- **Water** ☐ **(CWA / NPDES)** Includes wastewater, non-potable samples not intended for drinking water use.
- **Drinking Water** ☐ **(SDWA)** Includes finished drinking water, raw (untreated) water samples intended for human consumption.
- **Solid (Sludge)** ☐ **(503 Regs / RCRA/ SW-846)**

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Tests Requested: Q8023110033	Q8023110034	Q8023110976
12/9	11:45	OFOO2A	3	X	X		
12/9	11:45	OFOO2A	5	X		X	
12/9	10:28	LG-5	5	X			X
12/9	10:52	LG-2	5	X			X
12/9	11:18	LG-8	5	X			X

*NO oil/grease Red.

Low Level Hg - HCl Preserved Bottle
Lot # U-4-076-02AB
Sample ID: OFOO2A
Initials: JA Date: 12/10/24

23 + blank

Ammonium Sulfate buffer solution added upon arrival to laboratory to extend Hex-Cr hold time to 28 days.
Initials: C.F. Date: 12/10/24

Instructions: Please Return Bottles

C/S Info:
Deliver Via: UPS
C/S Charge ☒ 5

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	4:45p					Adams	12/10/24

823

Colorado Analytical LABORATORIES, INC.

CAL Task
241210008

CJF

Quotation for Analytical Services
Quote ID: QBO23110034

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Quart WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Cr - Tri	Calculation	1	$0.00	$0.00
Water - Ground	As - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cd - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - TR	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cu - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	TDS	SM 2540-C	1	$16.00	$16.00
Water - Ground	Zn - Total	EPA 200.8	1	$16.00	$16.00
Water - Ground	Cr - Hex	SM 3500-Cr B	1	$40.00	$40.00
Water - Ground	Hg LL	EPA 245.7	1	$52.00	$52.00
Water - Ground	Hg LL Field Blank	EPA 245.7	1	$52.00	$52.00
Shipping	Cooler Shipment - UPS	UPS	1	$30.00	$30.00

$270.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313

JML

CAL Task
241210008
CJF

Colorado Analytical
LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TDS	SM 2540-C	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease	EPA 1664 (B)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS	UPS	2	$30.00	$60.00

Bi-Monthly - Hg-Total

$664.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240321005

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.: 240321005
Client PO:
Client Project: DRMS

Date Received: 3/21/24
Date Reported: 3/29/24
Matrix: Water - Ground

Customer Sample ID UG-5
Sample Date/Time: 3/19/24 10:10 AM
Lab Number: 240321005-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**50.9 mg/L as CaCO3**	SM 2320-B	4.0	1	3/21/24	QC72136	JCB
Bicarbonate	**50.9 mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/21/24	-	JCB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/21/24	-	JCB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/21/24	-	JCB
Chloride	**0.68 mg/L**	EPA 300.0	0.10	0.007	3/21/24	QC72152	AMJ
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	3/27/24	QC72214	KRB
Fluoride	**0.29 mg/L**	EPA 300.0	0.10	0.024	3/21/24	QC72153	AMJ
Nitrate Nitrogen	**0.12 mg/L**	EPA 300.0	0.05	0.02	3/21/24	QC72154	AMJ
Nitrate/ Nitrite Nitrogen	**0.12 mg/L**	Calculation	0.05	0.02	3/22/24	-	AMJ
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	3/21/24	QC72155	AMJ
pH	**7.52 units**	SM 4500-H-B	0.01	0.01	3/21/24	-	JCB
Specific Conductance	**457 umhos/cm @ 25c**	EPA 120.1	5	5	3/21/24	-	JCB
Sulfate	**147 mg/L**	EPA 300.0	0.10	0.012	3/21/24	QC72156	AMJ
Total Dissolved Solids	**282 mg/L**	SM 2540-C	5	2	3/25/24	QC72131	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	3/26/24	QC72204	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	3/22/24	QC72151	ARH
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	3/28/24	QC72280	JJA
Aluminum	**0.003 mg/L**	EPA 200.8	0.001	0.00003	3/28/24	QC72246	MBN
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	3/28/24	QC72246	MBN
Arsenic	**0.0021 mg/L**	EPA 200.8	0.0006	0.00006	3/28/24	QC72246	MBN
Barium	**0.0247 mg/L**	EPA 200.8	0.0007	0.00007	3/28/24	QC72246	MBN
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	3/28/24	QC72246	MBN
Cadmium	**0.0009 mg/L**	EPA 200.8	0.0001	0.000006	3/28/24	QC72246	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	3/28/24	QC72246	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240321005

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.: 240321005
Client PO:
Client Project: DRMS

Date Received: 3/21/24
Date Reported: 3/29/24
Matrix: Water - Ground

Customer Sample ID UG-5
Sample Date/Time: 3/19/24 10:10 AM
Lab Number: 240321005-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	3/28/24	QC72246	MBN
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	3/28/24	QC72246	MBN
Manganese	**1.13 mg/L**	EPA 200.8	0.0008	0.00001	3/28/24	QC72246	MBN
Molybdenum	**0.0032 mg/L**	EPA 200.8	0.0005	0.00005	3/28/24	QC72246	MBN
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	3/28/24	QC72246	MBN
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	3/28/24	QC72246	MBN
Silica (as Si)	**3.3 mg/L**	EPA 200.8	0.3	0.03	3/28/24	QC72246	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	3/28/24	QC72246	MBN
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	3/28/24	QC72246	MBN
Uranium	**0.0003 mg/L**	EPA 200.8	0.0002	0.000002	3/28/24	QC72246	MBN
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	3/28/24	QC72246	MBN
Zinc	**0.348 mg/L**	EPA 200.8	0.001	0.00003	3/28/24	QC72246	MBN
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	3/25/24	QC72183	JJA
Calcium	**65.9 mg/L**	EPA 200.7	0.1	0.01	3/25/24	QC72183	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	3/25/24	QC72183	JJA
Magnesium	**2.37 mg/L**	EPA 200.7	0.02	0.002	3/25/24	QC72183	JJA
Potassium	**0.3 mg/L**	EPA 200.7	0.1	0.01	3/25/24	QC72183	JJA
Sodium	**7.4 mg/L**	EPA 200.7	0.1	0.01	3/25/24	QC72183	JJA
Total							
Total Hardness	**189.2 mg/L as CaCO3**	SM 2340-B	0.1	-	3/25/24	-	JJA
Calcium	**71.6 mg/L**	EPA 200.7	0.1	0.01	3/25/24	QC72183	JJA
Magnesium	**2.56 mg/L**	EPA 200.7	0.02	0.002	3/25/24	QC72183	JJA

Unable to analyze nitrate/nitrite within holding time. Per customer-okay to analyze outside of holding time.

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(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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240321005

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.: 240321005
Client PO:
Client Project: DRMS

Date Received: 3/21/24
Date Reported: 3/29/24
Matrix: Water - Ground

Customer Sample ID UG-2
Sample Date/Time: 3/19/24 10:40 AM
Lab Number: 240321005-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**50.1 mg/L as CaCO3**	SM 2320-B	4.0	1	3/21/24	QC72136	JCB
Bicarbonate	**50.1 mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/21/24	-	JCB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/21/24	-	JCB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/21/24	-	JCB
Chloride	**0.74 mg/L**	EPA 300.0	0.10	0.007	3/21/24	QC72152	AMJ
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	3/27/24	QC72214	KRB
Fluoride	**0.30 mg/L**	EPA 300.0	0.10	0.024	3/21/24	QC72153	AMJ
Nitrate Nitrogen	**0.13 mg/L**	EPA 300.0	0.05	0.02	3/21/24	QC72154	AMJ
Nitrate/ Nitrite Nitrogen	**0.13 mg/L**	Calculation	0.05	0.02	3/22/24	-	AMJ
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	3/21/24	QC72155	AMJ
pH	**7.53 units**	SM 4500-H-B	0.01	0.01	3/21/24	-	JCB
Specific Conductance	**448 umhos/cm @ 25c**	EPA 120.1	5	5	3/21/24	-	JCB
Sulfate	**144 mg/L**	EPA 300.0	0.10	0.012	3/21/24	QC72156	AMJ
Total Dissolved Solids	**281 mg/L**	SM 2540-C	5	2	3/25/24	QC72131	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	3/26/24	QC72204	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	3/22/24	QC72151	ARH
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	3/28/24	QC72280	JJA
Aluminum	**0.002 mg/L**	EPA 200.8	0.001	0.00003	3/28/24	QC72246	MBN
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	3/28/24	QC72246	MBN
Arsenic	**0.0025 mg/L**	EPA 200.8	0.0006	0.00006	3/28/24	QC72246	MBN
Barium	**0.0257 mg/L**	EPA 200.8	0.0007	0.00007	3/28/24	QC72246	MBN
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	3/28/24	QC72246	MBN
Cadmium	**0.0011 mg/L**	EPA 200.8	0.0001	0.000006	3/28/24	QC72246	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	3/28/24	QC72246	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

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ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240321005

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.: 240321005
Client PO:
Client Project: DRMS

Date Received: 3/21/24
Date Reported: 3/29/24
Matrix: Water - Ground

Customer Sample ID UG-2
Sample Date/Time: 3/19/24 10:40 AM
Lab Number: 240321005-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	3/28/24	QC72246	MBN
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	3/28/24	QC72246	MBN
Manganese	**1.56 mg/L**	EPA 200.8	0.0008	0.00001	3/28/24	QC72246	MBN
Molybdenum	**0.0019 mg/L**	EPA 200.8	0.0005	0.00005	3/28/24	QC72246	MBN
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	3/28/24	QC72246	MBN
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	3/28/24	QC72246	MBN
Silica (as Si)	**3.3 mg/L**	EPA 200.8	0.3	0.03	3/28/24	QC72246	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	3/28/24	QC72246	MBN
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	3/28/24	QC72246	MBN
Uranium	**0.0003 mg/L**	EPA 200.8	0.0002	0.000002	3/28/24	QC72246	MBN
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	3/28/24	QC72246	MBN
Zinc	**0.428 mg/L**	EPA 200.8	0.001	0.00003	3/28/24	QC72246	MBN
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	3/25/24	QC72183	JJA
Calcium	**68.8 mg/L**	EPA 200.7	0.1	0.01	3/25/24	QC72183	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	3/25/24	QC72183	JJA
Magnesium	**2.46 mg/L**	EPA 200.7	0.02	0.002	3/25/24	QC72183	JJA
Potassium	**0.4 mg/L**	EPA 200.7	0.1	0.01	3/25/24	QC72183	JJA
Sodium	**8.0 mg/L**	EPA 200.7	0.1	0.01	3/25/24	QC72183	JJA
Total							
Total Hardness	**183.6 mg/L as CaCO3**	SM 2340-B	0.1	-	3/25/24	-	JJA
Calcium	**69.4 mg/L**	EPA 200.7	0.1	0.01	3/25/24	QC72183	JJA
Magnesium	**2.50 mg/L**	EPA 200.7	0.02	0.002	3/25/24	QC72183	JJA

Unable to analyze nitrate/nitrite within holding time. Per customer-okay to analyze outside of holding time.

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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240321005

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.: 240321005
Client PO:
Client Project: DRMS

Date Received: 3/21/24
Date Reported: 3/29/24
Matrix: Water - Ground

Customer Sample ID UG-8
Sample Date/Time: 3/19/24 11:00 AM
Lab Number: 240321005-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**53.9 mg/L as CaCO3**	SM 2320-B	4.0	1	3/21/24	QC72136	JCB
Bicarbonate	**53.9 mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/21/24	-	JCB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/21/24	-	JCB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/21/24	-	JCB
Chloride	**1.22 mg/L**	EPA 300.0	0.10	0.007	3/21/24	QC72152	AMJ
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	3/27/24	QC72214	KRB
Fluoride	**0.40 mg/L**	EPA 300.0	0.10	0.024	3/21/24	QC72153	AMJ
Nitrate Nitrogen	**0.10 mg/L**	EPA 300.0	0.05	0.02	3/21/24	QC72154	AMJ
Nitrate/ Nitrite Nitrogen	**0.10 mg/L**	Calculation	0.05	0.02	3/22/24	-	AMJ
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	3/21/24	QC72155	AMJ
pH	**7.55 units**	SM 4500-H-B	0.01	0.01	3/21/24	-	JCB
Specific Conductance	**435 umhos/cm @ 25c**	EPA 120.1	5	5	3/21/24	-	JCB
Sulfate	**135 mg/L**	EPA 300.0	0.10	0.012	3/21/24	QC72156	AMJ
Total Dissolved Solids	**268 mg/L**	SM 2540-C	5	2	3/25/24	QC72131	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	3/26/24	QC72204	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	3/22/24	QC72151	ARH
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	3/28/24	QC72280	JJA
Aluminum	**0.005 mg/L**	EPA 200.8	0.001	0.00003	3/28/24	QC72246	MBN
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	3/28/24	QC72246	MBN
Arsenic	**0.0020 mg/L**	EPA 200.8	0.0006	0.00006	3/28/24	QC72246	MBN
Barium	**0.0186 mg/L**	EPA 200.8	0.0007	0.00007	3/28/24	QC72246	MBN
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	3/28/24	QC72246	MBN
Cadmium	**0.0030 mg/L**	EPA 200.8	0.0001	0.000006	3/28/24	QC72246	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	3/28/24	QC72246	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240321005

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.: 240321005
Client PO:
Client Project: DRMS

Date Received: 3/21/24
Date Reported: 3/29/24
Matrix: Water - Ground

Customer Sample ID UG-8
Sample Date/Time: 3/19/24 11:00 AM
Lab Number: 240321005-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	3/28/24	QC72246	MBN
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	3/28/24	QC72246	MBN
Manganese	**4.94 mg/L**	EPA 200.8	0.0008	0.00001	3/28/24	QC72246	MBN
Molybdenum	**0.0029 mg/L**	EPA 200.8	0.0005	0.00005	3/28/24	QC72246	MBN
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	3/28/24	QC72246	MBN
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	3/28/24	QC72246	MBN
Silica (as Si)	**3.7 mg/L**	EPA 200.8	0.3	0.03	3/28/24	QC72246	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	3/28/24	QC72246	MBN
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	3/28/24	QC72246	MBN
Uranium	**0.0004 mg/L**	EPA 200.8	0.0002	0.000002	3/28/24	QC72246	MBN
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	3/28/24	QC72246	MBN
Zinc	**1.02 mg/L**	EPA 200.8	0.001	0.00003	3/28/24	QC72246	MBN
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	3/25/24	QC72183	JJA
Calcium	**59.4 mg/L**	EPA 200.7	0.1	0.01	3/25/24	QC72183	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	3/25/24	QC72183	JJA
Magnesium	**3.39 mg/L**	EPA 200.7	0.02	0.002	3/25/24	QC72183	JJA
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	3/25/24	QC72183	JJA
Sodium	**11.4 mg/L**	EPA 200.7	0.1	0.01	3/25/24	QC72183	JJA
Total							
Total Hardness	**172.1 mg/L as CaCO3**	SM 2340-B	0.1	-	3/25/24	-	JJA
Calcium	**63.1 mg/L**	EPA 200.7	0.1	0.01	3/25/24	QC72183	JJA
Magnesium	**3.51 mg/L**	EPA 200.7	0.02	0.002	3/25/24	QC72183	JJA

Unable to analyze nitrate/nitrite within holding time. Per customer-okay to analyze outside of holding time.

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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240321005

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 3/21/24
Project Name: DRMS

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Total Alkalinity	QC72136	Blank	ND	SM 2320-B	3/21/24
Chloride	QC72152	Blank	ND	EPA 300.0	3/21/24
Cyanide-Total	QC72214	Blank	ND	EPA 335.4	3/26/24
Fluoride	QC72153	Blank	ND	EPA 300.0	3/21/24
Mercury	QC72280	Method Blank	ND	EPA 245.7	3/28/24
Aluminum	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Antimony	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Arsenic	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Barium	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Beryllium	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Cadmium	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Chromium	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Copper	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Lead	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Manganese	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Molybdenum	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Nickel	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Selenium	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Silica (as Si)	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Silver	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Thallium	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Uranium	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Vanadium	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Zinc	QC72246	Method Blank	ND	EPA 200.8	3/21/24
Boron	QC72183	Method Blank	ND	EPA 200.7	3/21/24
Calcium	QC72183	Method Blank	ND	EPA 200.7	3/21/24
Iron	QC72183	Method Blank	ND	EPA 200.7	3/21/24
Magnesium	QC72183	Method Blank	ND	EPA 200.7	3/21/24
Potassium	QC72183	Method Blank	ND	EPA 200.7	3/21/24
Sodium	QC72183	Method Blank	ND	EPA 200.7	3/21/24
Nitrate Nitrogen	QC72154	Blank	ND	EPA 300.0	3/21/24
Nitrite Nitrogen	QC72155	Blank	ND	EPA 300.0	3/21/24
Sulfate	QC72156	Blank	ND	EPA 300.0	3/21/24
Total Dissolved Solids	QC72131	Blank	ND	SM 2540-C	3/21/24
Phosphorus - Total	QC72204	Blank	ND	EPA 365.1	3/25/24
Total Suspended Solids	QC72151	Blank	ND	SM 2540-D	3/22/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Alkalinity	QC72136	Duplicate	0 - 20	-	1.6	SM 2320-B
		LCS	90 - 110	103.4	-	
		LCS-2	90 - 110	96.9	-	
Chloride	QC72152	Duplicate	0 - 20	-	0.4	EPA 300.0

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(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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		LCS	90 - 110	103.0	-	
		MS	75 - 125	96.9	-	
Cyanide-Total	QC72214	Duplicate	0 - 20	-	0.0	EPA 335.4
		LCS	90 - 110	99.9	-	
		MS	75 - 125	88.5	-	
Fluoride	QC72153	Duplicate	0 - 20	-	1.0	EPA 300.0
		LCS	90 - 110	93.7	-	
		MS	75 - 125	88.2	-	
Mercury	QC72280	Duplicate	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	101.8	-	
		MS	80 - 120	104.0	-	
Aluminum	QC72246	LCS	90 - 110	106.0	-	EPA 200.8
		MS	70 - 130	99.1	-	
		MSD	0 - 10	-	6.7	
Antimony	QC72246	LCS	90 - 110	106.4	-	EPA 200.8
		MS	70 - 130	93.3	-	
		MSD	0 - 10	-	4.1	
Arsenic	QC72246	LCS	90 - 110	100.2	-	EPA 200.8
		MS	70 - 130	99.2	-	
		MSD	0 - 10	-	2.6	
Barium	QC72246	LCS	90 - 110	100.7	-	EPA 200.8
		MS	70 - 130	104.6	-	
		MSD	0 - 10	-	1.1	
Beryllium	QC72246	LCS	90 - 110	100.8	-	EPA 200.8
		MS	70 - 130	98.8	-	
		MSD	0 - 10	-	0.4	
Cadmium	QC72246	LCS	90 - 110	100.6	-	EPA 200.8
		MS	70 - 130	97.4	-	
		MSD	0 - 10	-	3.2	
Chromium	QC72246	LCS	90 - 110	105.8	-	EPA 200.8
		MS	70 - 130	105.8	-	
		MSD	0 - 10	-	5.9	
Copper	QC72246	LCS	90 - 110	100.7	-	EPA 200.8
		MS	70 - 130	97.1	-	
		MSD	0 - 10	-	1.7	
Lead	QC72246	LCS	90 - 110	101.3	-	EPA 200.8
		MS	70 - 130	93.2	-	
		MSD	0 - 10	-	3.6	
Manganese	QC72246	LCS	90 - 110	104.0	-	EPA 200.8
		MS	70 - 130	123.0	-	
		MSD	0 - 10	-	0.5	
Molybdenum	QC72246	LCS	90 - 110	98.7	-	EPA 200.8
		MS	70 - 130	101.4	-	
		MSD	0 - 10	-	2.5	
Nickel	QC72246	LCS	90 - 110	107.5	-	EPA 200.8
		MS	70 - 130	104.8	-	
		MSD	0 - 10	-	5.0	
Selenium	QC72246	LCS	90 - 110	100.0	-	EPA 200.8
		MS	70 - 130	102.6	-	
		MSD	0 - 10	-	3.0	
Silica (as Si)	QC72246	LCS	90 - 110	101.3	-	EPA 200.8

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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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS	70 - 130	97.6	-	
		MSD	0 - 10	-	1.0	
Silver	QC72246	LCS	90 - 110	92.3	-	EPA 200.8
		MS	70 - 130	72.2	-	
		MSD	0 - 10	-	0.4	
Thallium	QC72246	LCS	90 - 110	101.5	-	EPA 200.8
		MS	70 - 130	94.1	-	
		MSD	0 - 10	-	3.9	
Uranium	QC72246	LCS	90 - 110	101.1	-	EPA 200.8
		MS	70 - 130	96.3	-	
		MSD	0 - 10	-	3.1	
Vanadium	QC72246	LCS	90 - 110	105.0	-	EPA 200.8
		MS	70 - 130	108.6	-	
		MSD	0 - 10	-	5.3	
Zinc	QC72246	LCS	90 - 110	103.4	-	EPA 200.8
		MS	70 - 130	113.0	-	
		MSD	0 - 10	-	2.0	
Boron	QC72183	Duplicate	0 - 20	-	6.6	EPA 200.7
		LCS	90 - 110	91.6	-	
		MS	75 - 125	93.3	-	
Calcium	QC72183	Duplicate	0 - 20	-	1.0	EPA 200.7
		LCS	90 - 110	103.6	-	
		MS	75 - 125	86.9	-	
Iron	QC72183	Duplicate	0 - 20	-	1.2	EPA 200.7
		LCS	90 - 110	90.7	-	
		MS	75 - 125	95.0	-	
Magnesium	QC72183	Duplicate	0 - 20	-	0.6	EPA 200.7
		LCS	90 - 110	96.4	-	
		MS	75 - 125	102.3	-	
Potassium	QC72183	Duplicate	0 - 20	-	0.8	EPA 200.7
		LCS	90 - 110	93.8	-	
		MS	75 - 125	108.0	-	
Sodium	QC72183	Duplicate	0 - 20	-	1.6	EPA 200.7
		LCS	90 - 110	93.2	-	
		MS	75 - 125	101.4	-	
Nitrate Nitrogen	QC72154	Duplicate	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	95.7	-	
		MS	75 - 125	89.9	-	
Nitrite Nitrogen	QC72155	Duplicate	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	101.6	-	
		MS	75 - 125	96.3	-	
Sulfate	QC72156	Duplicate	0 - 20	-	0.6	EPA 300.0
		LCS	90 - 110	103.4	-	
		MS	75 - 125	99.6	-	
Total Dissolved Solids	QC72131	Duplicate	0 - 10	-	1.0	SM 2540-C
		LCS	85 - 115	98.5	-	
Phosphorus - Total	QC72204	Duplicate	0 - 20	-	1.9	EPA 365.1
		LCS	90 - 110	98.7	-	
		MS	75 - 125	102.0	-	
Total Suspended Solids	QC72151	Duplicate	0 - 10	-	1.4	SM 2540-D
		LCS	90 - 110	90.2	-	

Abbreviations/ References:

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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.

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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 1	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240321005 JAK
Phone: 970 316 2294	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: CJ Dickerson		
Sample Collector Phone: (602) 793-1821	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

OF002A logged as wastewater per history.

Tests Requested

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Bi-monthly Bottle order 4ft.	DRMS *
3/19	9:00 am	OF002A - Bi-monthly	3	x	x	
3/19	10:00 am	MG-5	5	x		x
3/19	10:40 am	MG-2	5	x		x
3/19	11:00 am	MG-8	5	x		x
		Unable to analyze nitrate/nitrite within hold time. Per CJ-okay to run out of hold time. 3/22/24 JK				
		*Testing based on QB0240109746 and bottles rcd.				

groundwater per quote

Instructions: Please return bottles (OF002A only)

C/S Info:
Deliver Via: UPS
C/S Charge ☒ $5

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y
Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	3/20/ 3:30 pm					[signature]	3/21/24

745

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240625002

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.: 240625002
Client PO:
Client Project: CDPS Bi Monthly WW

Date Received: 6/25/24
Date Reported: 7/2/24
Matrix: Wastewater

Customer Sample ID OF002A
Sample Date/Time: 6/24/24 10:00 AM
Lab Number: 240625002-01

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	6/27/24	QC74393	KRB
pH	**7.74 units**	SM 4500-H-B	0.01	0.01	6/25/24	-	ARH
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	6/25/24	QC74312	ARH
Potentially Dissolved							
Cadmium	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	6/27/24	QC74388	MBN
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	6/27/24	QC74388	MBN
Lead	**0.0005 mg/L**	EPA 200.8	0.0001	0.000006	6/27/24	QC74388	MBN
Manganese	**0.0773 mg/L**	EPA 200.8	0.0008	0.00001	6/27/24	QC74388	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	6/27/24	QC74388	MBN
Zinc	**0.024 mg/L**	EPA 200.8	0.001	0.00003	6/27/24	QC74388	MBN
Total							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	6/27/24	QC74397	JJA
Lead	**0.0017 mg/L**	EPA 200.8	0.0001	0.000006	6/27/24	QC74388	MBN
Total Recoverable							
Iron	**0.037 mg/L**	EPA 200.7	0.005	0.0005	6/27/24	QC74390	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240625002

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 6/25/24
Project Name: CDPS Bi Monthly WW

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Cyanide-Weak Acid Dissociable	QC74393	Blank	ND	ASTM 2036-09C	6/27/24
Mercury	QC74397	Method Blank	ND	EPA 245.7	6/27/24
Cadmium	QC74388	Method Blank	ND	EPA 200.8	6/25/24
Copper	QC74388	Method Blank	ND	EPA 200.8	6/25/24
Lead	QC74388	Method Blank	ND	EPA 200.8	6/25/24
Manganese	QC74388	Method Blank	ND	EPA 200.8	6/25/24
Silver	QC74388	Method Blank	ND	EPA 200.8	6/25/24
Zinc	QC74388	Method Blank	ND	EPA 200.8	6/25/24
Iron	QC74390	Method Blank	ND	EPA 200.7	6/25/24
Total Suspended Solids	QC74312	Blank	ND	SM 2540-D	6/25/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Weak Acid Dissociable	QC74393	Duplicate -240625002-01	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	97.3	-	
		MS -240626053-02	75 - 125	97.0	-	
Mercury	QC74397	Duplicate -240621087-03	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	102.6	-	
		MS -240621087-03	80 - 120	86.0	-	
Cadmium	QC74388	LCS	90 - 110	99.2	-	EPA 200.8
		MS -240625001-01	70 - 130	107.0	-	
		MSD -240625001-01	0 - 10	-	1.8	
Copper	QC74388	LCS	90 - 110	99.8	-	EPA 200.8
		MS -240625001-01	70 - 130	110.6	-	
		MSD -240625001-01	0 - 10	-	0.3	
Lead	QC74388	LCS	90 - 110	101.6	-	EPA 200.8
		MS -240625001-01	70 - 130	93.5	-	
		MSD -240625001-01	0 - 10	-	3.8	
Manganese	QC74388	LCS	90 - 110	104.8	-	EPA 200.8
		MS -240625001-01	70 - 130	125.6	-	
		MSD -240625001-01	0 - 10	-	0.9	
Silver	QC74388	LCS	90 - 110	100.0	-	EPA 200.8
		MS -240625001-01	70 - 130	99.9	-	
		MSD -240625001-01	0 - 10	-	2.7	
Zinc	QC74388	LCS	90 - 110	101.3	-	EPA 200.8
		MS -240625001-01	70 - 130	110.9	-	
		MSD -240625001-01	0 - 10	-	1.9	
Iron	QC74390	Duplicate -240625001-01	0 - 20	-	4.9	EPA 200.7
		LCS	90 - 110	100.4	-	
		MS -240625001-01	75 - 125	101.6	-	
Total Suspended Solids	QC74312	Duplicate -240624009-01	0 - 10	-	2.5	SM 2540-D
		LCS	90 - 110	102.0	-	

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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.

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
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ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Therin Resources	Company Name:	
Contact Name: CJ Dickerson	Contact Name:	
Address: 1900 Main St Unit 1	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240625002 RMB
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@therinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	Tests Requested: QBG231Ø033	Tests Requested: GRO2400976 "DRMS"
6/24	10:00am	OFØØ2A	3	X	X	
6/24	11:00am	UG-5	5			X
6/24	11:30am	UG-2	5			X
6/24	11:50a	UG-8	5			X

*No o/g bottle rcd (18)

Waste: Water per history RB 6/25

Instructions: Return of OFØØ2A Bottle only please

C/S Info:
Deliver Via: UPS C/S Charge ☒ 5

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	6/24 3:30pm					Adams	6/25/24 800

CAL Task
240625002

RMB

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO23110033

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Friday, November 10, 2023**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
CDPS Bi Monthly WW

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Fe - TR	EPA 200.7	2	$13.00	$26.00
Water - Ground	Ph	SM 4500-H-B	2	$13.00	$26.00
Water - Ground	Ag - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cd - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Cu - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Mn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Pb - Total	EPA 200.8	2	$16.00	$32.00
Water - Ground	TSS	SM 2540-D	2	$16.00	$32.00
Water - Ground	Zn - PD	EPA 200.8	2	$16.00	$32.00
Water - Ground	Hg	EPA 245.7	2	$27.00	$54.00
Water - Ground	Cyanide-Weak Acid Dissociable	ASTM 2036-09C	2	$40.00	$80.00
Water - Ground	Oil & Grease -not rcd.	EPA 1664 (A)	2	$65.00	$130.00
Shipping	Cooler Shipment - UPS RB	UPS	2	$30.00	$60.00

$632.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID UG-2
Sample Date/Time: 9/17/24 12:00 PM
Lab Number: 240918003-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**51.3 mg/L as CaCO3**	SM 2320-B	4.0	1	9/18/24	QC76327	TAB
Bicarbonate	**51.3 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	9/19/24	QC76297	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.23 mg/L**	EPA 300.0	0.10	0.024	9/19/24	QC76298	NRP
Nitrate Nitrogen	**0.23 mg/L**	EPA 300.0	0.05	0.02	9/19/24	QC76294	NRP
Nitrate/ Nitrite Nitrogen	**0.23 mg/L**	Calculation	0.05	0.02	9/19/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/19/24	QC76295	NRP
pH	**7.19 units**	SM 4500-H-B	0.01	0.01	9/18/24	-	KRB
Specific Conductance	**311 umhos/cm @ 25c**	EPA 120.1	5	5	9/18/24	-	KRB
Sulfate	**95.5 mg/L**	EPA 300.0	1.00	0.012	9/19/24	QC76299	NRP
Total Dissolved Solids	**187 mg/L**	SM 2540-C	5	2	9/19/24	QC76311	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/19/24	QC76308	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/19/24	QC76290	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Aluminum	**0.008 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/23/24	QC76340	JJA
Arsenic	**0.0031 mg/L**	EPA 200.8	0.0006	0.00006	9/23/24	QC76340	JJA
Barium	**0.0324 mg/L**	EPA 200.8	0.0007	0.00007	9/23/24	QC76340	JJA
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/23/24	QC76340	JJA
Cadmium	**0.0017 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/23/24	QC76340	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
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(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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID UG-2
Sample Date/Time: 9/17/24 12:00 PM
Lab Number: 240918003-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Manganese	**1.90 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Molybdenum	**0.0021 mg/L**	EPA 200.8	0.0005	0.00005	9/23/24	QC76340	JJA
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/23/24	QC76340	JJA
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/23/24	QC76340	JJA
Silica (as Si)	**3.19 mg/L**	EPA 200.8	0.30	0.03	9/23/24	QC76340	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76340	JJA
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/23/24	QC76340	JJA
Uranium	**0.0003 mg/L**	EPA 200.8	0.0002	0.000002	9/23/24	QC76340	JJA
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/23/24	QC76340	JJA
Zinc	**0.500 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/23/24	QC76367	JJA
Calcium	**51.2 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/23/24	QC76367	JJA
Magnesium	**2.30 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA
Potassium	**0.4 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Sodium	**6.3 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Total							
Total Hardness	**141.8 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/23/24	-	JJA
Calcium	**52.8 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Magnesium	**2.40 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID UG-8
Sample Date/Time: 9/17/24 8:55 AM
Lab Number: 240918003-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**64.5 mg/L as CaCO3**	SM 2320-B	4.0	1	9/18/24	QC76327	TAB
Bicarbonate	**64.5 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	9/18/24	QC76297	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.27 mg/L**	EPA 300.0	0.10	0.024	9/18/24	QC76298	NRP
Nitrate Nitrogen	**0.37 mg/L**	EPA 300.0	0.05	0.02	9/18/24	QC76294	NRP
Nitrate/ Nitrite Nitrogen	**0.37 mg/L**	Calculation	0.05	0.02	9/19/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/18/24	QC76295	NRP
pH	**7.63 units**	SM 4500-H-B	0.01	0.01	9/18/24	-	KRB
Specific Conductance	**335 umhos/cm @ 25c**	EPA 120.1	5	5	9/18/24	-	KRB
Sulfate	**92.1 mg/L**	EPA 300.0	1.00	0.012	9/18/24	QC76299	NRP
Total Dissolved Solids	**210 mg/L**	SM 2540-C	5	2	9/19/24	QC76311	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/19/24	QC76308	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/19/24	QC76290	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Aluminum	**0.005 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Antimony	**0.0019 mg/L**	EPA 200.8	0.0012	0.00012	9/23/24	QC76340	JJA
Arsenic	**0.0090 mg/L**	EPA 200.8	0.0006	0.00006	9/23/24	QC76340	JJA
Barium	**0.0342 mg/L**	EPA 200.8	0.0007	0.00007	9/23/24	QC76340	JJA
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/23/24	QC76340	JJA
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/23/24	QC76340	JJA

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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.
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ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID UG-8
Sample Date/Time: 9/17/24 8:55 AM
Lab Number: 240918003-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Lead	**0.0003 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Manganese	**0.0106 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Molybdenum	**0.0048 mg/L**	EPA 200.8	0.0005	0.00005	9/23/24	QC76340	JJA
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/23/24	QC76340	JJA
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/23/24	QC76340	JJA
Silica (as Si)	**3.18 mg/L**	EPA 200.8	0.30	0.03	9/23/24	QC76340	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76340	JJA
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/23/24	QC76340	JJA
Uranium	**0.0007 mg/L**	EPA 200.8	0.0002	0.000002	9/23/24	QC76340	JJA
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/23/24	QC76340	JJA
Zinc	**0.036 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/23/24	QC76367	JJA
Calcium	**58.8 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/23/24	QC76367	JJA
Magnesium	**3.28 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Sodium	**9.1 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Total							
Total Hardness	**162.1 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/23/24	-	JJA
Calcium	**59.4 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Magnesium	**3.32 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA

Abbreviations/ References:

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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID GW-3R
Sample Date/Time: 9/17/24 12:55 PM
Lab Number: 240918003-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**29.6 mg/L as CaCO3**	SM 2320-B	4.0	1	9/18/24	QC76327	TAB
Bicarbonate	**29.6 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	9/18/24	QC76297	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.22 mg/L**	EPA 300.0	0.10	0.024	9/18/24	QC76298	NRP
Nitrate Nitrogen	**0.28 mg/L**	EPA 300.0	0.05	0.02	9/18/24	QC76294	NRP
Nitrate/ Nitrite Nitrogen	**0.28 mg/L**	Calculation	0.05	0.02	9/19/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/18/24	QC76295	NRP
pH	**6.53 units**	SM 4500-H-B	0.01	0.01	9/18/24	-	KRB
Specific Conductance	**221 umhos/cm @ 25c**	EPA 120.1	5	5	9/18/24	-	KRB
Sulfate	**68.5 mg/L**	EPA 300.0	1.00	0.012	9/18/24	QC76299	NRP
Total Dissolved Solids	**135 mg/L**	SM 2540-C	5	2	9/19/24	QC76311	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/19/24	QC76308	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/19/24	QC76290	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Aluminum	**0.002 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/23/24	QC76340	JJA
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	9/23/24	QC76340	JJA
Barium	**0.0364 mg/L**	EPA 200.8	0.0007	0.00007	9/23/24	QC76340	JJA
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/23/24	QC76340	JJA
Cadmium	**0.0003 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/23/24	QC76340	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID GW-3R
Sample Date/Time: 9/17/24 12:55 PM
Lab Number: 240918003-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Molybdenum	**0.0016 mg/L**	EPA 200.8	0.0005	0.00005	9/23/24	QC76340	JJA
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/23/24	QC76340	JJA
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/23/24	QC76340	JJA
Silica (as Si)	**2.31 mg/L**	EPA 200.8	0.30	0.03	9/23/24	QC76340	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76340	JJA
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/23/24	QC76340	JJA
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	9/23/24	QC76340	JJA
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/23/24	QC76340	JJA
Zinc	**0.150 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/23/24	QC76367	JJA
Calcium	**37.1 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/23/24	QC76367	JJA
Magnesium	**2.14 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA
Potassium	**0.4 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Sodium	**2.7 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Total							
Total Hardness	**105.7 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/23/24	-	JJA
Calcium	**38.7 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Magnesium	**2.21 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

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ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID GW-99
Sample Date/Time: 9/17/24 1:05 PM
Lab Number: 240918003-04

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**29.7 mg/L as CaCO3**	SM 2320-B	4.0	1	9/18/24	QC76327	TAB
Bicarbonate	**29.7 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	9/19/24	QC76297	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.23 mg/L**	EPA 300.0	0.10	0.024	9/19/24	QC76298	NRP
Nitrate Nitrogen	**0.30 mg/L**	EPA 300.0	0.05	0.02	9/19/24	QC76294	NRP
Nitrate/ Nitrite Nitrogen	**0.30 mg/L**	Calculation	0.05	0.02	9/19/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/19/24	QC76295	NRP
pH	**6.42 units**	SM 4500-H-B	0.01	0.01	9/18/24	-	KRB
Specific Conductance	**223 umhos/cm @ 25c**	EPA 120.1	5	5	9/18/24	-	KRB
Sulfate	**70.0 mg/L**	EPA 300.0	1.00	0.012	9/19/24	QC76299	NRP
Total Dissolved Solids	**132 mg/L**	SM 2540-C	5	2	9/19/24	QC76311	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/19/24	QC76308	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/19/24	QC76290	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Aluminum	**0.002 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/23/24	QC76340	JJA
Arsenic	**0.0006 mg/L**	EPA 200.8	0.0006	0.00006	9/23/24	QC76340	JJA
Barium	**0.0374 mg/L**	EPA 200.8	0.0007	0.00007	9/23/24	QC76340	JJA
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/23/24	QC76340	JJA
Cadmium	**0.0003 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/23/24	QC76340	JJA

Abbreviations/ References:

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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID GW-99
Sample Date/Time: 9/17/24 1:05 PM
Lab Number: 240918003-04

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Molybdenum	**0.0018 mg/L**	EPA 200.8	0.0005	0.00005	9/23/24	QC76340	JJA
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/23/24	QC76340	JJA
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/23/24	QC76340	JJA
Silica (as Si)	**2.31 mg/L**	EPA 200.8	0.30	0.03	9/23/24	QC76340	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76340	JJA
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/23/24	QC76340	JJA
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	9/23/24	QC76340	JJA
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/23/24	QC76340	JJA
Zinc	**0.152 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/23/24	QC76367	JJA
Calcium	**36.9 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/23/24	QC76367	JJA
Magnesium	**2.13 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Sodium	**2.9 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Total							
Total Hardness	**104.6 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/23/24	-	JJA
Calcium	**38.2 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Magnesium	**2.22 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA

Abbreviations/ References:

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID GW-3B
Sample Date/Time: 9/17/24 3:00 PM
Lab Number: 240918003-05

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**29.8 mg/L as CaCO3**	SM 2320-B	4.0	1	9/18/24	QC76327	TAB
Bicarbonate	**29.8 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	9/19/24	QC76297	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.26 mg/L**	EPA 300.0	0.10	0.024	9/19/24	QC76298	NRP
Nitrate Nitrogen	**0.30 mg/L**	EPA 300.0	0.05	0.02	9/19/24	QC76294	NRP
Nitrate/ Nitrite Nitrogen	**0.30 mg/L**	Calculation	0.05	0.02	9/19/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/19/24	QC76295	NRP
pH	**6.20 units**	SM 4500-H-B	0.01	0.01	9/18/24	-	KRB
Specific Conductance	**214 umhos/cm @ 25c**	EPA 120.1	5	5	9/18/24	-	KRB
Sulfate	**66.1 mg/L**	EPA 300.0	1.00	0.012	9/19/24	QC76299	NRP
Total Dissolved Solids	**137 mg/L**	SM 2540-C	5	2	9/19/24	QC76311	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/19/24	QC76308	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/19/24	QC76290	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Aluminum	**0.003 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/23/24	QC76340	JJA
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	9/23/24	QC76340	JJA
Barium	**0.0527 mg/L**	EPA 200.8	0.0007	0.00007	9/23/24	QC76340	JJA
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/23/24	QC76340	JJA
Cadmium	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/23/24	QC76340	JJA

Abbreviations/ References:

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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID GW-3B
Sample Date/Time: 9/17/24 3:00 PM
Lab Number: 240918003-05

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**0.0012 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Lead	**0.0005 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Manganese	**0.0045 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Molybdenum	**0.0008 mg/L**	EPA 200.8	0.0005	0.00005	9/23/24	QC76340	JJA
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/23/24	QC76340	JJA
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/23/24	QC76340	JJA
Silica (as Si)	**2.60 mg/L**	EPA 200.8	0.30	0.03	9/23/24	QC76340	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76340	JJA
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/23/24	QC76340	JJA
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	9/23/24	QC76340	JJA
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/23/24	QC76340	JJA
Zinc	**0.122 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/23/24	QC76367	JJA
Calcium	**34.7 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/23/24	QC76367	JJA
Magnesium	**2.51 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA
Potassium	**0.6 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Sodium	**2.6 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Total							
Total Hardness	**102.3 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/23/24	-	JJA
Calcium	**36.6 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Magnesium	**2.66 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA

Abbreviations/ References:

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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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240918003

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 9/18/24
Project Name: DRMS

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Total Alkalinity	QC76327	Blank	ND	SM 2320-B	9/18/24
Chloride	QC76297	Blank	ND	EPA 300.0	9/18/24
Cyanide-Total	QC76412	Blank	ND	EPA 335.4	9/24/24
Fluoride	QC76298	Blank	ND	EPA 300.0	9/18/24
Mercury	QC76315	Method Blank	ND	EPA 245.7	9/19/24
Aluminum	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Antimony	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Arsenic	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Barium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Beryllium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Cadmium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Chromium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Copper	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Lead	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Manganese	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Molybdenum	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Nickel	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Selenium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Silica (as Si)	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Silver	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Thallium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Uranium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Vanadium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Zinc	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Boron	QC76367	Method Blank	ND	EPA 200.7	9/18/24
Calcium	QC76367	Method Blank	ND	EPA 200.7	9/18/24
Iron	QC76367	Method Blank	ND	EPA 200.7	9/18/24
Magnesium	QC76367	Method Blank	ND	EPA 200.7	9/18/24
Potassium	QC76367	Method Blank	ND	EPA 200.7	9/18/24
Sodium	QC76367	Method Blank	ND	EPA 200.7	9/18/24
Nitrate Nitrogen	QC76294	Blank	ND	EPA 300.0	9/18/24
Nitrite Nitrogen	QC76295	Blank	ND	EPA 300.0	9/18/24
Sulfate	QC76299	Blank	ND	EPA 300.0	9/18/24
Total Dissolved Solids	QC76311	Blank	ND	SM 2540-C	9/19/24
Phosphorus - Total	QC76308	Blank	ND	EPA 365.1	9/18/24
Total Suspended Solids	QC76290	Blank	ND	SM 2540-D	9/19/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Alkalinity	QC76327	Duplicate -240916003-01	0 - 20	-	5.8	SM 2320-B
		LCS	90 - 110	93.4	-	
		LCS-2	90 - 110	103.3	-	
Chloride	QC76297	Duplicate -240918003-02	0 - 20	-	2.8	EPA 300.0

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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		LCS	90 - 110	101.4	-	
		MS -240918003-02	75 - 125	98.8	-	
Cyanide-Total	QC76412	Duplicate -240917123-01	0 - 20	-	16.7	EPA 335.4
		LCS	90 - 110	91.1	-	
		MS -240918003-02C	75 - 125	90.5	-	
Fluoride	QC76298	Duplicate -240918003-02	0 - 20	-	5.9	EPA 300.0
		LCS	90 - 110	95.0	-	
		MS -240918003-02	75 - 125	89.9	-	
Mercury	QC76315	Duplicate -240913036-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	106.8	-	
		MS -240913036-01F	80 - 120	100.0	-	
Aluminum	QC76340	LCS	90 - 110	101.0	-	EPA 200.8
		MS -240918002-01	70 - 130	95.4	-	
		MSD -240918002-01	0 - 10	-	0.5	
Antimony	QC76340	LCS	90 - 110	100.2	-	EPA 200.8
		MS -240918002-01	70 - 130	106.4	-	
		MSD -240918002-01	0 - 10	-	1.2	
Arsenic	QC76340	LCS	90 - 110	100.3	-	EPA 200.8
		MS -240918002-01	70 - 130	109.1	-	
		MSD -240918002-01	0 - 10	-	3.0	
Barium	QC76340	LCS	90 - 110	101.3	-	EPA 200.8
		MS -240918002-01	70 - 130	108.4	-	
		MSD -240918002-01	0 - 10	-	1.6	
Beryllium	QC76340	LCS	90 - 110	101.3	-	EPA 200.8
		MS -240918002-01	70 - 130	109.3	-	
		MSD -240918002-01	0 - 10	-	3.7	
Cadmium	QC76340	LCS	90 - 110	96.8	-	EPA 200.8
		MS -240918002-01	70 - 130	105.7	-	
		MSD -240918002-01	0 - 10	-	1.8	
Chromium	QC76340	LCS	90 - 110	108.5	-	EPA 200.8
		MS -240918002-01	70 - 130	114.3	-	
		MSD -240918002-01	0 - 10	-	0.8	
Copper	QC76340	LCS	90 - 110	108.2	-	EPA 200.8
		MS -240918002-01	70 - 130	103.1	-	
		MSD -240918002-01	0 - 10	-	2.4	
Lead	QC76340	LCS	90 - 110	100.9	-	EPA 200.8
		MS -240918002-01	70 - 130	106.3	-	
		MSD -240918002-01	0 - 10	-	1.8	
Manganese	QC76340	LCS	90 - 110	105.8	-	EPA 200.8
		MS -240918002-01	70 - 130	108.2	-	
		MSD -240918002-01	0 - 10	-	0.7	
Molybdenum	QC76340	LCS	90 - 110	99.4	-	EPA 200.8
		MS -240918002-01	70 - 130	109.4	-	
		MSD -240918002-01	0 - 10	-	1.1	
Nickel	QC76340	LCS	90 - 110	104.9	-	EPA 200.8
		MS -240918002-01	70 - 130	105.8	-	
		MSD -240918002-01	0 - 10	-	1.5	
Selenium	QC76340	LCS	90 - 110	98.1	-	EPA 200.8
		MS -240918002-01	70 - 130	109.3	-	
		MSD -240918002-01	0 - 10	-	1.1	
Silica (as Si)	QC76340	LCS	90 - 110	106.4	-	EPA 200.8

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(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

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Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -240918002-01	70 - 130	86.0	-	
		MSD -240918002-01	0 - 10	-	2.2	
Silver	QC76340	LCS	90 - 110	102.4	-	EPA 200.8
		MS -240918002-01	70 - 130	101.2	-	
		MSD -240918002-01	0 - 10	-	2.0	
Thallium	QC76340	LCS	90 - 110	102.7	-	EPA 200.8
		MS -240918002-01	70 - 130	107.7	-	
		MSD -240918002-01	0 - 10	-	2.4	
Uranium	QC76340	LCS	90 - 110	98.2	-	EPA 200.8
		MS -240918002-01	70 - 130	105.7	-	
		MSD -240918002-01	0 - 10	-	1.2	
Vanadium	QC76340	LCS	90 - 110	101.8	-	EPA 200.8
		MS -240918002-01	70 - 130	111.5	-	
		MSD -240918002-01	0 - 10	-	0.5	
Zinc	QC76340	LCS	90 - 110	103.5	-	EPA 200.8
		MS -240918002-01	70 - 130	88.7	-	
		MSD -240918002-01	0 - 10	-	3.3	
Boron	QC76367	Duplicate -240918023-01	0 - 20	-	14.0	EPA 200.7
		LCS	90 - 110	106.2	-	
		MS -240918003-03	75 - 125	108.6	-	
Calcium	QC76367	Duplicate -240918023-01	0 - 20	-	1.9	EPA 200.7
		LCS	90 - 110	98.9	-	
		MS -240918003-03	75 - 125	93.1	-	
Iron	QC76367	Duplicate -240918023-01	0 - 20	-	11.0	EPA 200.7
		LCS	90 - 110	108.8	-	
		MS -240918003-03	75 - 125	109.0	-	
Magnesium	QC76367	Duplicate -240918023-01	0 - 20	-	1.1	EPA 200.7
		LCS	90 - 110	105.6	-	
		MS -240918003-03	75 - 125	112.4	-	
Potassium	QC76367	Duplicate -240918023-01	0 - 20	-	8.8	EPA 200.7
		LCS	90 - 110	99.2	-	
		MS -240918003-03	75 - 125	121.3	-	
Sodium	QC76367	Duplicate -240918023-01	0 - 20	-	3.3	EPA 200.7
		LCS	90 - 110	95.6	-	
		MS -240918003-03	75 - 125	115.4	-	
Nitrate Nitrogen	QC76294	Duplicate -240917065-02	0 - 20	-	1.1	EPA 300.0
		LCS	90 - 110	97.4	-	
		MS -240917065-02	75 - 125	93.5	-	
Nitrite Nitrogen	QC76295	Duplicate -240917065-02	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	98.1	-	
		MS -240917065-02	75 - 125	94.9	-	
Sulfate	QC76299	Duplicate -240918003-02	0 - 20	-	0.5	EPA 300.0
		LCS	90 - 110	99.8	-	
		MS -240918003-02	75 - 125	104.0	-	
Total Dissolved Solids	QC76311	Duplicate -240918117-07	0 - 10	-	3.2	SM 2540-C
		LCS	85 - 115	104.7	-	
Phosphorus - Total	QC76308	Duplicate -240917065-01	0 - 20	-	5.7	EPA 365.1
		LCS	90 - 110	99.5	-	
		MS -240917058-05	75 - 125	92.5	-	
Total Suspended Solids	QC76290	Duplicate -240918046-01	0 - 10	-	7.3	SM 2540-D
		LCS	90 - 110	98.3	-	

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(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.

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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 L	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240918003 JAK
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

- **Water (CWA / NPDES)** ☒ — Includes wastewater, non-potable samples not intended for drinking water use.
- **Drinking Water (SDWA)** ☐ — Includes finished drinking water, raw (untreated) water samples intended for human consumption.
- **Solid (Sludge) (503 Regs / RCRA/ SW-846)** ☐

	Date	Time	Sample ID	No. of Containers	Grab or Composite	QB0240109476
	~~9/17~~		~~MW-5~~	~~5~~		~~X~~
*	9/17	12:00/8:25	MW-2	5		X
Δ	9/17	8:55	MW-8	5		X
	9/17	12:55	GW-3R	5		X
	9/17	13:05	GW-99	5		X
	9/17	15:00	GW-3B	5		X

Tests Requested

* Time of collection on two bottles is 12:00. Logged as 12:00 for latest time of collection. (25)

Instructions: Δ Time of collection corrected to 8:55A. JK 9/18/24

C/S Info:

Deliver Via: UPS C/S Charge ☒ $

Seals Present Yes ☐ No ☐

Temp. 4 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	9/17 5:00p					Adams	9/18/24 933

CAL Task
240918003

Colorado Analytical LABORATORIES, INC.

JAK

Quotation for Analytical Services

Quote ID: QBO24010976

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Wednesday, January 31, 2024**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
DRMS

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Alkalinity - B-C	N/A	12	$16.00	$192.00
Water - Ground	Alkalinity	SM 2320-B	12	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	12	Incl.	Incl.
Water - Ground	Hardness - Total	SM 2340-B	12	$0.00	$0.00
Water - Ground	Nitrate/ Nitrite Nitrogen	Calculation	12	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Fe - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	K - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Na - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ph	SM 4500-H-B	12	$13.00	$156.00
Water - Ground	Specific Conductance	EPA 120.1	12	$14.00	$168.00
Water - Ground	Ag - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Al - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	As - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ba - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Be - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cd - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cr - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cu - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mo - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ni - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Pb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Sb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Se - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Si - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TDS	SM 2540-C	12	$16.00	$192.00

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

JML

Colorado Analytical LABORATORIES, INC.

CAL Task
240918003
JAK

Quotation for Analytical Services
Quote ID: QBO24010976

Water - Ground	Tl - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TSS	SM 2540-D	12	$16.00	$192.00
Water - Ground	V - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Zn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Chloride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Fluoride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrate Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrite Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Sulfate	EPA 300.0	12	$18.00	$216.00
Water - Ground	U - Dis	EPA 200.8	12	$23.00	$276.00
Water - Ground	Total Phosphorus	EPA 365.1	12	$26.00	$312.00
Water - Ground	Hg - Dissolved	EPA 245.7	12	$27.00	$324.00
Water - Ground	Cyanide-Total	EPA 335.4	12	$40.00	$480.00

$8,076.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240919021

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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID UG-5
Sample Date/Time: 9/18/24 7:40 AM
Lab Number: 240919021-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**52.2 mg/L as CaCO3**	SM 2320-B	4.0	1	9/23/24	QC76416	KJP
Bicarbonate	**52.2 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Chloride	**0.33 mg/L**	EPA 300.0	0.10	0.007	9/19/24	QC76353	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.19 mg/L**	EPA 300.0	0.10	0.024	9/19/24	QC76354	NRP
Nitrate Nitrogen	**0.25 mg/L**	EPA 300.0	0.05	0.02	9/19/24	QC76355	NRP
Nitrate/ Nitrite Nitrogen	**0.25 mg/L**	Calculation	0.05	0.02	9/23/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/19/24	QC76356	NRP
pH	**7.31 units**	SM 4500-H-B	0.01	0.01	9/19/24	-	ARH
Specific Conductance	**303 umhos/cm @ 25c**	EPA 120.1	5	5	9/19/24	-	ARH
Sulfate	**90.6 mg/L**	EPA 300.0	0.10	0.012	9/19/24	QC76358	NRP
Total Dissolved Solids	**203 mg/L**	SM 2540-C	5	2	9/24/24	QC76377	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/24/24	QC76391	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/20/24	QC76317	ARH
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/26/24	QC76494	JJA
Aluminum	**0.011 mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/24/24	QC76387	AMJ
Arsenic	**0.0024 mg/L**	EPA 200.8	0.0006	0.00006	9/24/24	QC76387	AMJ
Barium	**0.0293 mg/L**	EPA 200.8	0.0007	0.00007	9/24/24	QC76387	AMJ
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/24/24	QC76387	AMJ
Cadmium	**0.0013 mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/24/24	QC76387	AMJ

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240919021

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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID UG-5
Sample Date/Time: 9/18/24 7:40 AM
Lab Number: 240919021-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Lead	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Manganese	**1.47 mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Molybdenum	**0.0035 mg/L**	EPA 200.8	0.0005	0.00005	9/24/24	QC76387	AMJ
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/24/24	QC76387	AMJ
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/24/24	QC76387	AMJ
Silica (as Si)	**3.81 mg/L**	EPA 200.8	0.30	0.03	9/24/24	QC76387	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/24/24	QC76387	AMJ
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/24/24	QC76387	AMJ
Uranium	**0.0003 mg/L**	EPA 200.8	0.0002	0.000002	9/24/24	QC76387	AMJ
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/24/24	QC76387	AMJ
Zinc	**0.391 mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/24/24	QC76389	JJA
Calcium	**56.6 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/24/24	QC76389	JJA
Magnesium	**2.38 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA
Potassium	**0.3 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Sodium	**5.9 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Total							
Total Hardness	**145.7 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/24/24	-	JJA
Calcium	**53.6 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Magnesium	**2.86 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240919021

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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID GW-2A
Sample Date/Time: 9/18/24 8:55 AM
Lab Number: 240919021-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**27.2 mg/L as CaCO3**	SM 2320-B	4.0	1	9/23/24	QC76416	KJP
Bicarbonate	**27.2 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Chloride	**0.15 mg/L**	EPA 300.0	0.10	0.007	9/19/24	QC76353	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.19 mg/L**	EPA 300.0	0.10	0.024	9/19/24	QC76354	NRP
Nitrate Nitrogen	**0.19 mg/L**	EPA 300.0	0.05	0.02	9/19/24	QC76355	NRP
Nitrate/ Nitrite Nitrogen	**0.19 mg/L**	Calculation	0.05	0.02	9/23/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/19/24	QC76356	NRP
pH	**6.28 units**	SM 4500-H-B	0.01	0.01	9/19/24	-	ARH
Specific Conductance	**198 umhos/cm @ 25c**	EPA 120.1	5	5	9/19/24	-	ARH
Sulfate	**61.9 mg/L**	EPA 300.0	0.10	0.012	9/19/24	QC76358	NRP
Total Dissolved Solids	**138 mg/L**	SM 2540-C	5	2	9/24/24	QC76377	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/24/24	QC76391	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/20/24	QC76317	ARH
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/26/24	QC76494	JJA
Aluminum	**0.001 mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/24/24	QC76387	AMJ
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	9/24/24	QC76387	AMJ
Barium	**0.0513 mg/L**	EPA 200.8	0.0007	0.00007	9/24/24	QC76387	AMJ
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/24/24	QC76387	AMJ
Cadmium	**0.0006 mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/24/24	QC76387	AMJ

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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Date Analyzed = Date Test Completed

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(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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240919021

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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID GW-2A
Sample Date/Time: 9/18/24 8:55 AM
Lab Number: 240919021-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Lead	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Molybdenum	**0.0009 mg/L**	EPA 200.8	0.0005	0.00005	9/24/24	QC76387	AMJ
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/24/24	QC76387	AMJ
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/24/24	QC76387	AMJ
Silica (as Si)	**3.23 mg/L**	EPA 200.8	0.30	0.03	9/24/24	QC76387	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/24/24	QC76387	AMJ
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/24/24	QC76387	AMJ
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	9/24/24	QC76387	AMJ
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/24/24	QC76387	AMJ
Zinc	**0.465 mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/24/24	QC76389	JJA
Calcium	**33.5 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/24/24	QC76389	JJA
Magnesium	**2.62 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA
Potassium	**0.6 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Sodium	**2.4 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Total							
Total Hardness	**95.9 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/24/24	-	JJA
Calcium	**34.1 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Magnesium	**2.63 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240919021

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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID GW-2B
Sample Date/Time: 9/18/24 8:15 AM
Lab Number: 240919021-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**30.4 mg/L as CaCO3**	SM 2320-B	4.0	1	9/23/24	QC76416	KJP
Bicarbonate	**30.4 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Chloride	**0.14 mg/L**	EPA 300.0	0.10	0.007	9/20/24	QC76353	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.21 mg/L**	EPA 300.0	0.10	0.024	9/20/24	QC76354	NRP
Nitrate Nitrogen	**0.15 mg/L**	EPA 300.0	0.05	0.02	9/20/24	QC76355	NRP
Nitrate/ Nitrite Nitrogen	**0.15 mg/L**	Calculation	0.05	0.02	9/23/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/20/24	QC76356	NRP
pH	**6.34 units**	SM 4500-H-B	0.01	0.01	9/19/24	-	ARH
Specific Conductance	**192 umhos/cm @ 25c**	EPA 120.1	5	5	9/19/24	-	ARH
Sulfate	**56.1 mg/L**	EPA 300.0	0.10	0.012	9/20/24	QC76358	NRP
Total Dissolved Solids	**131 mg/L**	SM 2540-C	5	2	9/24/24	QC76377	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/24/24	QC76391	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/20/24	QC76317	ARH
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/26/24	QC76494	JJA
Aluminum	**0.001 mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/24/24	QC76387	AMJ
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	9/24/24	QC76387	AMJ
Barium	**0.0578 mg/L**	EPA 200.8	0.0007	0.00007	9/24/24	QC76387	AMJ
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/24/24	QC76387	AMJ
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/24/24	QC76387	AMJ

Abbreviations/ References:

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Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240919021

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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID GW-2B
Sample Date/Time: 9/18/24 8:15 AM
Lab Number: 240919021-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Molybdenum	**0.0009 mg/L**	EPA 200.8	0.0005	0.00005	9/24/24	QC76387	AMJ
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/24/24	QC76387	AMJ
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/24/24	QC76387	AMJ
Silica (as Si)	**3.30 mg/L**	EPA 200.8	0.30	0.03	9/24/24	QC76387	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/24/24	QC76387	AMJ
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/24/24	QC76387	AMJ
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	9/24/24	QC76387	AMJ
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/24/24	QC76387	AMJ
Zinc	**0.266 mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/24/24	QC76389	JJA
Calcium	**32.9 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/24/24	QC76389	JJA
Magnesium	**2.71 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Sodium	**2.0 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Total							
Total Hardness	**93.9 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/24/24	-	JJA
Calcium	**33.1 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Magnesium	**2.75 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA

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ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240919021

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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID GW-1B
Sample Date/Time: 9/18/24 10:20 AM
Lab Number: 240919021-04

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**31.0 mg/L as CaCO3**	SM 2320-B	4.0	1	9/23/24	QC76416	KJP
Bicarbonate	**31.0 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Chloride	**0.26 mg/L**	EPA 300.0	0.10	0.007	9/20/24	QC76353	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.17 mg/L**	EPA 300.0	0.10	0.024	9/20/24	QC76354	NRP
Nitrate Nitrogen	**0.07 mg/L**	EPA 300.0	0.05	0.02	9/20/24	QC76355	NRP
Nitrate/ Nitrite Nitrogen	**0.07 mg/L**	Calculation	0.05	0.02	9/23/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/20/24	QC76356	NRP
pH	**6.69 units**	SM 4500-H-B	0.01	0.01	9/19/24	-	ARH
Specific Conductance	**188 umhos/cm @ 25c**	EPA 120.1	5	5	9/19/24	-	ARH
Sulfate	**54.1 mg/L**	EPA 300.0	0.10	0.012	9/20/24	QC76358	NRP
Total Dissolved Solids	**119 mg/L**	SM 2540-C	5	2	9/24/24	QC76377	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/24/24	QC76391	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/20/24	QC76317	ARH
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/26/24	QC76494	JJA
Aluminum	**ND mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/24/24	QC76387	AMJ
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	9/24/24	QC76387	AMJ
Barium	**0.0494 mg/L**	EPA 200.8	0.0007	0.00007	9/24/24	QC76387	AMJ
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/24/24	QC76387	AMJ
Cadmium	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/24/24	QC76387	AMJ

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240919021

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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID GW-1B
Sample Date/Time: 9/18/24 10:20 AM
Lab Number: 240919021-04

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Lead	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Molybdenum	**0.0012 mg/L**	EPA 200.8	0.0005	0.00005	9/24/24	QC76387	AMJ
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/24/24	QC76387	AMJ
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/24/24	QC76387	AMJ
Silica (as Si)	**2.40 mg/L**	EPA 200.8	0.30	0.03	9/24/24	QC76387	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/24/24	QC76387	AMJ
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/24/24	QC76387	AMJ
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	9/24/24	QC76387	AMJ
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/24/24	QC76387	AMJ
Zinc	**0.060 mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/24/24	QC76389	JJA
Calcium	**31.2 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/24/24	QC76389	JJA
Magnesium	**2.72 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Sodium	**1.9 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Total							
Total Hardness	**90.0 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/24/24	-	JJA
Calcium	**31.6 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Magnesium	**2.73 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA

Abbreviations/ References:

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Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240919021

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 9/19/24
Project Name: DRMS

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Total Alkalinity	QC76416	Blank	ND	SM 2320-B	9/23/24
Chloride	QC76353	Blank	ND	EPA 300.0	9/19/24
Cyanide-Total	QC76412	Blank	ND	EPA 335.4	9/24/24
Fluoride	QC76354	Blank	ND	EPA 300.0	9/19/24
Mercury	QC76494	Method Blank	ND	EPA 245.7	9/26/24
Aluminum	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Antimony	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Arsenic	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Barium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Beryllium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Cadmium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Chromium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Copper	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Lead	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Manganese	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Molybdenum	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Nickel	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Selenium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Silica (as Si)	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Silver	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Thallium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Uranium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Vanadium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Zinc	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Boron	QC76389	Method Blank	ND	EPA 200.7	9/19/24
Calcium	QC76389	Method Blank	ND	EPA 200.7	9/19/24
Iron	QC76389	Method Blank	ND	EPA 200.7	9/19/24
Magnesium	QC76389	Method Blank	ND	EPA 200.7	9/19/24
Potassium	QC76389	Method Blank	ND	EPA 200.7	9/19/24
Sodium	QC76389	Method Blank	ND	EPA 200.7	9/19/24
Nitrate Nitrogen	QC76355	Blank	ND	EPA 300.0	9/19/24
Nitrite Nitrogen	QC76356	Blank	ND	EPA 300.0	9/19/24
Sulfate	QC76358	Blank	ND	EPA 300.0	9/19/24
Total Dissolved Solids	QC76377	Blank	ND	SM 2540-C	9/23/24
Phosphorus - Total	QC76391	Blank	ND	EPA 365.1	9/23/24
Total Suspended Solids	QC76317	Blank	ND	SM 2540-D	9/20/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Alkalinity	QC76416	Duplicate -240918062-02	0 - 20	-	0.9	SM 2320-B
		LCS	90 - 110	99.1	-	
		LCS-2	90 - 110	107.7	-	
Chloride	QC76353	Duplicate -240919012-07	0 - 20	-	0.6	EPA 300.0

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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		LCS	90 - 110	103.3	-	
		MS -240919012-07	75 - 125	102.4	-	
Cyanide-Total	QC76412	Duplicate -240917123-01	0 - 20	-	16.7	EPA 335.4
		LCS	90 - 110	91.1	-	
		MS -240918003-02C	75 - 125	90.5	-	
Fluoride	QC76354	Duplicate -240919012-07	0 - 20	-	0.4	EPA 300.0
		LCS	90 - 110	92.6	-	
		MS -240919012-07	75 - 125	87.5	-	
Mercury	QC76494	Duplicate -240919091-03	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	104.8	-	
		MS -240919091-03	80 - 120	88.0	-	
Aluminum	QC76387	LCS	90 - 110	101.3	-	EPA 200.8
		MS -240919001-01A	70 - 130	89.4	-	
		MSD -240919001-01A	0 - 10	-	5.5	
Antimony	QC76387	LCS	90 - 110	104.1	-	EPA 200.8
		MS -240919001-01A	70 - 130	104.5	-	
		MSD -240919001-01A	0 - 10	-	1.5	
Arsenic	QC76387	LCS	90 - 110	102.7	-	EPA 200.8
		MS -240919001-01A	70 - 130	125.1	-	
		MSD -240919001-01A	0 - 10	-	0.1	
Barium	QC76387	LCS	90 - 110	100.6	-	EPA 200.8
		MS -240919001-01A	70 - 130	102.9	-	
		MSD -240919001-01A	0 - 10	-	1.5	
Beryllium	QC76387	LCS	90 - 110	100.4	-	EPA 200.8
		MS -240919001-01A	70 - 130	75.7	-	
		MSD -240919001-01A	0 - 10	-	1.5	
Cadmium	QC76387	LCS	90 - 110	100.0	-	EPA 200.8
		MS -240919001-01A	70 - 130	90.6	-	
		MSD -240919001-01A	0 - 10	-	0.2	
Chromium	QC76387	LCS	90 - 110	104.2	-	EPA 200.8
		MS -240919001-01A	70 - 130	103.3	-	
		MSD -240919001-01A	0 - 10	-	1.1	
Copper	QC76387	LCS	90 - 110	104.9	-	EPA 200.8
		MS -240919001-01A	70 - 130	94.6	-	
		MSD -240919001-01A	0 - 10	-	2.7	
Lead	QC76387	LCS	90 - 110	97.9	-	EPA 200.8
		MS -240919001-01A	70 - 130	87.3	-	
		MSD -240919001-01A	0 - 10	-	2.8	
Manganese	QC76387	LCS	90 - 110	106.6	-	EPA 200.8
		MS -240919001-01A	70 - 130	103.0	-	
		MSD -240919001-01A	0 - 10	-	2.2	
Molybdenum	QC76387	LCS	90 - 110	101.3	-	EPA 200.8
		MS -240919001-01A	70 - 130	105.3	-	
		MSD -240919001-01A	0 - 10	-	0.1	
Nickel	QC76387	LCS	90 - 110	103.4	-	EPA 200.8
		MS -240919001-01A	70 - 130	91.4	-	
		MSD -240919001-01A	0 - 10	-	0.5	
Selenium	QC76387	LCS	90 - 110	102.3	-	EPA 200.8
		MS -240919001-01A	70 - 130	105.1	-	
		MSD -240919001-01A	0 - 10	-	1.4	
Silica (as Si)	QC76387	LCS	90 - 110	108.0	-	EPA 200.8

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ND = Not Detected at Reporting Limit.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -240919001-01A	70 - 130	117.7	-	
		MSD -240919001-01A	0 - 10	-	0.6	
Silver	QC76387	LCS	90 - 110	101.2	-	EPA 200.8
		MS -240919001-01A	70 - 130	77.3	-	
		MSD -240919001-01A	0 - 10	-	0.2	
Thallium	QC76387	LCS	90 - 110	98.9	-	EPA 200.8
		MS -240919001-01A	70 - 130	89.8	-	
		MSD -240919001-01A	0 - 10	-	2.7	
Uranium	QC76387	LCS	90 - 110	92.6	-	EPA 200.8
		MS -240919001-01A	70 - 130	84.5	-	
		MSD -240919001-01A	0 - 10	-	0.7	
Vanadium	QC76387	LCS	90 - 110	99.0	-	EPA 200.8
		MS -240919001-01A	70 - 130	106.6	-	
		MSD -240919001-01A	0 - 10	-	1.8	
Zinc	QC76387	LCS	90 - 110	105.4	-	EPA 200.8
		MS -240919001-01A	70 - 130	106.6	-	
		MSD -240919001-01A	0 - 10	-	0.2	
Boron	QC76389	Duplicate -240919001-01	0 - 20	-	1.0	EPA 200.7
		LCS	90 - 110	98.3	-	
		MS -240919021-02D	75 - 125	114.0	-	
Calcium	QC76389	Duplicate -240919001-01	0 - 20	-	1.8	EPA 200.7
		LCS	90 - 110	104.4	-	
		MS -240919021-02D	75 - 125	96.4	-	
Iron	QC76389	Duplicate -240919001-01	0 - 20	-	6.5	EPA 200.7
		LCS	90 - 110	93.5	-	
		MS -240919021-02D	75 - 125	114.0	-	
Magnesium	QC76389	Duplicate -240919001-01	0 - 20	-	0.7	EPA 200.7
		LCS	90 - 110	100.3	-	
		MS -240919021-02D	75 - 125	106.4	-	
Potassium	QC76389	Duplicate -240919001-01	0 - 20	-	2.6	EPA 200.7
		LCS	90 - 110	97.7	-	
		MS -240919021-02D	75 - 125	108.2	-	
Sodium	QC76389	Duplicate -240919001-01	0 - 20	-	0.6	EPA 200.7
		LCS	90 - 110	99.2	-	
		MS -240919021-02D	75 - 125	113.4	-	
Nitrate Nitrogen	QC76355	Duplicate -240919012-07	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	97.3	-	
		MS -240919012-07	75 - 125	91.4	-	
Nitrite Nitrogen	QC76356	Duplicate -240919012-07	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	94.0	-	
		MS -240919012-07	75 - 125	89.5	-	
Sulfate	QC76358	Duplicate -240919012-07	0 - 20	-	0.5	EPA 300.0
		LCS	90 - 110	99.9	-	
		MS -240919012-07	75 - 125	101.3	-	
Total Dissolved Solids	QC76377	Duplicate -240919115-06	0 - 10	-	0.6	SM 2540-C
		LCS	85 - 115	100.1	-	
Phosphorus - Total	QC76391	Duplicate -240919076-01	0 - 20	-	2.8	EPA 365.1
		LCS	90 - 110	95.6	-	
		MS -240919002-05	75 - 125	117.9	-	
Total Suspended Solids	QC76317	Duplicate -240919031-01	0 - 10	-	2.9	SM 2540-D
		LCS	90 - 110	97.4	-	

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(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.

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
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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
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ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 01	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	CAL Task 240919021 JAK
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

- **Water** ☒ **(CWA / NPDES)** Includes wastewater, non-potable samples not intended for drinking water use.
- **Drinking Water** ☐ **(SDWA)** Includes finished drinking water, raw (untreated) water samples intended for human consumption.
- **Solid (Sludge)** ☐ **(503 Regs / RCRA/ SW-846)**

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)		GBD240101976	Tests Requested
9/18	07:40	UG-5	5	X		X	
9/18	08:55	GW-2A	5	X		X	
9/18	08:15	GW-2B	5	X		X	
9/18		~~GW-1A~~	~~5~~			~~X~~	
9/18	10:20	GW-1B	5	X		X	

20

Instructions:

C/S Info:

Deliver Via: UPS C/S Charge ☒

Seals Present Yes ☐ No ☐

Temp. 2 °C/Ice Y Sample Pres. Yes ☐ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	9/18 4:30p					Adams	9/19/24 800

CAL Task
240919021

JAK

Colorado Analytical
LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO24010976

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Wednesday, January 31, 2024**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
DRMS

Matrix	Description	Method	Qty	Price - each	Total
Water - Ground	Alkalinity - B-C	N/A	12	$16.00	$192.00
Water - Ground	Alkalinity	SM 2320-B	12	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	12	Incl.	Incl.
Water - Ground	Hardness - Total	SM 2340-B	12	$0.00	$0.00
Water - Ground	Nitrate/ Nitrite Nitrogen	Calculation	12	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Fe - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	K - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Na - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ph	SM 4500-H-B	12	$13.00	$156.00
Water - Ground	Specific Conductance	EPA 120.1	12	$14.00	$168.00
Water - Ground	Ag - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Al - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	As - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ba - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Be - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cd - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cr - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cu - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mo - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ni - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Pb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Sb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Se - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Si - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TDS	SM 2540-C	12	$16.00	$192.00

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

JML

CAL Task
240919021
JAK

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO24010976

Water - Ground	Tl - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TSS	SM 2540-D	12	$16.00	$192.00
Water - Ground	V - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Zn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Chloride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Fluoride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrate Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrite Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Sulfate	EPA 300.0	12	$18.00	$216.00
Water - Ground	U - Dis	EPA 200.8	12	$23.00	$276.00
Water - Ground	Total Phosphorus	EPA 365.1	12	$26.00	$312.00
Water - Ground	Hg - Dissolved	EPA 245.7	12	$27.00	$324.00
Water - Ground	Cyanide-Total	EPA 335.4	12	$40.00	$480.00

$8,076.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

***Colorado Analytical Laboratory maintains certification by the Colorado Department of Health* (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.**

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241210006

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.: 241210006
Client PO:
Client Project: DRMS

Date Received: 12/10/24
Date Reported: 12/17/24
Matrix: Water

Customer Sample ID UG-5
Sample Date/Time: 12/9/24 10:28 AM
Lab Number: 241210006-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**60.5 mg/L as CaCO3**	SM 2320-B	4.0	1	12/12/24	QC78213	KJP
Bicarbonate	**60.5 mg/L as CaCO3**	SM 2320-B	0.2	0.2	12/12/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	12/12/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	12/12/24	-	KJP
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	12/10/24	QC78169	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	12/11/24	QC78185	KRB
Fluoride	**0.31 mg/L**	EPA 300.0	0.10	0.024	12/10/24	QC78174	NRP
Nitrate Nitrogen	**ND mg/L**	EPA 300.0	0.05	0.02	12/10/24	QC78170	NRP
Nitrate/ Nitrite Nitrogen	**ND mg/L**	Calculation	0.05	0.02	12/11/24	-	AMJ
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	12/10/24	QC78171	NRP
pH	**7.23 units**	SM 4500-H-B	0.01	0.01	12/10/24	-	ARH
Specific Conductance	**442 umhos/cm @ 25c**	EPA 120.1	5	5	12/10/24	-	ARH
Sulfate	**146 mg/L**	EPA 300.0	1.00	0.012	12/10/24	QC78172	NRP
Total Dissolved Solids	**261 mg/L**	SM 2540-C	5	2	12/11/24	QC78158	KRI
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	12/12/24	QC78194	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	12/10/24	QC78146	ARH
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	12/13/24	QC78237	MBN
Aluminum	**0.003 mg/L**	EPA 200.8	0.001	0.00003	12/11/24	QC78187	AMJ
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	12/11/24	QC78187	AMJ
Arsenic	**0.0023 mg/L**	EPA 200.8	0.0006	0.00006	12/11/24	QC78187	AMJ
Barium	**0.0241 mg/L**	EPA 200.8	0.0007	0.00007	12/11/24	QC78187	AMJ
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	12/11/24	QC78187	AMJ
Cadmium	**0.0009 mg/L**	EPA 200.8	0.0001	0.000006	12/11/24	QC78187	AMJ
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	12/11/24	QC78187	AMJ

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241210006

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.: 241210006
Client PO:
Client Project: DRMS

Date Received: 12/10/24
Date Reported: 12/17/24
Matrix: Water

Customer Sample ID UG-5
Sample Date/Time: 12/9/24 10:28 AM
Lab Number: 241210006-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**0.0012 mg/L**	EPA 200.8	0.0008	0.00001	12/11/24	QC78187	AMJ
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	12/11/24	QC78187	AMJ
Manganese	**0.9320 mg/L**	EPA 200.8	0.0008	0.00001	12/11/24	QC78187	AMJ
Molybdenum	**0.0059 mg/L**	EPA 200.8	0.0005	0.00005	12/11/24	QC78187	AMJ
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	12/11/24	QC78187	AMJ
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	12/11/24	QC78187	AMJ
Silica (as Si)	**4.15 mg/L**	EPA 200.8	0.30	0.03	12/11/24	QC78187	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	12/11/24	QC78187	AMJ
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	12/11/24	QC78187	AMJ
Uranium	**0.0003 mg/L**	EPA 200.8	0.0002	0.000002	12/11/24	QC78187	AMJ
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	12/11/24	QC78187	AMJ
Zinc	**0.275 mg/L**	EPA 200.8	0.001	0.00003	12/11/24	QC78187	AMJ
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	12/12/24	QC78215	JJA
Calcium	**71.4 mg/L**	EPA 200.7	0.1	0.01	12/12/24	QC78215	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	12/12/24	QC78215	JJA
Magnesium	**3.50 mg/L**	EPA 200.7	0.02	0.002	12/12/24	QC78215	JJA
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	12/12/24	QC78215	JJA
Sodium	**7.0 mg/L**	EPA 200.7	0.1	0.01	12/12/24	QC78215	JJA
Total							
Total Hardness	**195.4 mg/L as CaCO3**	SM 2340-B	0.1	0.01	12/12/24	-	JJA
Calcium	**72.4 mg/L**	EPA 200.7	0.1	0.01	12/12/24	QC78215	JJA
Magnesium	**3.52 mg/L**	EPA 200.7	0.02	0.002	12/12/24	QC78215	JJA

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241210006

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.: 241210006
Client PO:
Client Project: DRMS

Date Received: 12/10/24
Date Reported: 12/17/24
Matrix: Water

Customer Sample ID UG-2
Sample Date/Time: 12/9/24 10:52 AM
Lab Number: 241210006-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**48.8 mg/L as CaCO3**	SM 2320-B	4.0	1	12/12/24	QC78213	KJP
Bicarbonate	**48.8 mg/L as CaCO3**	SM 2320-B	0.2	0.2	12/12/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	12/12/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	12/12/24	-	KJP
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	12/10/24	QC78169	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	12/11/24	QC78185	KRB
Fluoride	**0.25 mg/L**	EPA 300.0	0.10	0.024	12/10/24	QC78174	NRP
Nitrate Nitrogen	**0.25 mg/L**	EPA 300.0	0.05	0.02	12/10/24	QC78170	NRP
Nitrate/ Nitrite Nitrogen	**0.25 mg/L**	Calculation	0.05	0.02	12/11/24	-	AMJ
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	12/10/24	QC78171	NRP
pH	**7.26 units**	SM 4500-H-B	0.01	0.01	12/10/24	-	ARH
Specific Conductance	**402 umhos/cm @ 25c**	EPA 120.1	5	5	12/10/24	-	ARH
Sulfate	**133 mg/L**	EPA 300.0	1.00	0.012	12/10/24	QC78172	NRP
Total Dissolved Solids	**258 mg/L**	SM 2540-C	5	2	12/11/24	QC78158	KRI
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	12/12/24	QC78194	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	12/10/24	QC78146	ARH
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	12/13/24	QC78237	MBN
Aluminum	**0.004 mg/L**	EPA 200.8	0.001	0.00003	12/11/24	QC78187	AMJ
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	12/11/24	QC78187	AMJ
Arsenic	**0.0027 mg/L**	EPA 200.8	0.0006	0.00006	12/11/24	QC78187	AMJ
Barium	**0.0263 mg/L**	EPA 200.8	0.0007	0.00007	12/11/24	QC78187	AMJ
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	12/11/24	QC78187	AMJ
Cadmium	**0.0012 mg/L**	EPA 200.8	0.0001	0.000006	12/11/24	QC78187	AMJ
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	12/11/24	QC78187	AMJ

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241210006

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.: 241210006
Client PO:
Client Project: DRMS

Date Received: 12/10/24
Date Reported: 12/17/24
Matrix: Water

Customer Sample ID UG-2
Sample Date/Time: 12/9/24 10:52 AM
Lab Number: 241210006-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	12/11/24	QC78187	AMJ
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	12/11/24	QC78187	AMJ
Manganese	**1.84 mg/L**	EPA 200.8	0.0008	0.00001	12/11/24	QC78187	AMJ
Molybdenum	**0.0022 mg/L**	EPA 200.8	0.0005	0.00005	12/11/24	QC78187	AMJ
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	12/11/24	QC78187	AMJ
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	12/11/24	QC78187	AMJ
Silica (as Si)	**3.19 mg/L**	EPA 200.8	0.30	0.03	12/11/24	QC78187	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	12/11/24	QC78187	AMJ
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	12/11/24	QC78187	AMJ
Uranium	**0.0002 mg/L**	EPA 200.8	0.0002	0.000002	12/11/24	QC78187	AMJ
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	12/11/24	QC78187	AMJ
Zinc	**0.424 mg/L**	EPA 200.8	0.001	0.00003	12/11/24	QC78187	AMJ
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	12/12/24	QC78215	JJA
Calcium	**62.4 mg/L**	EPA 200.7	0.1	0.01	12/12/24	QC78215	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	12/12/24	QC78215	JJA
Magnesium	**2.65 mg/L**	EPA 200.7	0.02	0.002	12/12/24	QC78215	JJA
Potassium	**0.4 mg/L**	EPA 200.7	0.1	0.01	12/12/24	QC78215	JJA
Sodium	**7.6 mg/L**	EPA 200.7	0.1	0.01	12/12/24	QC78215	JJA
Total							
Total Hardness	**167.7 mg/L as CaCO3**	SM 2340-B	0.1	0.01	12/12/24	-	JJA
Calcium	**62.7 mg/L**	EPA 200.7	0.1	0.01	12/12/24	QC78215	JJA
Magnesium	**2.70 mg/L**	EPA 200.7	0.02	0.002	12/12/24	QC78215	JJA

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Analytical Results

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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.: 241210006
Client PO:
Client Project: DRMS

Date Received: 12/10/24
Date Reported: 12/17/24
Matrix: Water

Customer Sample ID UG-8
Sample Date/Time: 12/9/24 11:18 AM
Lab Number: 241210006-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**54.9 mg/L as CaCO3**	SM 2320-B	4.0	1	12/12/24	QC78213	KJP
Bicarbonate	**54.9 mg/L as CaCO3**	SM 2320-B	0.2	0.2	12/12/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	12/12/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	12/12/24	-	KJP
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	12/10/24	QC78169	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	12/11/24	QC78185	KRB
Fluoride	**0.32 mg/L**	EPA 300.0	0.10	0.024	12/10/24	QC78174	NRP
Nitrate Nitrogen	**0.30 mg/L**	EPA 300.0	0.05	0.02	12/10/24	QC78170	NRP
Nitrate/ Nitrite Nitrogen	**0.30 mg/L**	Calculation	0.05	0.02	12/11/24	-	AMJ
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	12/10/24	QC78171	NRP
pH	**7.21 units**	SM 4500-H-B	0.01	0.01	12/10/24	-	ARH
Specific Conductance	**400 umhos/cm @ 25c**	EPA 120.1	5	5	12/10/24	-	ARH
Sulfate	**124 mg/L**	EPA 300.0	1.00	0.012	12/10/24	QC78172	NRP
Total Dissolved Solids	**261 mg/L**	SM 2540-C	5	2	12/11/24	QC78158	KRI
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	12/12/24	QC78194	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	12/10/24	QC78146	ARH
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	12/13/24	QC78237	MBN
Aluminum	**0.010 mg/L**	EPA 200.8	0.001	0.00003	12/11/24	QC78187	AMJ
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	12/11/24	QC78187	AMJ
Arsenic	**0.0034 mg/L**	EPA 200.8	0.0006	0.00006	12/11/24	QC78187	AMJ
Barium	**0.0238 mg/L**	EPA 200.8	0.0007	0.00007	12/11/24	QC78187	AMJ
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	12/11/24	QC78187	AMJ
Cadmium	**0.0029 mg/L**	EPA 200.8	0.0001	0.000006	12/11/24	QC78187	AMJ
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	12/11/24	QC78187	AMJ

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 241210006

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.: 241210006
Client PO:
Client Project: DRMS

Date Received: 12/10/24
Date Reported: 12/17/24
Matrix: Water

Customer Sample ID UG-8
Sample Date/Time: 12/9/24 11:18 AM
Lab Number: 241210006-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	12/11/24	QC78187	AMJ
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	12/11/24	QC78187	AMJ
Manganese	**4.85 mg/L**	EPA 200.8	0.0008	0.00001	12/11/24	QC78187	AMJ
Molybdenum	**0.0031 mg/L**	EPA 200.8	0.0005	0.00005	12/11/24	QC78187	AMJ
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	12/11/24	QC78187	AMJ
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	12/11/24	QC78187	AMJ
Silica (as Si)	**3.54 mg/L**	EPA 200.8	0.30	0.03	12/11/24	QC78187	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	12/11/24	QC78187	AMJ
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	12/11/24	QC78187	AMJ
Uranium	**0.0004 mg/L**	EPA 200.8	0.0002	0.000002	12/11/24	QC78187	AMJ
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	12/11/24	QC78187	AMJ
Zinc	**1.02 mg/L**	EPA 200.8	0.001	0.00003	12/11/24	QC78187	AMJ
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	12/12/24	QC78215	JJA
Calcium	**56.6 mg/L**	EPA 200.7	0.1	0.01	12/12/24	QC78215	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	12/12/24	QC78215	JJA
Magnesium	**3.62 mg/L**	EPA 200.7	0.02	0.002	12/12/24	QC78215	JJA
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	12/12/24	QC78215	JJA
Sodium	**10.3 mg/L**	EPA 200.7	0.1	0.01	12/12/24	QC78215	JJA
Total							
Total Hardness	**156.9 mg/L as CaCO3**	SM 2340-B	0.1	0.01	12/12/24	-	JJA
Calcium	**56.7 mg/L**	EPA 200.7	0.1	0.01	12/12/24	QC78215	JJA
Magnesium	**3.74 mg/L**	EPA 200.7	0.02	0.002	12/12/24	QC78215	JJA

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Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 241210006

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 12/10/24
Project Name: DRMS

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Total Alkalinity	QC78213	Blank	ND	SM 2320-B	12/11/24
Chloride	QC78169	Blank	ND	EPA 300.0	12/10/24
Cyanide-Total	QC78185	Blank	ND	EPA 335.4	12/11/24
Fluoride	QC78174	Blank	ND	EPA 300.0	12/10/24
Mercury	QC78237	Method Blank	ND	EPA 245.7	12/13/24
Aluminum	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Antimony	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Arsenic	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Barium	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Beryllium	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Cadmium	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Chromium	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Copper	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Lead	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Manganese	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Molybdenum	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Nickel	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Selenium	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Silica (as Si)	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Silver	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Thallium	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Uranium	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Vanadium	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Zinc	QC78187	Method Blank	ND	EPA 200.8	12/10/24
Boron	QC78215	Method Blank	ND	EPA 200.7	12/10/24
Calcium	QC78215	Method Blank	ND	EPA 200.7	12/10/24
Iron	QC78215	Method Blank	ND	EPA 200.7	12/10/24
Magnesium	QC78215	Method Blank	ND	EPA 200.7	12/10/24
Potassium	QC78215	Method Blank	ND	EPA 200.7	12/10/24
Sodium	QC78215	Method Blank	ND	EPA 200.7	12/10/24
Nitrate Nitrogen	QC78170	Blank	ND	EPA 300.0	12/10/24
Nitrite Nitrogen	QC78171	Blank	ND	EPA 300.0	12/10/24
Sulfate	QC78172	Blank	ND	EPA 300.0	12/10/24
Total Dissolved Solids	QC78158	Blank	ND	SM 2540-C	12/10/24
Phosphorus - Total	QC78194	Blank	ND	EPA 365.1	12/11/24
Total Suspended Solids	QC78146	Blank	ND	SM 2540-D	12/10/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Alkalinity	QC78213	Duplicate -241205090-01	0 - 20	-	3.5	SM 2320-B
		LCS	90 - 110	98.0	-	
		LCS-2	90 - 110	107.4	-	
Chloride	QC78169	Duplicate -241209128-02	0 - 20	-	0.6	EPA 300.0

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Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		LCS	90 - 110	105.6	-	
		MS -241209128-02A	75 - 125	106.1	-	
Cyanide-Total	QC78185	Duplicate -241210134-02	0 - 20	-	13.6	EPA 335.4
		LCS	90 - 110	90.6	-	
		MS -241206074-02	75 - 125	95.5	-	
Fluoride	QC78174	Duplicate -241210044-01	0 - 20	-	4.7	EPA 300.0
		LCS	90 - 110	99.8	-	
		MS -241210044-01	75 - 125	95.8	-	
Mercury	QC78237	Duplicate -241205071-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	101.4	-	
		MS -241205071-01A	80 - 120	100.0	-	
Aluminum	QC78187	LCS	90 - 110	104.3	-	EPA 200.8
		MS -241210006-01	70 - 130	99.1	-	
		MSD -241210006-01	0 - 10	-	5.7	
Antimony	QC78187	LCS	90 - 110	102.3	-	EPA 200.8
		MS -241210006-01	70 - 130	93.4	-	
		MSD -241210006-01	0 - 10	-	3.8	
Arsenic	QC78187	LCS	90 - 110	104.9	-	EPA 200.8
		MS -241210006-01	70 - 130	92.7	-	
		MSD -241210006-01	0 - 10	-	8.0	
Barium	QC78187	LCS	90 - 110	99.7	-	EPA 200.8
		MS -241210006-01	70 - 130	88.0	-	
		MSD -241210006-01	0 - 10	-	6.7	
Beryllium	QC78187	LCS	90 - 110	98.1	-	EPA 200.8
		MS -241210006-01	70 - 130	83.6	-	
		MSD -241210006-01	0 - 10	-	8.6	
Cadmium	QC78187	LCS	90 - 110	99.1	-	EPA 200.8
		MS -241210006-01	70 - 130	94.3	-	
		MSD -241210006-01	0 - 10	-	5.0	
Chromium	QC78187	LCS	90 - 110	104.0	-	EPA 200.8
		MS -241210006-01	70 - 130	92.2	-	
		MSD -241210006-01	0 - 10	-	7.1	
Copper	QC78187	LCS	90 - 110	105.3	-	EPA 200.8
		MS -241210006-01	70 - 130	98.6	-	
		MSD -241210006-01	0 - 10	-	2.0	
Lead	QC78187	LCS	90 - 110	104.2	-	EPA 200.8
		MS -241210006-01	70 - 130	93.0	-	
		MSD -241210006-01	0 - 10	-	8.1	
Manganese	QC78187	LCS	90 - 110	105.7	-	EPA 200.8
		MS -241210006-01	70 - 130	113.3	-	
		MSD -241210006-01	0 - 10	-	0.4	
Molybdenum	QC78187	LCS	90 - 110	100.3	-	EPA 200.8
		MS -241210006-01	70 - 130	84.6	-	
		MSD -241210006-01	0 - 10	-	9.3	
Nickel	QC78187	LCS	90 - 110	107.2	-	EPA 200.8
		MS -241210006-01	70 - 130	92.0	-	
		MSD -241210006-01	0 - 10	-	10.0	
Selenium	QC78187	LCS	90 - 110	101.7	-	EPA 200.8
		MS -241210006-01	70 - 130	86.8	-	
		MSD -241210006-01	0 - 10	-	3.9	
Silica (as Si)	QC78187	LCS	90 - 110	99.1	-	EPA 200.8

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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -241210006-01	70 - 130	87.5	-	
		MSD -241210006-01	0 - 10	-	8.0	
Silver	QC78187	LCS	90 - 110	101.4	-	EPA 200.8
		MS -241210006-01	70 - 130	97.5	-	
		MSD -241210006-01	0 - 10	-	5.4	
Thallium	QC78187	LCS	90 - 110	106.6	-	EPA 200.8
		MS -241210006-01	70 - 130	109.7	-	
		MSD -241210006-01	0 - 10	-	1.6	
Uranium	QC78187	LCS	90 - 110	109.7	-	EPA 200.8
		MS -241210006-01	70 - 130	80.9	-	
		MSD -241210006-01	0 - 10	-	8.5	
Vanadium	QC78187	LCS	90 - 110	106.1	-	EPA 200.8
		MS -241210006-01	70 - 130	93.1	-	
		MSD -241210006-01	0 - 10	-	0.5	
Zinc	QC78187	LCS	90 - 110	109.6	-	EPA 200.8
		MS -241210006-01	70 - 130	117.7	-	
		MSD -241210006-01	0 - 10	-	0.1	
Boron	QC78215	Duplicate -241210012-01	0 - 20	-	5.7	EPA 200.7
		LCS	90 - 110	100.7	-	
		MS -241210006-01D	75 - 125	108.0	-	
Calcium	QC78215	Duplicate -241210012-01	0 - 20	-	1.6	EPA 200.7
		LCS	90 - 110	100.9	-	
		MS -241210006-01D	75 - 125	80.7	-	
Iron	QC78215	Duplicate -241210012-01	0 - 20	-	0.7	EPA 200.7
		LCS	90 - 110	104.0	-	
		MS -241210006-01D	75 - 125	109.1	-	
Magnesium	QC78215	Duplicate -241210012-01	0 - 20	-	0.8	EPA 200.7
		LCS	90 - 110	105.1	-	
		MS -241210006-01D	75 - 125	106.6	-	
Potassium	QC78215	Duplicate -241210012-01	0 - 20	-	0.6	EPA 200.7
		LCS	90 - 110	102.4	-	
		MS -241210006-01D	75 - 125	107.5	-	
Sodium	QC78215	Duplicate -241210012-01	0 - 20	-	0.6	EPA 200.7
		LCS	90 - 110	103.2	-	
		MS -241210006-01D	75 - 125	103.6	-	
Nitrate Nitrogen	QC78170	Duplicate -241209128-02	0 - 20	-	0.6	EPA 300.0
		LCS	90 - 110	105.0	-	
		MS -241209128-02A	75 - 125	93.9	-	
Nitrite Nitrogen	QC78171	Duplicate -241209128-02	0 - 20	-	4.4	EPA 300.0
		LCS	90 - 110	105.4	-	
		MS -241209128-02A	75 - 125	102.3	-	
Sulfate	QC78172	Duplicate -241209128-02	0 - 20	-	0.1	EPA 300.0
		LCS	90 - 110	99.1	-	
		MS -241209128-02A	75 - 125	101.4	-	
Total Dissolved Solids	QC78158	Duplicate -241210029-02	0 - 10	-	0.4	SM 2540-C
		LCS	85 - 115	100.1	-	
Phosphorus - Total	QC78194	Duplicate -241210162-01	0 - 20	-	0.5	EPA 365.1
		LCS	90 - 110	104.6	-	
		MS -241210162-03B	75 - 125	78.6	-	
Total Suspended Solids	QC78146	Duplicate -241210020-01	0 - 10	-	7.0	SM 2540-D
		LCS	90 - 110	91.4	-	

Abbreviations/ References:

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(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.

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 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

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(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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 101	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	
Phone: (602) 793-1321	Phone:	
Email: cj dickerson@thorinresources.com	Email:	
Sample Collector: Andrew Stibo		
Sample Collector Phone:	PO No.:	

CAL Task
241210006
CJF

Split quotes per project. CF 12/10/24

Sample Matrix (Select One Only)

- **Water** ☐ **(CWA / NPDES)** Includes wastewater, non-potable samples not intended for drinking water use.
- **Drinking Water** ☐ **(SDWA)** Includes finished drinking water, raw (untreated) water samples intended for human consumption.
- **Solid (Sludge)** ☐ **(503 Regs / RCRA/ SW-846)**

Date	Time	Sample ID	No. of Containers	Grab or (Check One Only) Composite	Tests Requested: Q8023110033	Q8023110034	Q8023[illegible]24010276
12/9	11:45	OF002A	3	X	X		
12/9	11:45	OF002A	5	X		X	
12/9	10:28	LG-5	5	X			X
12/9	10:52	LG-2	5	X			X
12/9	11:18	LG-8	5	X			X

* No oil/grease rtd.

Low Level Hg - HCl Preserved Bottle
Lot # U-4-076-02AB
Sample ID: OF002A
Initials: JA Date: 12/10/24

23 + blank

Instructions: Please Return Bottles

C/S Info:
Deliver Via: UPS
C/S Charge ☒ 5

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y
Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	4:45p					[illegible]	12/10/24

823

Colorado Analytical LABORATORIES, INC.

CAL Task
241210006

CJF

Quotation for Analytical Services

Quote ID: QBO24010976

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Wednesday, January 31, 2024**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
DRMS

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Alkalinity - B-C	N/A	12	$16.00	$192.00
Water - Ground	Alkalinity	SM 2320-B	12	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	12	Incl.	Incl.
Water - Ground	Hardness - Total	SM 2340-B	12	$0.00	$0.00
Water - Ground	Nitrate/ Nitrite Nitrogen	Calculation	12	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Fe - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	K - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Na - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ph	SM 4500-H-B	12	$13.00	$156.00
Water - Ground	Specific Conductance	EPA 120.1	12	$14.00	$168.00
Water - Ground	Ag - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Al - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	As - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ba - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Be - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cd - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cr - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cu - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mo - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ni - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Pb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Sb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Se - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Si - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TDS	SM 2540-C	12	$16.00	$192.00

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313

JML

CAL Task
241210006

CJF

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services

Quote ID: QBO24010976

Water - Ground	Tl - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TSS	SM 2540-D	12	$16.00	$192.00
Water - Ground	V - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Zn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Chloride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Fluoride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrate Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrite Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Sulfate	EPA 300.0	12	$18.00	$216.00
Water - Ground	U - Dis	EPA 200.8	12	$23.00	$276.00
Water - Ground	Total Phosphorus	EPA 365.1	12	$26.00	$312.00
Water - Ground	Hg	EPA 245.7	12	$27.00	$324.00
Water - Ground	Cyanide-Total	EPA 335.4	12	$40.00	$480.00

$8,076.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240322002

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.: 240322002
Client PO:
Client Project: DRMS

Date Received: 3/22/24
Date Reported: 4/1/24
Matrix: Water - Ground

Customer Sample ID GW-3R
Sample Date/Time: 3/21/24 11:00 AM
Lab Number: 240322002-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**33.1 mg/L as CaCO3**	SM 2320-B	4.0	1	3/26/24	QC72203	TAB
Bicarbonate	**33.1 mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/26/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/26/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/26/24	-	TAB
Chloride	**0.20 mg/L**	EPA 300.0	0.10	0.007	3/22/24	QC72178	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	3/27/24	QC72214	KRB
Fluoride	**0.14 mg/L**	EPA 300.0	0.10	0.024	3/22/24	QC72179	NRP
Nitrate Nitrogen	**0.17 mg/L**	EPA 300.0	0.05	0.02	3/22/24	QC72180	NRP
Nitrate/ Nitrite Nitrogen	**0.17 mg/L**	Calculation	0.05	0.02	3/26/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	3/22/24	QC72181	NRP
pH	**6.69 units**	SM 4500-H-B	0.01	0.01	3/22/24	-	AKF
Specific Conductance	**253 umhos/cm @ 25c**	EPA 120.1	5	5	3/22/24	-	AKF
Sulfate	**76.5 mg/L**	EPA 300.0	0.10	0.012	3/22/24	QC72182	NRP
Total Dissolved Solids	**105 mg/L**	SM 2540-C	5	2	3/27/24	QC72209	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	3/26/24	QC72204	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	3/25/24	QC72170	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	3/28/24	QC72280	JJA
Aluminum	**0.002 mg/L**	EPA 200.8	0.001	0.00003	3/29/24	QC72284	MBN
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	3/29/24	QC72284	MBN
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	3/29/24	QC72284	MBN
Barium	**0.0383 mg/L**	EPA 200.8	0.0007	0.00007	3/29/24	QC72284	MBN
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	3/29/24	QC72284	MBN
Cadmium	**0.0004 mg/L**	EPA 200.8	0.0001	0.000006	3/29/24	QC72284	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	3/29/24	QC72284	MBN

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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240322002

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.: 240322002
Client PO:
Client Project: DRMS

Date Received: 3/22/24
Date Reported: 4/1/24
Matrix: Water - Ground

Customer Sample ID GW-3R
Sample Date/Time: 3/21/24 11:00 AM
Lab Number: 240322002-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	3/29/24	QC72284	MBN
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	3/29/24	QC72284	MBN
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	3/29/24	QC72284	MBN
Molybdenum	**0.0007 mg/L**	EPA 200.8	0.0005	0.00005	3/29/24	QC72284	MBN
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	3/29/24	QC72284	MBN
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	3/29/24	QC72284	MBN
Silica (as Si)	**1.9 mg/L**	EPA 200.8	0.3	0.03	3/29/24	QC72284	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	3/29/24	QC72284	MBN
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	3/29/24	QC72284	MBN
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	3/29/24	QC72284	MBN
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	3/29/24	QC72284	MBN
Zinc	**0.225 mg/L**	EPA 200.8	0.001	0.00003	3/29/24	QC72284	MBN
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	3/27/24	QC72191	JJA
Calcium	**40.6 mg/L**	EPA 200.7	0.1	0.01	3/27/24	QC72191	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	3/27/24	QC72191	JJA
Magnesium	**2.24 mg/L**	EPA 200.7	0.02	0.002	3/27/24	QC72191	JJA
Potassium	**0.4 mg/L**	EPA 200.7	0.1	0.01	3/27/24	QC72191	JJA
Sodium	**2.3 mg/L**	EPA 200.7	0.1	0.01	3/27/24	QC72191	JJA
Total							
Total Hardness	**118.6 mg/L as CaCO3**	SM 2340-B	0.1	-	3/27/24	-	JJA
Calcium	**43.6 mg/L**	EPA 200.7	0.1	0.01	3/27/24	QC72191	JJA
Magnesium	**2.39 mg/L**	EPA 200.7	0.02	0.002	3/27/24	QC72191	JJA

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240322002

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.: 240322002
Client PO:
Client Project: DRMS

Date Received: 3/22/24
Date Reported: 4/1/24
Matrix: Water - Ground

Customer Sample ID GW-3B
Sample Date/Time: 3/21/24 11:40 AM
Lab Number: 240322002-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**32.0 mg/L as CaCO3**	SM 2320-B	4.0	1	3/26/24	QC72203	TAB
Bicarbonate	**32.0 mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/26/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/26/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/26/24	-	TAB
Chloride	**0.19 mg/L**	EPA 300.0	0.10	0.007	3/22/24	QC72178	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	3/27/24	QC72214	KRB
Fluoride	**0.21 mg/L**	EPA 300.0	0.10	0.024	3/22/24	QC72179	NRP
Nitrate Nitrogen	**0.15 mg/L**	EPA 300.0	0.05	0.02	3/22/24	QC72180	NRP
Nitrate/ Nitrite Nitrogen	**0.15 mg/L**	Calculation	0.05	0.02	3/26/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	3/22/24	QC72181	NRP
pH	**6.57 units**	SM 4500-H-B	0.01	0.01	3/22/24	-	AKF
Specific Conductance	**247 umhos/cm @ 25c**	EPA 120.1	5	5	3/22/24	-	AKF
Sulfate	**73.7 mg/L**	EPA 300.0	0.10	0.012	3/22/24	QC72182	NRP
Total Dissolved Solids	**83 mg/L**	SM 2540-C	5	2	3/27/24	QC72209	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	3/26/24	QC72204	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	3/25/24	QC72170	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	3/28/24	QC72280	JJA
Aluminum	**ND mg/L**	EPA 200.8	0.001	0.00003	3/29/24	QC72284	MBN
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	3/29/24	QC72284	MBN
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	3/29/24	QC72284	MBN
Barium	**0.0533 mg/L**	EPA 200.8	0.0007	0.00007	3/29/24	QC72284	MBN
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	3/29/24	QC72284	MBN
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	3/29/24	QC72284	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	3/29/24	QC72284	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240322002

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.: 240322002
Client PO:
Client Project: DRMS

Date Received: 3/22/24
Date Reported: 4/1/24
Matrix: Water - Ground

Customer Sample ID GW-3B
Sample Date/Time: 3/21/24 11:40 AM
Lab Number: 240322002-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	3/29/24	QC72284	MBN
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	3/29/24	QC72284	MBN
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	3/29/24	QC72284	MBN
Molybdenum	**0.0007 mg/L**	EPA 200.8	0.0005	0.00005	3/29/24	QC72284	MBN
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	3/29/24	QC72284	MBN
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	3/29/24	QC72284	MBN
Silica (as Si)	**2.0 mg/L**	EPA 200.8	0.3	0.03	3/29/24	QC72284	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	3/29/24	QC72284	MBN
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	3/29/24	QC72284	MBN
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	3/29/24	QC72284	MBN
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	3/29/24	QC72284	MBN
Zinc	**0.121 mg/L**	EPA 200.8	0.001	0.00003	3/29/24	QC72284	MBN
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	3/27/24	QC72191	JJA
Calcium	**37.8 mg/L**	EPA 200.7	0.1	0.01	3/27/24	QC72191	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	3/27/24	QC72191	JJA
Magnesium	**2.57 mg/L**	EPA 200.7	0.02	0.002	3/27/24	QC72191	JJA
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	3/27/24	QC72191	JJA
Sodium	**2.2 mg/L**	EPA 200.7	0.1	0.01	3/27/24	QC72191	JJA
Total							
Total Hardness	**110.3 mg/L as CaCO3**	SM 2340-B	0.1	-	3/27/24	-	JJA
Calcium	**39.7 mg/L**	EPA 200.7	0.1	0.01	3/27/24	QC72191	JJA
Magnesium	**2.69 mg/L**	EPA 200.7	0.02	0.002	3/27/24	QC72191	JJA

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Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240322002

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.: 240322002
Client PO:
Client Project: DRMS

Date Received: 3/22/24
Date Reported: 4/1/24
Matrix: Water - Ground

Customer Sample ID GW-99
Sample Date/Time: 3/21/24 11:15 AM
Lab Number: 240322002-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**33.7 mg/L as CaCO3**	SM 2320-B	4.0	1	3/26/24	QC72203	TAB
Bicarbonate	**33.7 mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/26/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/26/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	3/26/24	-	TAB
Chloride	**0.21 mg/L**	EPA 300.0	0.10	0.007	3/22/24	QC72178	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	3/27/24	QC72214	KRB
Fluoride	**0.14 mg/L**	EPA 300.0	0.10	0.024	3/22/24	QC72179	NRP
Nitrate Nitrogen	**0.17 mg/L**	EPA 300.0	0.05	0.02	3/22/24	QC72180	NRP
Nitrate/ Nitrite Nitrogen	**0.17 mg/L**	Calculation	0.05	0.02	3/26/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	3/22/24	QC72181	NRP
pH	**6.54 units**	SM 4500-H-B	0.01	0.01	3/22/24	-	AKF
Specific Conductance	**256 umhos/cm @ 25c**	EPA 120.1	5	5	3/22/24	-	AKF
Sulfate	**77.8 mg/L**	EPA 300.0	0.10	0.012	3/22/24	QC72182	NRP
Total Dissolved Solids	**112 mg/L**	SM 2540-C	5	2	3/27/24	QC72209	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	3/26/24	QC72204	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	3/25/24	QC72170	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	3/28/24	QC72280	JJA
Aluminum	**ND mg/L**	EPA 200.8	0.001	0.00003	3/29/24	QC72284	MBN
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	3/29/24	QC72284	MBN
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	3/29/24	QC72284	MBN
Barium	**0.0375 mg/L**	EPA 200.8	0.0007	0.00007	3/29/24	QC72284	MBN
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	3/29/24	QC72284	MBN
Cadmium	**0.0004 mg/L**	EPA 200.8	0.0001	0.000006	3/29/24	QC72284	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	3/29/24	QC72284	MBN

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240322002

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.: 240322002
Client PO:
Client Project: DRMS

Date Received: 3/22/24
Date Reported: 4/1/24
Matrix: Water - Ground

Customer Sample ID GW-99
Sample Date/Time: 3/21/24 11:15 AM
Lab Number: 240322002-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	3/29/24	QC72284	MBN
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	3/29/24	QC72284	MBN
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	3/29/24	QC72284	MBN
Molybdenum	**0.0006 mg/L**	EPA 200.8	0.0005	0.00005	3/29/24	QC72284	MBN
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	3/29/24	QC72284	MBN
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	3/29/24	QC72284	MBN
Silica (as Si)	**2.2 mg/L**	EPA 200.8	0.3	0.03	3/29/24	QC72284	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	3/29/24	QC72284	MBN
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	3/29/24	QC72284	MBN
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	3/29/24	QC72284	MBN
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	3/29/24	QC72284	MBN
Zinc	**0.214 mg/L**	EPA 200.8	0.001	0.00003	3/29/24	QC72284	MBN
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	3/27/24	QC72191	JJA
Calcium	**40.2 mg/L**	EPA 200.7	0.1	0.01	3/27/24	QC72191	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	3/27/24	QC72191	JJA
Magnesium	**2.22 mg/L**	EPA 200.7	0.02	0.002	3/27/24	QC72191	JJA
Potassium	**0.4 mg/L**	EPA 200.7	0.1	0.01	3/27/24	QC72191	JJA
Sodium	**2.2 mg/L**	EPA 200.7	0.1	0.01	3/27/24	QC72191	JJA
Total							
Total Hardness	**116.8 mg/L as CaCO3**	SM 2340-B	0.1	-	3/27/24	-	JJA
Calcium	**42.9 mg/L**	EPA 200.7	0.1	0.01	3/27/24	QC72191	JJA
Magnesium	**2.36 mg/L**	EPA 200.7	0.02	0.002	3/27/24	QC72191	JJA

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Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240322002

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 3/22/24
Project Name: DRMS

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Total Alkalinity	QC72203	Blank	ND	SM 2320-B	3/25/24
Chloride	QC72178	Blank	ND	EPA 300.0	3/22/24
Cyanide-Total	QC72214	Blank	ND	EPA 335.4	3/26/24
Fluoride	QC72179	Blank	ND	EPA 300.0	3/22/24
Mercury	QC72280	Method Blank	ND	EPA 245.7	3/28/24
Aluminum	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Antimony	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Arsenic	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Barium	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Beryllium	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Cadmium	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Chromium	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Copper	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Lead	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Manganese	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Molybdenum	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Nickel	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Selenium	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Silica (as Si)	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Silver	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Thallium	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Uranium	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Vanadium	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Zinc	QC72284	Method Blank	ND	EPA 200.8	3/22/24
Boron	QC72191	Method Blank	ND	EPA 200.7	3/22/24
Calcium	QC72191	Method Blank	ND	EPA 200.7	3/22/24
Iron	QC72191	Method Blank	ND	EPA 200.7	3/22/24
Magnesium	QC72191	Method Blank	ND	EPA 200.7	3/22/24
Potassium	QC72191	Method Blank	ND	EPA 200.7	3/22/24
Sodium	QC72191	Method Blank	ND	EPA 200.7	3/22/24
Nitrate Nitrogen	QC72180	Blank	ND	EPA 300.0	3/22/24
Nitrite Nitrogen	QC72181	Blank	ND	EPA 300.0	3/22/24
Sulfate	QC72182	Blank	ND	EPA 300.0	3/22/24
Total Dissolved Solids	QC72209	Blank	ND	SM 2540-C	3/26/24
Phosphorus - Total	QC72204	Blank	ND	EPA 365.1	3/25/24
Total Suspended Solids	QC72170	Blank	ND	SM 2540-D	3/25/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Alkalinity	QC72203	Duplicate	0 - 20	-	1.6	SM 2320-B
		LCS	90 - 110	105.0	-	
		LCS-2	90 - 110	96.7	-	
Chloride	QC72178	Duplicate	0 - 20	-	3.2	EPA 300.0

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Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		LCS	90 - 110	101.0	-	
		MS	75 - 125	95.8	-	
Cyanide-Total	QC72214	Duplicate	0 - 20	-	0.0	EPA 335.4
		LCS	90 - 110	99.9	-	
		MS	75 - 125	88.5	-	
Fluoride	QC72179	Duplicate	0 - 20	-	0.2	EPA 300.0
		LCS	90 - 110	101.6	-	
		MS	75 - 125	98.9	-	
Mercury	QC72280	Duplicate	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	101.8	-	
		MS	80 - 120	104.0	-	
Aluminum	QC72284	LCS	90 - 110	100.1	-	EPA 200.8
		MS	70 - 130	99.6	-	
		MSD	0 - 10	-	1.1	
Antimony	QC72284	LCS	90 - 110	104.3	-	EPA 200.8
		MS	70 - 130	114.2	-	
		MSD	0 - 10	-	1.2	
Arsenic	QC72284	LCS	90 - 110	99.1	-	EPA 200.8
		MS	70 - 130	120.9	-	
		MSD	0 - 10	-	0.9	
Barium	QC72284	LCS	90 - 110	100.2	-	EPA 200.8
		MS	70 - 130	109.8	-	
		MSD	0 - 10	-	3.8	
Beryllium	QC72284	LCS	90 - 110	100.4	-	EPA 200.8
		MS	70 - 130	99.1	-	
		MSD	0 - 10	-	9.8	
Cadmium	QC72284	LCS	90 - 110	98.8	-	EPA 200.8
		MS	70 - 130	115.1	-	
		MSD	0 - 10	-	0.8	
Chromium	QC72284	LCS	90 - 110	105.2	-	EPA 200.8
		MS	70 - 130	103.0	-	
		MSD	0 - 10	-	0.6	
Copper	QC72284	LCS	90 - 110	100.5	-	EPA 200.8
		MS	70 - 130	121.2	-	
		MSD	0 - 10	-	8.6	
Lead	QC72284	LCS	90 - 110	107.9	-	EPA 200.8
		MS	70 - 130	88.5	-	
		MSD	0 - 10	-	8.9	
Manganese	QC72284	LCS	90 - 110	103.9	-	EPA 200.8
		MS	70 - 130	115.8	-	
		MSD	0 - 10	-	1.9	
Molybdenum	QC72284	LCS	90 - 110	98.7	-	EPA 200.8
		MS	70 - 130	107.0	-	
		MSD	0 - 10	-	3.2	
Nickel	QC72284	LCS	90 - 110	107.8	-	EPA 200.8
		MS	70 - 130	97.9	-	
		MSD	0 - 10	-	2.5	
Selenium	QC72284	LCS	90 - 110	100.0	-	EPA 200.8
		MS	70 - 130	126.4	-	
		MSD	0 - 10	-	1.7	
Silica (as Si)	QC72284	LCS	90 - 110	90.4	-	EPA 200.8

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Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS	70 - 130	0.0 s	-	
		MSD	0 - 10	-	0.6	
Silver	QC72284	LCS	90 - 110	96.7	-	EPA 200.8
		MS	70 - 130	93.7	-	
		MSD	0 - 10	-	0.4	
Thallium	QC72284	LCS	90 - 110	97.2	-	EPA 200.8
		MS	70 - 130	97.3	-	
		MSD	0 - 10	-	8.2	
Uranium	QC72284	LCS	90 - 110	108.2	-	EPA 200.8
		MS	70 - 130	91.1	-	
		MSD	0 - 10	-	7.2	
Vanadium	QC72284	LCS	90 - 110	104.7	-	EPA 200.8
		MS	70 - 130	99.0	-	
		MSD	0 - 10	-	1.7	
Zinc	QC72284	LCS	90 - 110	101.3	-	EPA 200.8
		MS	70 - 130	114.0	-	
		MSD	0 - 10	-	1.6	
Boron	QC72191	Duplicate	0 - 20	-	12.0	EPA 200.7
		LCS	90 - 110	106.6	-	
		MS	75 - 125	87.5	-	
Calcium	QC72191	Duplicate	0 - 20	-	2.5	EPA 200.7
		LCS	90 - 110	98.1	-	
		MS	75 - 125	113.1	-	
Iron	QC72191	Duplicate	0 - 20	-	7.4	EPA 200.7
		LCS	90 - 110	109.1	-	
		MS	75 - 125	99.7	-	
Magnesium	QC72191	Duplicate	0 - 20	-	1.2	EPA 200.7
		LCS	90 - 110	95.1	-	
		MS	75 - 125	107.4	-	
Potassium	QC72191	Duplicate	0 - 20	-	3.0	EPA 200.7
		LCS	90 - 110	93.0	-	
		MS	75 - 125	106.6	-	
Sodium	QC72191	Duplicate	0 - 20	-	3.5	EPA 200.7
		LCS	90 - 110	93.5	-	
		MS	75 - 125	104.9	-	
Nitrate Nitrogen	QC72180	Duplicate	0 - 20	-	0.3	EPA 300.0
		LCS	90 - 110	98.0	-	
		MS	75 - 125	91.9	-	
Nitrite Nitrogen	QC72181	Duplicate	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	94.4	-	
		MS	75 - 125	112.4	-	
Sulfate	QC72182	Duplicate	0 - 20	-	0.1	EPA 300.0
		LCS	90 - 110	99.5	-	
		MS	75 - 125	95.2	-	
Total Dissolved Solids	QC72209	Duplicate	0 - 10	-	6.9	SM 2540-C
		LCS	85 - 115	102.0	-	
Phosphorus - Total	QC72204	Duplicate	0 - 20	-	1.9	EPA 365.1
		LCS	90 - 110	98.7	-	
		MS	75 - 125	102.0	-	
Total Suspended Solids	QC72170	Duplicate	0 - 10	-	5.2	SM 2540-D
		LCS	90 - 110	91.1	-	

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(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.

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
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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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Thorin Resources	Company Name: Thorin Resources	
Contact Name: CJ Dickerson	Contact Name: CJ Dickerson	
Address: 1900 Main St Unit 1	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240322002 RMB
Phone: 970 316-2294	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector: CJ Dickerson		
Sample Collector Phone: (602) 793-1321	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☒ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab	Composite	Tests Requested: DRMS
3/21	1100	GW-32	5	x		x
	1140	GW-3B	5	x		x
↓	1115	GW-99	5	x		x
		*ALL testing per history. RB 3/22/24				
		*collection date/time taken from bottles	(15)			

Instructions: No Bottle return required

C/S Info:
Deliver Via: UPS
C/S Charge ☒ K

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y
Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	3/21 3:45 pm					[illegible]	3/22/24 815

CAL Task
240322002

RMB

Colorado Analytical
LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO24010976

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Wednesday, January 31, 2024**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
DRMS

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Alkalinity - B-C	N/A	12	$16.00	$192.00
Water - Ground	Alkalinity	SM 2320-B	12	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	12	Incl.	Incl.
Water - Ground	Hardness - Total	SM 2340-B	12	$0.00	$0.00
Water - Ground	Nitrate/ Nitrite Nitrogen	Calculation	12	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Fe - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	K - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Na - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ph	SM 4500-H-B	12	$13.00	$156.00
Water - Ground	Specific Conductance	EPA 120.1	12	$14.00	$168.00
Water - Ground	Ag - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Al - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	As - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ba - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Be - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cd - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cr - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cu - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mo - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ni - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Pb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Sb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Se - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Si - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TDS	SM 2540-C	12	$16.00	$192.00

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

JML

CAL Task
240322002

RMB

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO24010976

Water - Ground	Tl - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TSS	SM 2540-D	12	$16.00	$192.00
Water - Ground	V - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Zn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Chloride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Fluoride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrate Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrite Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Sulfate	EPA 300.0	12	$18.00	$216.00
Water - Ground	U - Dis	EPA 200.8	12	$23.00	$276.00
Water - Ground	Total Phosphorus	EPA 365.1	12	$26.00	$312.00
Water - Ground	Hg - Dis.	EPA 245.7	12	$27.00	$324.00
Water - Ground	Cyanide-Total	EPA 335.4	12	$40.00	$480.00

$8,076.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240628033

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.: 240628033
Client PO:
Client Project: DRMS

Date Received: 6/28/24
Date Reported: 7/5/24
Matrix: Water - Ground

Customer Sample ID GW-3R
Sample Date/Time: 6/27/24 12:21 PM
Lab Number: 240628033-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**32.1 mg/L as CaCO3**	SM 2320-B	4.0	1	7/1/24	QC74496	TAB
Bicarbonate	**32.1 mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/1/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/1/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/1/24	-	TAB
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	6/28/24	QC74447	AMJ
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	7/2/24	QC74485	KRB
Fluoride	**0.25 mg/L**	EPA 300.0	0.10	0.024	6/28/24	QC74448	AMJ
Nitrate Nitrogen	**0.46 mg/L**	EPA 300.0	0.05	0.02	6/28/24	QC74449	AMJ
Nitrate/ Nitrite Nitrogen	**0.46 mg/L**	Calculation	0.05	0.02	7/2/24	-	AMJ
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	6/28/24	QC74452	AMJ
pH	**6.57 units**	SM 4500-H-B	0.01	0.01	6/28/24	-	ARH
Specific Conductance	**221 umhos/cm @ 25c**	EPA 120.1	5	5	6/28/24	-	ARH
Sulfate	**64.8 mg/L**	EPA 300.0	1.00	0.012	6/28/24	QC74451	AMJ
Total Dissolved Solids	**131 mg/L**	SM 2540-C	5	2	7/3/24	QC74464	ISG
Phosphorus - Total	**0.07 mg/L**	EPA 365.1	0.05	0.006	7/2/24	QC74480	TAB
Total Suspended Solids	**8 mg/L**	SM 2540-D	5	2	7/1/24	QC74421	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	7/3/24	QC74515	JJA
Aluminum	**0.037 mg/L**	EPA 200.8	0.001	0.00003	7/2/24	QC74492	MBN
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	7/2/24	QC74492	MBN
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	7/2/24	QC74492	MBN
Barium	**0.0311 mg/L**	EPA 200.8	0.0007	0.00007	7/2/24	QC74492	MBN
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	7/2/24	QC74492	MBN
Cadmium	**0.0003 mg/L**	EPA 200.8	0.0001	0.000006	7/2/24	QC74492	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	7/2/24	QC74492	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240628033

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.: 240628033
Client PO:
Client Project: DRMS

Date Received: 6/28/24
Date Reported: 7/5/24
Matrix: Water - Ground

Customer Sample ID GW-3R
Sample Date/Time: 6/27/24 12:21 PM
Lab Number: 240628033-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/2/24	QC74492	MBN
Lead	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	7/2/24	QC74492	MBN
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/2/24	QC74492	MBN
Molybdenum	**0.0008 mg/L**	EPA 200.8	0.0005	0.00005	7/2/24	QC74492	MBN
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	7/2/24	QC74492	MBN
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	7/2/24	QC74492	MBN
Silica (as Si)	**2.3 mg/L**	EPA 200.8	0.3	0.03	7/2/24	QC74492	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	7/2/24	QC74492	MBN
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	7/2/24	QC74492	MBN
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	7/2/24	QC74492	MBN
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	7/2/24	QC74492	MBN
Zinc	**0.165 mg/L**	EPA 200.8	0.001	0.00003	7/2/24	QC74492	MBN
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	7/3/24	QC74504	MBN
Calcium	**35.3 mg/L**	EPA 200.7	0.1	0.01	7/3/24	QC74504	MBN
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	7/3/24	QC74504	MBN
Magnesium	**1.98 mg/L**	EPA 200.7	0.02	0.002	7/3/24	QC74504	MBN
Potassium	**0.4 mg/L**	EPA 200.7	0.1	0.01	7/3/24	QC74504	MBN
Sodium	**2.8 mg/L**	EPA 200.7	0.1	0.01	7/3/24	QC74504	MBN
Total							
Total Hardness	**96.1 mg/L as CaCO3**	SM 2340-B	0.1	-	7/3/24	-	MBN
Calcium	**35.3 mg/L**	EPA 200.7	0.1	0.01	7/3/24	QC74504	MBN
Magnesium	**1.96 mg/L**	EPA 200.7	0.02	0.002	7/3/24	QC74504	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
MDL = Method Detection Limit
mg/L = Milligrams Per Liter or PPM
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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240628033

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.: 240628033
Client PO:
Client Project: DRMS

Date Received: 6/28/24
Date Reported: 7/5/24
Matrix: Water - Ground

Customer Sample ID GW-99
Sample Date/Time: 6/27/24 12:30 PM
Lab Number: 240628033-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**31.9 mg/L as CaCO3**	SM 2320-B	4.0	1	7/1/24	QC74496	TAB
Bicarbonate	**31.9 mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/1/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/1/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/1/24	-	TAB
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	6/28/24	QC74447	AMJ
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	7/2/24	QC74485	KRB
Fluoride	**0.25 mg/L**	EPA 300.0	0.10	0.024	6/28/24	QC74448	AMJ
Nitrate Nitrogen	**0.46 mg/L**	EPA 300.0	0.05	0.02	6/28/24	QC74449	AMJ
Nitrate/ Nitrite Nitrogen	**0.46 mg/L**	Calculation	0.05	0.02	7/2/24	-	AMJ
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	6/28/24	QC74452	AMJ
pH	**6.37 units**	SM 4500-H-B	0.01	0.01	6/28/24	-	ARH
Specific Conductance	**218 umhos/cm @ 25c**	EPA 120.1	5	5	6/28/24	-	ARH
Sulfate	**64.1 mg/L**	EPA 300.0	1.00	0.012	6/28/24	QC74451	AMJ
Total Dissolved Solids	**128 mg/L**	SM 2540-C	5	2	7/3/24	QC74464	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	7/2/24	QC74480	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	7/1/24	QC74421	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	7/3/24	QC74515	JJA
Aluminum	**0.036 mg/L**	EPA 200.8	0.001	0.00003	7/2/24	QC74492	MBN
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	7/2/24	QC74492	MBN
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	7/2/24	QC74492	MBN
Barium	**0.0318 mg/L**	EPA 200.8	0.0007	0.00007	7/2/24	QC74492	MBN
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	7/2/24	QC74492	MBN
Cadmium	**0.0003 mg/L**	EPA 200.8	0.0001	0.000006	7/2/24	QC74492	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	7/2/24	QC74492	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
MDL = Method Detection Limit
mg/L = Milligrams Per Liter or PPM
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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240628033

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.: 240628033
Client PO:
Client Project: DRMS

Date Received: 6/28/24
Date Reported: 7/5/24
Matrix: Water - Ground

Customer Sample ID GW-99
Sample Date/Time: 6/27/24 12:30 PM
Lab Number: 240628033-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/2/24	QC74492	MBN
Lead	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	7/2/24	QC74492	MBN
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/2/24	QC74492	MBN
Molybdenum	**0.0007 mg/L**	EPA 200.8	0.0005	0.00005	7/2/24	QC74492	MBN
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	7/2/24	QC74492	MBN
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	7/2/24	QC74492	MBN
Silica (as Si)	**2.3 mg/L**	EPA 200.8	0.3	0.03	7/2/24	QC74492	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	7/2/24	QC74492	MBN
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	7/2/24	QC74492	MBN
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	7/2/24	QC74492	MBN
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	7/2/24	QC74492	MBN
Zinc	**0.162 mg/L**	EPA 200.8	0.001	0.00003	7/2/24	QC74492	MBN
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	7/3/24	QC74504	MBN
Calcium	**34.5 mg/L**	EPA 200.7	0.1	0.01	7/3/24	QC74504	MBN
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	7/3/24	QC74504	MBN
Magnesium	**1.91 mg/L**	EPA 200.7	0.02	0.002	7/3/24	QC74504	MBN
Potassium	**0.4 mg/L**	EPA 200.7	0.1	0.01	7/3/24	QC74504	MBN
Sodium	**2.7 mg/L**	EPA 200.7	0.1	0.01	7/3/24	QC74504	MBN
Total							
Total Hardness	**93.3 mg/L as CaCO3**	SM 2340-B	0.1	-	7/3/24	-	MBN
Calcium	**34.2 mg/L**	EPA 200.7	0.1	0.01	7/3/24	QC74504	MBN
Magnesium	**1.93 mg/L**	EPA 200.7	0.02	0.002	7/3/24	QC74504	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.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240628033

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 6/28/24
Project Name: DRMS

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Total Alkalinity	QC74496	Blank	ND	SM 2320-B	7/1/24
Chloride	QC74447	Blank	ND	EPA 300.0	6/28/24
Cyanide-Total	QC74485	Blank	ND	EPA 335.4	7/2/24
Fluoride	QC74448	Blank	ND	EPA 300.0	6/28/24
Mercury	QC74515	Method Blank	ND	EPA 245.7	7/3/24
Aluminum	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Antimony	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Arsenic	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Barium	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Beryllium	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Cadmium	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Chromium	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Copper	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Lead	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Manganese	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Molybdenum	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Nickel	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Selenium	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Silica (as Si)	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Silver	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Thallium	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Uranium	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Vanadium	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Zinc	QC74492	Method Blank	ND	EPA 200.8	6/28/24
Boron	QC74504	Method Blank	ND	EPA 200.7	6/28/24
Calcium	QC74504	Method Blank	ND	EPA 200.7	6/28/24
Iron	QC74504	Method Blank	ND	EPA 200.7	6/28/24
Magnesium	QC74504	Method Blank	ND	EPA 200.7	6/28/24
Potassium	QC74504	Method Blank	ND	EPA 200.7	6/28/24
Sodium	QC74504	Method Blank	ND	EPA 200.7	6/28/24
Nitrate Nitrogen	QC74449	Blank	ND	EPA 300.0	6/28/24
Nitrite Nitrogen	QC74452	Blank	ND	EPA 300.0	6/28/24
Sulfate	QC74451	Blank	ND	EPA 300.0	6/28/24
Total Dissolved Solids	QC74464	Blank	ND	SM 2540-C	7/2/24
Phosphorus - Total	QC74480	Blank	ND	EPA 365.1	7/1/24
Total Suspended Solids	QC74421	Blank	ND	SM 2540-D	7/1/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Alkalinity	QC74496	Duplicate -240626039-01	0 - 20	-	0.5	SM 2320-B
		LCS	90 - 110		-	
		LCS-2	90 - 110	106.3	-	
Chloride	QC74447	Duplicate -240627115-01	0 - 20	-	2.5	EPA 300.0

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		LCS	90 - 110	101.8	-	
		MS -240627115-01	75 - 125	94.9	-	
Cyanide-Total	QC74485	Duplicate -240701102-06	0 - 20	-	0.0	EPA 335.4
		LCS	90 - 110	100.9	-	
		MS -240628023-02	75 - 125	77.5	-	
Fluoride	QC74448	Duplicate -240627115-01	0 - 20	-	1.2	EPA 300.0
		LCS	90 - 110	99.0	-	
		MS -240627115-01	75 - 125	95.1	-	
Mercury	QC74515	Duplicate -240701060-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	108.8	-	
		MS -240701060-01B	80 - 120	92.0	-	
Aluminum	QC74492	LCS	90 - 110	99.0	-	EPA 200.8
		MS -240628007-01B	70 - 130	97.4	-	
		MSD -240628007-01B	0 - 10	-	1.0	
Antimony	QC74492	LCS	90 - 110	100.8	-	EPA 200.8
		MS -240628007-01B	70 - 130	104.2	-	
		MSD -240628007-01B	0 - 10	-	0.9	
Arsenic	QC74492	LCS	90 - 110	98.4	-	EPA 200.8
		MS -240628007-01B	70 - 130	108.6	-	
		MSD -240628007-01B	0 - 10	-	1.6	
Barium	QC74492	LCS	90 - 110	99.7	-	EPA 200.8
		MS -240628007-01B	70 - 130	86.4	-	
		MSD -240628007-01B	0 - 10	-	1.9	
Beryllium	QC74492	LCS	90 - 110	95.8	-	EPA 200.8
		MS -240628007-01B	70 - 130	102.2	-	
		MSD -240628007-01B	0 - 10	-	1.7	
Cadmium	QC74492	LCS	90 - 110	96.0	-	EPA 200.8
		MS -240628007-01B	70 - 130	102.3	-	
		MSD -240628007-01B	0 - 10	-	0.6	
Chromium	QC74492	LCS	90 - 110	98.9	-	EPA 200.8
		MS -240628007-01B	70 - 130	102.3	-	
		MSD -240628007-01B	0 - 10	-	0.5	
Copper	QC74492	LCS	90 - 110	97.6	-	EPA 200.8
		MS -240628007-01B	70 - 130	100.4	-	
		MSD -240628007-01B	0 - 10	-	1.0	
Lead	QC74492	LCS	90 - 110	99.8	-	EPA 200.8
		MS -240628007-01B	70 - 130	94.5	-	
		MSD -240628007-01B	0 - 10	-	0.3	
Manganese	QC74492	LCS	90 - 110	100.7	-	EPA 200.8
		MS -240628007-01B	70 - 130	105.1	-	
		MSD -240628007-01B	0 - 10	-	1.6	
Molybdenum	QC74492	LCS	90 - 110	97.9	-	EPA 200.8
		MS -240628007-01B	70 - 130	102.1	-	
		MSD -240628007-01B	0 - 10	-	0.3	
Nickel	QC74492	LCS	90 - 110	98.8	-	EPA 200.8
		MS -240628007-01B	70 - 130	99.7	-	
		MSD -240628007-01B	0 - 10	-	0.3	
Selenium	QC74492	LCS	90 - 110	97.1	-	EPA 200.8
		MS -240628007-01B	70 - 130	115.8	-	
		MSD -240628007-01B	0 - 10	-	5.7	
Silica (as Si)	QC74492	LCS	90 - 110	106.1	-	EPA 200.8

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Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -240628007-01B	70 - 130	86.0	-	
		MSD -240628007-01B	0 - 10	-	0.5	
Silver	QC74492	LCS	90 - 110	101.3	-	EPA 200.8
		MS -240628007-01B	70 - 130	87.3	-	
		MSD -240628007-01B	0 - 10	-	1.1	
Thallium	QC74492	LCS	90 - 110	98.7	-	EPA 200.8
		MS -240628007-01B	70 - 130	95.9	-	
		MSD -240628007-01B	0 - 10	-	1.8	
Uranium	QC74492	LCS	90 - 110	98.1	-	EPA 200.8
		MS -240628007-01B	70 - 130	94.6	-	
		MSD -240628007-01B	0 - 10	-	0.3	
Vanadium	QC74492	LCS	90 - 110	97.3	-	EPA 200.8
		MS -240628007-01B	70 - 130	103.9	-	
		MSD -240628007-01B	0 - 10	-	0.7	
Zinc	QC74492	LCS	90 - 110	99.8	-	EPA 200.8
		MS -240628007-01B	70 - 130	103.5	-	
		MSD -240628007-01B	0 - 10	-	0.5	
Boron	QC74504	Duplicate -240628007-01	0 - 20	-	10.8	EPA 200.7
		LCS	90 - 110	106.2	-	
		MS -240628007-01B	75 - 125	98.4	-	
Calcium	QC74504	Duplicate -240628007-01	0 - 20	-	6.3	EPA 200.7
		LCS	90 - 110	98.8	-	
		MS -240628007-01B	75 - 125	101.7	-	
Iron	QC74504	Duplicate -240628007-01	0 - 20	-	0.0	EPA 200.7
		LCS	90 - 110	107.6	-	
		MS -240628007-01B	75 - 125	110.4	-	
Magnesium	QC74504	Duplicate -240628007-01	0 - 20	-	6.0	EPA 200.7
		LCS	90 - 110	95.8	-	
		MS -240628007-01B	75 - 125	107.4	-	
Potassium	QC74504	Duplicate -240628007-01	0 - 20	-	9.3	EPA 200.7
		LCS	90 - 110	96.7	-	
		MS -240628007-01B	75 - 125	116.5	-	
Sodium	QC74504	Duplicate -240628007-01	0 - 20	-	3.1	EPA 200.7
		LCS	90 - 110	92.8	-	
		MS -240628007-01B	75 - 125	93.0	-	
Nitrate Nitrogen	QC74449	Duplicate -240627115-01	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	97.4	-	
		MS -240627115-01	75 - 125	95.5	-	
Nitrite Nitrogen	QC74452	Duplicate -240627115-01	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	97.9	-	
		MS -240627115-01	75 - 125	92.8	-	
Sulfate	QC74451	Duplicate -240627115-01	0 - 20	-	3.4	EPA 300.0
		LCS	90 - 110	99.2	-	
		MS -240627115-01	75 - 125	93.4	-	
Total Dissolved Solids	QC74464	Duplicate -240627115-01	0 - 10	-	1.4	SM 2540-C
		LCS	85 - 115	97.7	-	
Phosphorus - Total	QC74480	Duplicate -240628081-02	0 - 20	-	0.0	EPA 365.1
		LCS	90 - 110	102.9	-	
		MS -240628018-04	75 - 125	109.6	-	
Total Suspended Solids	QC74421	Duplicate -240628009-01	0 - 10	-	0.0	SM 2540-D
		LCS	90 - 110	103.3	-	

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(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.

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
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ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 1	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	CAL Task 240628033 CJF
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☒ Soil ☐ Drinking Water ☐
Ground Water ☐ Sludge ☐
Surface Water ☐

ground water per quote & history CF 6/28/24

Date	Time	Sample ID	No. of Containers	Grab or (Check One Only) Composite	Tests Requested: 240100976
6/27	12:21p	GW-3R	5	X	X
6/27	12:30p	GW-99	5	X	X

10

Instructions: No Bottle Return Requested

C/S Info:
Deliver Via: UPS
C/S Charge ☒ K

Seals Present Yes ☐ No ☐
Temp. 2 °C/Ice Y
Sample Pres. Yes ☒ X No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	6/27/3:50p					[signature]	6/28/24 800

Colorado Analytical LABORATORIES, INC.

CAL Task 240628033

CJF

Quotation for Analytical Services

Quote ID: QBO24010976

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Wednesday, January 31, 2024**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
DRMS

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Alkalinity - B-C	N/A	12	$16.00	$192.00
Water - Ground	Alkalinity	SM 2320-B	12	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	12	Incl.	Incl.
Water - Ground	Hardness - Total	SM 2340-B	12	$0.00	$0.00
Water - Ground	Nitrate/ Nitrite Nitrogen	Calculation	12	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Fe - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	K - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Na - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ph	SM 4500-H-B	12	$13.00	$156.00
Water - Ground	Specific Conductance	EPA 120.1	12	$14.00	$168.00
Water - Ground	Ag - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Al - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	As - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ba - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Be - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cd - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cr - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cu - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mo - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ni - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Pb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Sb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Se - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Si - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TDS	SM 2540-C	12	$16.00	$192.00

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

JML

Colorado Analytical LABORATORIES, INC.

CAL Task
240628033

CJF

Quotation for Analytical Services
Quote ID: QBO24010976

Water - Ground	Tl - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TSS	SM 2540-D	12	$16.00	$192.00
Water - Ground	V - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Zn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Chloride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Fluoride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrate Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrite Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Sulfate	EPA 300.0	12	$18.00	$216.00
Water - Ground	U - Dis	EPA 200.8	12	$23.00	$276.00
Water - Ground	Total Phosphorus	EPA 365.1	12	$26.00	$312.00
Water - Ground	Hg	EPA 245.7	12	$27.00	$324.00
Water - Ground	Cyanide-Total	EPA 335.4	12	$40.00	$480.00

$8,076.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240702001

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.: 240702001
Client PO:
Client Project: DRMS

Date Received: 7/2/24
Date Reported: 7/10/24
Matrix: Water - Ground

Customer Sample ID GW-3B
Sample Date/Time: 6/28/24 8:40 AM
Lab Number: 240702001-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**29.4 mg/L as CaCO3**	SM 2320-B	4.0	1	7/9/24	QC74584	KJP
Bicarbonate	**29.4 mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Chloride	**0.24 mg/L**	EPA 300.0	0.10	0.007	7/2/24	QC74536	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	7/5/24	QC74561	DPL
Fluoride	**0.21 mg/L**	EPA 300.0	0.10	0.024	7/2/24	QC74537	NRP
Nitrate Nitrogen	**0.27 mg/L**	EPA 300.0	0.05	0.02	7/2/24	QC74538	NRP
Nitrate/ Nitrite Nitrogen	**0.27 mg/L**	Calculation	0.05	0.02	7/5/24	-	AMJ
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	7/2/24	QC74539	NRP
pH	**6.50 units**	SM 4500-H-B	0.01	0.01	7/2/24	-	ARH
Specific Conductance	**199 umhos/cm @ 25c**	EPA 120.1	5	5	7/2/24	-	ARH
Sulfate	**65.6 mg/L**	EPA 300.0	0.10	0.012	7/2/24	QC74540	NRP
Total Dissolved Solids	**127 mg/L**	SM 2540-C	5	2	7/3/24	QC74495	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	7/2/24	QC74480	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	7/3/24	QC74506	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	7/3/24	QC74515	JJA
Aluminum	**ND mg/L**	EPA 200.8	0.001	0.00003	7/9/24	QC74597	MBN
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	7/9/24	QC74597	MBN
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	7/9/24	QC74597	MBN
Barium	**0.0445 mg/L**	EPA 200.8	0.0007	0.00007	7/9/24	QC74597	MBN
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	7/9/24	QC74597	MBN
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	7/9/24	QC74597	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	7/9/24	QC74597	MBN

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ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240702001

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.: 240702001
Client PO:
Client Project: DRMS

Date Received: 7/2/24
Date Reported: 7/10/24
Matrix: Water - Ground

Customer Sample ID GW-3B
Sample Date/Time: 6/28/24 8:40 AM
Lab Number: 240702001-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/9/24	QC74597	MBN
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	7/9/24	QC74597	MBN
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/9/24	QC74597	MBN
Molybdenum	**0.0007 mg/L**	EPA 200.8	0.0005	0.00005	7/9/24	QC74597	MBN
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	7/9/24	QC74597	MBN
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	7/9/24	QC74597	MBN
Silica (as Si)	**2.4 mg/L**	EPA 200.8	0.3	0.03	7/9/24	QC74597	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	7/9/24	QC74597	MBN
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	7/9/24	QC74597	MBN
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	7/9/24	QC74597	MBN
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	7/9/24	QC74597	MBN
Zinc	**0.110 mg/L**	EPA 200.8	0.001	0.00003	7/9/24	QC74597	MBN
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	7/8/24	QC74567	MBN
Calcium	**30.0 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	7/8/24	QC74567	MBN
Magnesium	**2.09 mg/L**	EPA 200.7	0.02	0.002	7/8/24	QC74567	MBN
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Sodium	**2.2 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Total							
Total Hardness	**84.9 mg/L as CaCO3**	SM 2340-B	0.1	-	7/8/24	-	MBN
Calcium	**30.5 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Magnesium	**2.14 mg/L**	EPA 200.7	0.02	0.002	7/8/24	QC74567	MBN

Holding time expired for Nitrate/Nitrite Nitrogen. Ok to test outside of hold time per customer.

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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240702001

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.: 240702001
Client PO:
Client Project: DRMS

Date Received: 7/2/24
Date Reported: 7/10/24
Matrix: Water - Ground

Customer Sample ID GW-2A
Sample Date/Time: 6/28/24 10:04 AM
Lab Number: 240702001-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**25.2 mg/L as CaCO3**	SM 2320-B	4.0	1	7/9/24	QC74584	KJP
Bicarbonate	**25.2 mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Chloride	**0.16 mg/L**	EPA 300.0	0.10	0.007	7/2/24	QC74536	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	7/5/24	QC74561	DPL
Fluoride	**0.25 mg/L**	EPA 300.0	0.10	0.024	7/2/24	QC74537	NRP
Nitrate Nitrogen	**0.20 mg/L**	EPA 300.0	0.05	0.02	7/2/24	QC74538	NRP
Nitrate/ Nitrite Nitrogen	**0.20 mg/L**	Calculation	0.05	0.02	7/5/24	-	AMJ
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	7/2/24	QC74539	NRP
pH	**7.55 units**	SM 4500-H-B	0.01	0.01	7/2/24	-	ARH
Specific Conductance	**160 umhos/cm @ 25c**	EPA 120.1	5	5	7/2/24	-	ARH
Sulfate	**50.5 mg/L**	EPA 300.0	0.10	0.012	7/2/24	QC74540	NRP
Total Dissolved Solids	**98 mg/L**	SM 2540-C	5	2	7/3/24	QC74495	ISG
Phosphorus - Total	**0.12 mg/L**	EPA 365.1	0.05	0.006	7/2/24	QC74480	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	7/3/24	QC74506	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	7/3/24	QC74515	JJA
Aluminum	**0.001 mg/L**	EPA 200.8	0.001	0.00003	7/9/24	QC74597	MBN
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	7/9/24	QC74597	MBN
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	7/9/24	QC74597	MBN
Barium	**0.0360 mg/L**	EPA 200.8	0.0007	0.00007	7/9/24	QC74597	MBN
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	7/9/24	QC74597	MBN
Cadmium	**0.0004 mg/L**	EPA 200.8	0.0001	0.000006	7/9/24	QC74597	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	7/9/24	QC74597	MBN

Abbreviations/ References:

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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

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240702001

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.: 240702001
Client PO:
Client Project: DRMS

Date Received: 7/2/24
Date Reported: 7/10/24
Matrix: Water - Ground

Customer Sample ID GW-2A
Sample Date/Time: 6/28/24 10:04 AM
Lab Number: 240702001-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/9/24	QC74597	MBN
Lead	**0.0003 mg/L**	EPA 200.8	0.0001	0.000006	7/9/24	QC74597	MBN
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/9/24	QC74597	MBN
Molybdenum	**0.0010 mg/L**	EPA 200.8	0.0005	0.00005	7/9/24	QC74597	MBN
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	7/9/24	QC74597	MBN
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	7/9/24	QC74597	MBN
Silica (as Si)	**2.1 mg/L**	EPA 200.8	0.3	0.03	7/9/24	QC74597	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	7/9/24	QC74597	MBN
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	7/9/24	QC74597	MBN
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	7/9/24	QC74597	MBN
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	7/9/24	QC74597	MBN
Zinc	**0.318 mg/L**	EPA 200.8	0.001	0.00003	7/9/24	QC74597	MBN
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	7/8/24	QC74567	MBN
Calcium	**25.2 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	7/8/24	QC74567	MBN
Magnesium	**1.90 mg/L**	EPA 200.7	0.02	0.002	7/8/24	QC74567	MBN
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Sodium	**1.7 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Total							
Total Hardness	**70.8 mg/L as CaCO3**	SM 2340-B	0.1	-	7/8/24	-	MBN
Calcium	**25.2 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Magnesium	**1.92 mg/L**	EPA 200.7	0.02	0.002	7/8/24	QC74567	MBN

Holding time expired for Nitrate/Nitrite Nitrogen. Ok to test outside of hold time per customer.

Abbreviations/ References:

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mg/L = Milligrams Per Liter or PPM
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mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240702001

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.: 240702001
Client PO:
Client Project: DRMS

Date Received: 7/2/24
Date Reported: 7/10/24
Matrix: Water - Ground

Customer Sample ID GW-2B
Sample Date/Time: 6/28/24 11:11 AM
Lab Number: 240702001-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**29.8 mg/L as CaCO3**	SM 2320-B	4.0	1	7/9/24	QC74584	KJP
Bicarbonate	**29.8 mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Chloride	**0.31 mg/L**	EPA 300.0	0.10	0.007	7/2/24	QC74536	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	7/5/24	QC74561	DPL
Fluoride	**0.22 mg/L**	EPA 300.0	0.10	0.024	7/2/24	QC74537	NRP
Nitrate Nitrogen	**0.23 mg/L**	EPA 300.0	0.05	0.02	7/2/24	QC74538	NRP
Nitrate/ Nitrite Nitrogen	**0.23 mg/L**	Calculation	0.05	0.02	7/5/24	-	AMJ
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	7/2/24	QC74539	NRP
pH	**6.51 units**	SM 4500-H-B	0.01	0.01	7/2/24	-	ARH
Specific Conductance	**216 umhos/cm @ 25c**	EPA 120.1	5	5	7/2/24	-	ARH
Sulfate	**77.0 mg/L**	EPA 300.0	0.10	0.012	7/2/24	QC74540	NRP
Total Dissolved Solids	**125 mg/L**	SM 2540-C	5	2	7/3/24	QC74495	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	7/2/24	QC74480	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	7/3/24	QC74506	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	7/3/24	QC74515	JJA
Aluminum	**ND mg/L**	EPA 200.8	0.001	0.00003	7/9/24	QC74597	MBN
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	7/9/24	QC74597	MBN
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	7/9/24	QC74597	MBN
Barium	**0.0568 mg/L**	EPA 200.8	0.0007	0.00007	7/9/24	QC74597	MBN
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	7/9/24	QC74597	MBN
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	7/9/24	QC74597	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	7/9/24	QC74597	MBN

Abbreviations/ References:

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Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240702001

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.: 240702001
Client PO:
Client Project: DRMS

Date Received: 7/2/24
Date Reported: 7/10/24
Matrix: Water - Ground

Customer Sample ID GW-2B
Sample Date/Time: 6/28/24 11:11 AM
Lab Number: 240702001-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/9/24	QC74597	MBN
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	7/9/24	QC74597	MBN
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/9/24	QC74597	MBN
Molybdenum	**0.0009 mg/L**	EPA 200.8	0.0005	0.00005	7/9/24	QC74597	MBN
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	7/9/24	QC74597	MBN
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	7/9/24	QC74597	MBN
Silica (as Si)	**2.5 mg/L**	EPA 200.8	0.3	0.03	7/9/24	QC74597	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	7/9/24	QC74597	MBN
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	7/9/24	QC74597	MBN
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	7/9/24	QC74597	MBN
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	7/9/24	QC74597	MBN
Zinc	**0.285 mg/L**	EPA 200.8	0.001	0.00003	7/9/24	QC74597	MBN
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	7/8/24	QC74567	MBN
Calcium	**33.7 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	7/8/24	QC74567	MBN
Magnesium	**2.66 mg/L**	EPA 200.7	0.02	0.002	7/8/24	QC74567	MBN
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Sodium	**1.9 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Total							
Total Hardness	**98.7 mg/L as CaCO3**	SM 2340-B	0.1	-	7/8/24	-	MBN
Calcium	**35.0 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Magnesium	**2.74 mg/L**	EPA 200.7	0.02	0.002	7/8/24	QC74567	MBN

Holding time expired for Nitrate/Nitrite Nitrogen. Ok to test outside of hold time per customer.

Abbreviations/ References:

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240702001

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.: 240702001
Client PO:
Client Project: DRMS

Date Received: 7/2/24
Date Reported: 7/10/24
Matrix: Water - Ground

Customer Sample ID GW-1A
Sample Date/Time: 6/28/24 12:39 PM
Lab Number: 240702001-04

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**37.6 mg/L as CaCO3**	SM 2320-B	4.0	1	7/9/24	QC74584	KJP
Bicarbonate	**37.6 mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Chloride	**0.19 mg/L**	EPA 300.0	0.10	0.007	7/2/24	QC74536	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	7/5/24	QC74561	DPL
Fluoride	**0.19 mg/L**	EPA 300.0	0.10	0.024	7/2/24	QC74537	NRP
Nitrate Nitrogen	**0.18 mg/L**	EPA 300.0	0.05	0.02	7/2/24	QC74538	NRP
Nitrate/ Nitrite Nitrogen	**0.18 mg/L**	Calculation	0.05	0.02	7/5/24	-	AMJ
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	7/2/24	QC74539	NRP
pH	**6.70 units**	SM 4500-H-B	0.01	0.01	7/2/24	-	ARH
Specific Conductance	**148 umhos/cm @ 25c**	EPA 120.1	5	5	7/2/24	-	ARH
Sulfate	**36.6 mg/L**	EPA 300.0	0.10	0.012	7/2/24	QC74540	NRP
Total Dissolved Solids	**84 mg/L**	SM 2540-C	5	2	7/3/24	QC74495	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	7/2/24	QC74480	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	7/3/24	QC74506	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	7/3/24	QC74515	JJA
Aluminum	**0.001 mg/L**	EPA 200.8	0.001	0.00003	7/9/24	QC74597	MBN
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	7/9/24	QC74597	MBN
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	7/9/24	QC74597	MBN
Barium	**0.0341 mg/L**	EPA 200.8	0.0007	0.00007	7/9/24	QC74597	MBN
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	7/9/24	QC74597	MBN
Cadmium	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	7/9/24	QC74597	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	7/9/24	QC74597	MBN

Abbreviations/ References:

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240702001

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.: 240702001
Client PO:
Client Project: DRMS

Date Received: 7/2/24
Date Reported: 7/10/24
Matrix: Water - Ground

Customer Sample ID GW-1A
Sample Date/Time: 6/28/24 12:39 PM
Lab Number: 240702001-04

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/9/24	QC74597	MBN
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	7/9/24	QC74597	MBN
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/9/24	QC74597	MBN
Molybdenum	**0.0010 mg/L**	EPA 200.8	0.0005	0.00005	7/9/24	QC74597	MBN
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	7/9/24	QC74597	MBN
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	7/9/24	QC74597	MBN
Silica (as Si)	**2.1 mg/L**	EPA 200.8	0.3	0.03	7/9/24	QC74597	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	7/9/24	QC74597	MBN
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	7/9/24	QC74597	MBN
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	7/9/24	QC74597	MBN
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	7/9/24	QC74597	MBN
Zinc	**0.058 mg/L**	EPA 200.8	0.001	0.00003	7/9/24	QC74597	MBN
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	7/8/24	QC74567	MBN
Calcium	**23.1 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	7/8/24	QC74567	MBN
Magnesium	**1.82 mg/L**	EPA 200.7	0.02	0.002	7/8/24	QC74567	MBN
Potassium	**0.4 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Sodium	**1.7 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Total							
Total Hardness	**67.7 mg/L as CaCO3**	SM 2340-B	0.1	-	7/8/24	-	MBN
Calcium	**24.0 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Magnesium	**1.90 mg/L**	EPA 200.7	0.02	0.002	7/8/24	QC74567	MBN

Holding time expired for Nitrate/Nitrite Nitrogen. Ok to test outside of hold time per customer.

Abbreviations/ References:

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240702001

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.: 240702001
Client PO:
Client Project: DRMS

Date Received: 7/2/24
Date Reported: 7/10/24
Matrix: Water - Ground

Customer Sample ID GW-1B
Sample Date/Time: 6/28/24 1:40 PM
Lab Number: 240702001-05

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**36.0 mg/L as CaCO3**	SM 2320-B	4.0	1	7/9/24	QC74584	KJP
Bicarbonate	**36.0 mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	7/9/24	-	KJP
Chloride	**0.19 mg/L**	EPA 300.0	0.10	0.007	7/2/24	QC74536	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	7/5/24	QC74561	DPL
Fluoride	**0.19 mg/L**	EPA 300.0	0.10	0.024	7/2/24	QC74537	NRP
Nitrate Nitrogen	**0.19 mg/L**	EPA 300.0	0.05	0.02	7/2/24	QC74538	NRP
Nitrate/ Nitrite Nitrogen	**0.19 mg/L**	Calculation	0.05	0.02	7/5/24	-	AMJ
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	7/2/24	QC74539	NRP
pH	**6.72 units**	SM 4500-H-B	0.01	0.01	7/2/24	-	ARH
Specific Conductance	**149 umhos/cm @ 25c**	EPA 120.1	5	5	7/2/24	-	ARH
Sulfate	**37.4 mg/L**	EPA 300.0	0.10	0.012	7/2/24	QC74540	NRP
Total Dissolved Solids	**84 mg/L**	SM 2540-C	5	2	7/3/24	QC74495	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	7/2/24	QC74480	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	7/3/24	QC74506	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	7/3/24	QC74515	JJA
Aluminum	**0.001 mg/L**	EPA 200.8	0.001	0.00003	7/9/24	QC74597	MBN
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	7/9/24	QC74597	MBN
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	7/9/24	QC74597	MBN
Barium	**0.0351 mg/L**	EPA 200.8	0.0007	0.00007	7/9/24	QC74597	MBN
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	7/9/24	QC74597	MBN
Cadmium	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	7/9/24	QC74597	MBN
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	7/9/24	QC74597	MBN

Abbreviations/ References:

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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240702001

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.: 240702001
Client PO:
Client Project: DRMS

Date Received: 7/2/24
Date Reported: 7/10/24
Matrix: Water - Ground

Customer Sample ID GW-1B
Sample Date/Time: 6/28/24 1:40 PM
Lab Number: 240702001-05

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/9/24	QC74597	MBN
Lead	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	7/9/24	QC74597	MBN
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	7/9/24	QC74597	MBN
Molybdenum	**0.0011 mg/L**	EPA 200.8	0.0005	0.00005	7/9/24	QC74597	MBN
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	7/9/24	QC74597	MBN
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	7/9/24	QC74597	MBN
Silica (as Si)	**2.2 mg/L**	EPA 200.8	0.3	0.03	7/9/24	QC74597	MBN
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	7/9/24	QC74597	MBN
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	7/9/24	QC74597	MBN
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	7/9/24	QC74597	MBN
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	7/9/24	QC74597	MBN
Zinc	**0.052 mg/L**	EPA 200.8	0.001	0.00003	7/9/24	QC74597	MBN
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	7/8/24	QC74567	MBN
Calcium	**23.4 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	7/8/24	QC74567	MBN
Magnesium	**1.88 mg/L**	EPA 200.7	0.02	0.002	7/8/24	QC74567	MBN
Potassium	**0.4 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Sodium	**1.7 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Total							
Total Hardness	**67.4 mg/L as CaCO3**	SM 2340-B	0.1	-	7/8/24	-	MBN
Calcium	**23.8 mg/L**	EPA 200.7	0.1	0.01	7/8/24	QC74567	MBN
Magnesium	**1.92 mg/L**	EPA 200.7	0.02	0.002	7/8/24	QC74567	MBN

Holding time expired for Nitrate/Nitrite Nitrogen. Ok to test outside of hold time per customer.

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Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240702001

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 7/2/24
Project Name: DRMS

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Total Alkalinity	QC74584	Blank	ND	SM 2320-B	7/9/24
Chloride	QC74536	Blank	ND	EPA 300.0	7/2/24
Cyanide-Total	QC74561	Blank	ND	EPA 335.4	7/5/24
Fluoride	QC74537	Blank	ND	EPA 300.0	7/2/24
Mercury	QC74515	Method Blank	ND	EPA 245.7	7/3/24
Aluminum	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Antimony	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Arsenic	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Barium	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Beryllium	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Cadmium	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Chromium	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Copper	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Lead	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Manganese	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Molybdenum	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Nickel	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Selenium	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Silica (as Si)	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Silver	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Thallium	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Uranium	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Vanadium	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Zinc	QC74597	Method Blank	ND	EPA 200.8	7/2/24
Boron	QC74567	Method Blank	ND	EPA 200.7	7/2/24
Calcium	QC74567	Method Blank	ND	EPA 200.7	7/2/24
Iron	QC74567	Method Blank	ND	EPA 200.7	7/2/24
Magnesium	QC74567	Method Blank	ND	EPA 200.7	7/2/24
Potassium	QC74567	Method Blank	ND	EPA 200.7	7/2/24
Sodium	QC74567	Method Blank	ND	EPA 200.7	7/2/24
Nitrate Nitrogen	QC74538	Blank	ND	EPA 300.0	7/2/24
Nitrite Nitrogen	QC74539	Blank	ND	EPA 300.0	7/2/24
Sulfate	QC74540	Blank	ND	EPA 300.0	7/2/24
Total Dissolved Solids	QC74495	Blank	ND	SM 2540-C	7/2/24
Phosphorus - Total	QC74480	Blank	ND	EPA 365.1	7/1/24
Total Suspended Solids	QC74506	Blank	ND	SM 2540-D	7/3/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Alkalinity	QC74584	Duplicate -240702001-01	0 - 20	-	1.9	SM 2320-B
		LCS	90 - 110	99.5	-	
		LCS-2	90 - 110	102.8	-	
Chloride	QC74536	Duplicate -240702001-01	0 - 20	-	1.8	EPA 300.0

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Date Analyzed = Date Test Completed

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ND = Not Detected at Reporting Limit.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		LCS	90 - 110	107.7	-	
		MS -240702001-01	75 - 125	101.9	-	
Cyanide-Total	QC74561	Duplicate -240702001-01	0 - 20	-	0.0	EPA 335.4
		LCS	90 - 110	97.5	-	
		MS -240702001-05D	75 - 125	89.5	-	
Fluoride	QC74537	Duplicate -240702001-01	0 - 20	-	8.9	EPA 300.0
		LCS	90 - 110	96.4	-	
		MS -240702001-01	75 - 125	95.6	-	
Mercury	QC74515	Duplicate -240701060-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	108.8	-	
		MS -240701060-01B	80 - 120	92.0	-	
Aluminum	QC74597	LCS	90 - 110	104.1	-	EPA 200.8
		MS -240702001-01	70 - 130	101.7	-	
		MSD -240702001-01	0 - 10	-	2.4	
Antimony	QC74597	LCS	90 - 110	107.9	-	EPA 200.8
		MS -240702001-01	70 - 130	104.2	-	
		MSD -240702001-01	0 - 10	-	0.4	
Arsenic	QC74597	LCS	90 - 110	98.7	-	EPA 200.8
		MS -240702001-01	70 - 130	110.9	-	
		MSD -240702001-01	0 - 10	-	1.1	
Barium	QC74597	LCS	90 - 110	101.2	-	EPA 200.8
		MS -240702001-01	70 - 130	99.5	-	
		MSD -240702001-01	0 - 10	-	1.9	
Beryllium	QC74597	LCS	90 - 110	101.9	-	EPA 200.8
		MS -240702001-01	70 - 130	109.1	-	
		MSD -240702001-01	0 - 10	-	1.3	
Cadmium	QC74597	LCS	90 - 110	99.2	-	EPA 200.8
		MS -240702001-01	70 - 130	107.3	-	
		MSD -240702001-01	0 - 10	-	0.3	
Chromium	QC74597	LCS	90 - 110	101.5	-	EPA 200.8
		MS -240702001-01	70 - 130	108.1	-	
		MSD -240702001-01	0 - 10	-	0.1	
Copper	QC74597	LCS	90 - 110	101.2	-	EPA 200.8
		MS -240702001-01	70 - 130	108.7	-	
		MSD -240702001-01	0 - 10	-	0.4	
Lead	QC74597	LCS	90 - 110	101.0	-	EPA 200.8
		MS -240702001-01	70 - 130	107.1	-	
		MSD -240702001-01	0 - 10	-	0.8	
Manganese	QC74597	LCS	90 - 110	102.9	-	EPA 200.8
		MS -240702001-01	70 - 130	108.6	-	
		MSD -240702001-01	0 - 10	-	0.3	
Molybdenum	QC74597	LCS	90 - 110	99.9	-	EPA 200.8
		MS -240702001-01	70 - 130	106.5	-	
		MSD -240702001-01	0 - 10	-	0.3	
Nickel	QC74597	LCS	90 - 110	104.2	-	EPA 200.8
		MS -240702001-01	70 - 130	108.5	-	
		MSD -240702001-01	0 - 10	-	0.4	
Selenium	QC74597	LCS	90 - 110	98.6	-	EPA 200.8
		MS -240702001-01	70 - 130	113.3	-	
		MSD -240702001-01	0 - 10	-	4.1	
Silica (as Si)	QC74597	LCS	90 - 110	96.5	-	EPA 200.8

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Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -240702001-01	70 - 130	76.8	-	
		MSD -240702001-01	0 - 10	-	1.7	
Silver	QC74597	LCS	90 - 110	107.6	-	EPA 200.8
		MS -240702001-01	70 - 130	107.6	-	
		MSD -240702001-01	0 - 10	-	1.0	
Thallium	QC74597	LCS	90 - 110	102.0	-	EPA 200.8
		MS -240702001-01	70 - 130	106.5	-	
		MSD -240702001-01	0 - 10	-	0.7	
Uranium	QC74597	LCS	90 - 110	95.6	-	EPA 200.8
		MS -240702001-01	70 - 130	106.3	-	
		MSD -240702001-01	0 - 10	-	0.7	
Vanadium	QC74597	LCS	90 - 110	100.9	-	EPA 200.8
		MS -240702001-01	70 - 130	109.4	-	
		MSD -240702001-01	0 - 10	-	0.0	
Zinc	QC74597	LCS	90 - 110	101.2	-	EPA 200.8
		MS -240702001-01	70 - 130	106.9	-	
		MSD -240702001-01	0 - 10	-	0.3	
Boron	QC74567	Duplicate -240702005-01	0 - 20	-	1.1	EPA 200.7
		LCS	90 - 110	95.6	-	
		MS -240702001-01	75 - 125	104.7	-	
Calcium	QC74567	Duplicate -240702005-01	0 - 20	-	1.1	EPA 200.7
		LCS	90 - 110	96.8	-	
		MS -240702001-01	75 - 125	110.0	-	
Iron	QC74567	Duplicate -240702005-01	0 - 20	-	0.7	EPA 200.7
		LCS	90 - 110	94.7	-	
		MS -240702001-01	75 - 125	110.3	-	
Magnesium	QC74567	Duplicate -240702005-01	0 - 20	-	0.5	EPA 200.7
		LCS	90 - 110	94.2	-	
		MS -240702001-01	75 - 125	106.4	-	
Potassium	QC74567	Duplicate -240702005-01	0 - 20	-	1.1	EPA 200.7
		LCS	90 - 110	98.5	-	
		MS -240702001-01	75 - 125	118.1	-	
Sodium	QC74567	Duplicate -240702005-01	0 - 20	-	1.0	EPA 200.7
		LCS	90 - 110	93.2	-	
		MS -240702001-01	75 - 125	111.6	-	
Nitrate Nitrogen	QC74538	Duplicate -240702001-01	0 - 20	-	3.0	EPA 300.0
		LCS	90 - 110	108.5	-	
		MS -240702001-01	75 - 125	101.3	-	
Nitrite Nitrogen	QC74539	Duplicate -240702001-01	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	107.8	-	
		MS -240702001-01	75 - 125	103.0	-	
Sulfate	QC74540	Duplicate -240702001-01	0 - 20	-	2.5	EPA 300.0
		LCS	90 - 110	110.0	-	
		MS -240702001-01	75 - 125	108.6	-	
Total Dissolved Solids	QC74495	Duplicate -240628067-01	0 - 10	-	2.2	SM 2540-C
		LCS	85 - 115	97.7	-	
Phosphorus - Total	QC74480	Duplicate -240628081-02	0 - 20	-	0.0	EPA 365.1
		LCS	90 - 110	102.9	-	
		MS -240628018-04	75 - 125	109.6	-	
Total Suspended Solids	QC74506	Duplicate -240702003-01	0 - 10	-	3.2	SM 2540-D
		LCS	90 - 110	103.3	-	

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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.

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
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ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Thorin Resources	Company Name:	
Contact Name: CS Dickerson	Contact Name:	
Address: 1900 Main St. Unit 1	Address:	Task Number (Lab Use Only)
City Olney State Co Zip 81427	City State Zip	CAL Task 240702001 RMB
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☑ Soil ☐ Drinking Water ☐
Ground Water ☑ * Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or (Check One Only) Composite	Tests Requested: 240100976
6/28	9:40am	~~GB~~ GW-3B	5	X	X
6/28	10:04am	GW-2A	5	X	X
6/28	11:11am	GW-2B	5	X	X
6/28	12:39pm	GW-1A	5	X	X
6/28	1:40pm	GW-~~2~~1B	5	X	X
*Per history quote. RB 7/2					

25

Instructions: Run if past hold time, No Bottle return

C/S Info:

Deliver Via: UPS

C/S Charge ☒ K

Seals Present Yes ☐ No ☐

Temp. 2 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CS Dickerson	07/01 4:05p					Adams	7/2/24

CAL Task
240702001

RMB

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO24010976

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Wednesday, January 31, 2024**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
DRMS

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Alkalinity - B-C	N/A	12	$16.00	$192.00
Water - Ground	Alkalinity	SM 2320-B	12	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	12	Incl.	Incl.
Water - Ground	Hardness - Total	SM 2340-B	12	$0.00	$0.00
Water - Ground	Nitrate/ Nitrite Nitrogen	Calculation	12	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Fe - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	K - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Na - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ph	SM 4500-H-B	12	$13.00	$156.00
Water - Ground	Specific Conductance	EPA 120.1	12	$14.00	$168.00
Water - Ground	Ag - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Al - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	As - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ba - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Be - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cd - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cr - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cu - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mo - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ni - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Pb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Sb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Se - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Si - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TDS	SM 2540-C	12	$16.00	$192.00

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

JML

Colorado Analytical LABORATORIES, INC.

CAL Task
240702001

RMB

Quotation for Analytical Services
Quote ID: QBO24010976

Water - Ground	Tl - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TSS	SM 2540-D	12	$16.00	$192.00
Water - Ground	V - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Zn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Chloride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Fluoride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrate Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrite Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Sulfate	EPA 300.0	12	$18.00	$216.00
Water - Ground	U - Dis	EPA 200.8	12	$23.00	$276.00
Water - Ground	Total Phosphorus	EPA 365.1	12	$26.00	$312.00
Water - Ground	Hg	EPA 245.7	12	$27.00	$324.00
Water - Ground	Cyanide-Total	EPA 335.4	12	$40.00	$480.00

$8,076.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID UG-2
Sample Date/Time: 9/17/24 12:00 PM
Lab Number: 240918003-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**51.3 mg/L as CaCO3**	SM 2320-B	4.0	1	9/18/24	QC76327	TAB
Bicarbonate	**51.3 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	9/19/24	QC76297	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.23 mg/L**	EPA 300.0	0.10	0.024	9/19/24	QC76298	NRP
Nitrate Nitrogen	**0.23 mg/L**	EPA 300.0	0.05	0.02	9/19/24	QC76294	NRP
Nitrate/ Nitrite Nitrogen	**0.23 mg/L**	Calculation	0.05	0.02	9/19/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/19/24	QC76295	NRP
pH	**7.19 units**	SM 4500-H-B	0.01	0.01	9/18/24	-	KRB
Specific Conductance	**311 umhos/cm @ 25c**	EPA 120.1	5	5	9/18/24	-	KRB
Sulfate	**95.5 mg/L**	EPA 300.0	1.00	0.012	9/19/24	QC76299	NRP
Total Dissolved Solids	**187 mg/L**	SM 2540-C	5	2	9/19/24	QC76311	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/19/24	QC76308	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/19/24	QC76290	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Aluminum	**0.008 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/23/24	QC76340	JJA
Arsenic	**0.0031 mg/L**	EPA 200.8	0.0006	0.00006	9/23/24	QC76340	JJA
Barium	**0.0324 mg/L**	EPA 200.8	0.0007	0.00007	9/23/24	QC76340	JJA
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/23/24	QC76340	JJA
Cadmium	**0.0017 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/23/24	QC76340	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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID UG-2
Sample Date/Time: 9/17/24 12:00 PM
Lab Number: 240918003-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Manganese	**1.90 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Molybdenum	**0.0021 mg/L**	EPA 200.8	0.0005	0.00005	9/23/24	QC76340	JJA
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/23/24	QC76340	JJA
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/23/24	QC76340	JJA
Silica (as Si)	**3.19 mg/L**	EPA 200.8	0.30	0.03	9/23/24	QC76340	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76340	JJA
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/23/24	QC76340	JJA
Uranium	**0.0003 mg/L**	EPA 200.8	0.0002	0.000002	9/23/24	QC76340	JJA
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/23/24	QC76340	JJA
Zinc	**0.500 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/23/24	QC76367	JJA
Calcium	**51.2 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/23/24	QC76367	JJA
Magnesium	**2.30 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA
Potassium	**0.4 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Sodium	**6.3 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Total							
Total Hardness	**141.8 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/23/24	-	JJA
Calcium	**52.8 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Magnesium	**2.40 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

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(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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID UG-8
Sample Date/Time: 9/17/24 8:55 AM
Lab Number: 240918003-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**64.5 mg/L as CaCO3**	SM 2320-B	4.0	1	9/18/24	QC76327	TAB
Bicarbonate	**64.5 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	9/18/24	QC76297	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.27 mg/L**	EPA 300.0	0.10	0.024	9/18/24	QC76298	NRP
Nitrate Nitrogen	**0.37 mg/L**	EPA 300.0	0.05	0.02	9/18/24	QC76294	NRP
Nitrate/ Nitrite Nitrogen	**0.37 mg/L**	Calculation	0.05	0.02	9/19/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/18/24	QC76295	NRP
pH	**7.63 units**	SM 4500-H-B	0.01	0.01	9/18/24	-	KRB
Specific Conductance	**335 umhos/cm @ 25c**	EPA 120.1	5	5	9/18/24	-	KRB
Sulfate	**92.1 mg/L**	EPA 300.0	1.00	0.012	9/18/24	QC76299	NRP
Total Dissolved Solids	**210 mg/L**	SM 2540-C	5	2	9/19/24	QC76311	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/19/24	QC76308	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/19/24	QC76290	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Aluminum	**0.005 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Antimony	**0.0019 mg/L**	EPA 200.8	0.0012	0.00012	9/23/24	QC76340	JJA
Arsenic	**0.0090 mg/L**	EPA 200.8	0.0006	0.00006	9/23/24	QC76340	JJA
Barium	**0.0342 mg/L**	EPA 200.8	0.0007	0.00007	9/23/24	QC76340	JJA
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/23/24	QC76340	JJA
Cadmium	**ND mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/23/24	QC76340	JJA

Abbreviations/ References:

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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

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ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID UG-8
Sample Date/Time: 9/17/24 8:55 AM
Lab Number: 240918003-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Lead	**0.0003 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Manganese	**0.0106 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Molybdenum	**0.0048 mg/L**	EPA 200.8	0.0005	0.00005	9/23/24	QC76340	JJA
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/23/24	QC76340	JJA
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/23/24	QC76340	JJA
Silica (as Si)	**3.18 mg/L**	EPA 200.8	0.30	0.03	9/23/24	QC76340	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76340	JJA
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/23/24	QC76340	JJA
Uranium	**0.0007 mg/L**	EPA 200.8	0.0002	0.000002	9/23/24	QC76340	JJA
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/23/24	QC76340	JJA
Zinc	**0.036 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/23/24	QC76367	JJA
Calcium	**58.8 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/23/24	QC76367	JJA
Magnesium	**3.28 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Sodium	**9.1 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Total							
Total Hardness	**162.1 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/23/24	-	JJA
Calcium	**59.4 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Magnesium	**3.32 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA

Abbreviations/ References:

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(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

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID GW-3R
Sample Date/Time: 9/17/24 12:55 PM
Lab Number: 240918003-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**29.6 mg/L as CaCO3**	SM 2320-B	4.0	1	9/18/24	QC76327	TAB
Bicarbonate	**29.6 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	9/18/24	QC76297	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.22 mg/L**	EPA 300.0	0.10	0.024	9/18/24	QC76298	NRP
Nitrate Nitrogen	**0.28 mg/L**	EPA 300.0	0.05	0.02	9/18/24	QC76294	NRP
Nitrate/ Nitrite Nitrogen	**0.28 mg/L**	Calculation	0.05	0.02	9/19/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/18/24	QC76295	NRP
pH	**6.53 units**	SM 4500-H-B	0.01	0.01	9/18/24	-	KRB
Specific Conductance	**221 umhos/cm @ 25c**	EPA 120.1	5	5	9/18/24	-	KRB
Sulfate	**68.5 mg/L**	EPA 300.0	1.00	0.012	9/18/24	QC76299	NRP
Total Dissolved Solids	**135 mg/L**	SM 2540-C	5	2	9/19/24	QC76311	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/19/24	QC76308	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/19/24	QC76290	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Aluminum	**0.002 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/23/24	QC76340	JJA
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	9/23/24	QC76340	JJA
Barium	**0.0364 mg/L**	EPA 200.8	0.0007	0.00007	9/23/24	QC76340	JJA
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/23/24	QC76340	JJA
Cadmium	**0.0003 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/23/24	QC76340	JJA

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
MDL = Method Detection Limit
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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID GW-3R
Sample Date/Time: 9/17/24 12:55 PM
Lab Number: 240918003-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Molybdenum	**0.0016 mg/L**	EPA 200.8	0.0005	0.00005	9/23/24	QC76340	JJA
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/23/24	QC76340	JJA
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/23/24	QC76340	JJA
Silica (as Si)	**2.31 mg/L**	EPA 200.8	0.30	0.03	9/23/24	QC76340	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76340	JJA
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/23/24	QC76340	JJA
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	9/23/24	QC76340	JJA
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/23/24	QC76340	JJA
Zinc	**0.150 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/23/24	QC76367	JJA
Calcium	**37.1 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/23/24	QC76367	JJA
Magnesium	**2.14 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA
Potassium	**0.4 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Sodium	**2.7 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Total							
Total Hardness	**105.7 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/23/24	-	JJA
Calcium	**38.7 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Magnesium	**2.21 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA

Abbreviations/ References:

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ug/L = Micrograms Per Liter or PPB
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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID GW-99
Sample Date/Time: 9/17/24 1:05 PM
Lab Number: 240918003-04

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**29.7 mg/L as CaCO3**	SM 2320-B	4.0	1	9/18/24	QC76327	TAB
Bicarbonate	**29.7 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	9/19/24	QC76297	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.23 mg/L**	EPA 300.0	0.10	0.024	9/19/24	QC76298	NRP
Nitrate Nitrogen	**0.30 mg/L**	EPA 300.0	0.05	0.02	9/19/24	QC76294	NRP
Nitrate/ Nitrite Nitrogen	**0.30 mg/L**	Calculation	0.05	0.02	9/19/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/19/24	QC76295	NRP
pH	**6.42 units**	SM 4500-H-B	0.01	0.01	9/18/24	-	KRB
Specific Conductance	**223 umhos/cm @ 25c**	EPA 120.1	5	5	9/18/24	-	KRB
Sulfate	**70.0 mg/L**	EPA 300.0	1.00	0.012	9/19/24	QC76299	NRP
Total Dissolved Solids	**132 mg/L**	SM 2540-C	5	2	9/19/24	QC76311	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/19/24	QC76308	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/19/24	QC76290	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Aluminum	**0.002 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/23/24	QC76340	JJA
Arsenic	**0.0006 mg/L**	EPA 200.8	0.0006	0.00006	9/23/24	QC76340	JJA
Barium	**0.0374 mg/L**	EPA 200.8	0.0007	0.00007	9/23/24	QC76340	JJA
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/23/24	QC76340	JJA
Cadmium	**0.0003 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/23/24	QC76340	JJA

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID GW-99
Sample Date/Time: 9/17/24 1:05 PM
Lab Number: 240918003-04

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Molybdenum	**0.0018 mg/L**	EPA 200.8	0.0005	0.00005	9/23/24	QC76340	JJA
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/23/24	QC76340	JJA
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/23/24	QC76340	JJA
Silica (as Si)	**2.31 mg/L**	EPA 200.8	0.30	0.03	9/23/24	QC76340	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76340	JJA
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/23/24	QC76340	JJA
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	9/23/24	QC76340	JJA
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/23/24	QC76340	JJA
Zinc	**0.152 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/23/24	QC76367	JJA
Calcium	**36.9 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/23/24	QC76367	JJA
Magnesium	**2.13 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Sodium	**2.9 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Total							
Total Hardness	**104.6 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/23/24	-	JJA
Calcium	**38.2 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Magnesium	**2.22 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA

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Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID GW-3B
Sample Date/Time: 9/17/24 3:00 PM
Lab Number: 240918003-05

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**29.8 mg/L as CaCO3**	SM 2320-B	4.0	1	9/18/24	QC76327	TAB
Bicarbonate	**29.8 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/18/24	-	TAB
Chloride	**ND mg/L**	EPA 300.0	1.00	0.007	9/19/24	QC76297	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.26 mg/L**	EPA 300.0	0.10	0.024	9/19/24	QC76298	NRP
Nitrate Nitrogen	**0.30 mg/L**	EPA 300.0	0.05	0.02	9/19/24	QC76294	NRP
Nitrate/ Nitrite Nitrogen	**0.30 mg/L**	Calculation	0.05	0.02	9/19/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/19/24	QC76295	NRP
pH	**6.20 units**	SM 4500-H-B	0.01	0.01	9/18/24	-	KRB
Specific Conductance	**214 umhos/cm @ 25c**	EPA 120.1	5	5	9/18/24	-	KRB
Sulfate	**66.1 mg/L**	EPA 300.0	1.00	0.012	9/19/24	QC76299	NRP
Total Dissolved Solids	**137 mg/L**	SM 2540-C	5	2	9/19/24	QC76311	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/19/24	QC76308	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/19/24	QC76290	ISG
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/19/24	QC76315	JJA
Aluminum	**0.003 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/23/24	QC76340	JJA
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	9/23/24	QC76340	JJA
Barium	**0.0527 mg/L**	EPA 200.8	0.0007	0.00007	9/23/24	QC76340	JJA
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/23/24	QC76340	JJA
Cadmium	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/23/24	QC76340	JJA

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240918003

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.: 240918003
Client PO:
Client Project: DRMS

Date Received: 9/18/24
Date Reported: 10/1/24
Matrix: Water

Customer Sample ID GW-3B
Sample Date/Time: 9/17/24 3:00 PM
Lab Number: 240918003-05

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**0.0012 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Lead	**0.0005 mg/L**	EPA 200.8	0.0001	0.000006	9/23/24	QC76340	JJA
Manganese	**0.0045 mg/L**	EPA 200.8	0.0008	0.00001	9/23/24	QC76340	JJA
Molybdenum	**0.0008 mg/L**	EPA 200.8	0.0005	0.00005	9/23/24	QC76340	JJA
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/23/24	QC76340	JJA
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/23/24	QC76340	JJA
Silica (as Si)	**2.60 mg/L**	EPA 200.8	0.30	0.03	9/23/24	QC76340	JJA
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/23/24	QC76340	JJA
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/23/24	QC76340	JJA
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	9/23/24	QC76340	JJA
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/23/24	QC76340	JJA
Zinc	**0.122 mg/L**	EPA 200.8	0.001	0.00003	9/23/24	QC76340	JJA
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/23/24	QC76367	JJA
Calcium	**34.7 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/23/24	QC76367	JJA
Magnesium	**2.51 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA
Potassium	**0.6 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Sodium	**2.6 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Total							
Total Hardness	**102.3 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/23/24	-	JJA
Calcium	**36.6 mg/L**	EPA 200.7	0.1	0.01	9/23/24	QC76367	JJA
Magnesium	**2.66 mg/L**	EPA 200.7	0.02	0.002	9/23/24	QC76367	JJA

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Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240918003

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 9/18/24
Project Name: DRMS

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Total Alkalinity	QC76327	Blank	ND	SM 2320-B	9/18/24
Chloride	QC76297	Blank	ND	EPA 300.0	9/18/24
Cyanide-Total	QC76412	Blank	ND	EPA 335.4	9/24/24
Fluoride	QC76298	Blank	ND	EPA 300.0	9/18/24
Mercury	QC76315	Method Blank	ND	EPA 245.7	9/19/24
Aluminum	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Antimony	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Arsenic	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Barium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Beryllium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Cadmium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Chromium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Copper	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Lead	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Manganese	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Molybdenum	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Nickel	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Selenium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Silica (as Si)	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Silver	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Thallium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Uranium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Vanadium	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Zinc	QC76340	Method Blank	ND	EPA 200.8	9/18/24
Boron	QC76367	Method Blank	ND	EPA 200.7	9/18/24
Calcium	QC76367	Method Blank	ND	EPA 200.7	9/18/24
Iron	QC76367	Method Blank	ND	EPA 200.7	9/18/24
Magnesium	QC76367	Method Blank	ND	EPA 200.7	9/18/24
Potassium	QC76367	Method Blank	ND	EPA 200.7	9/18/24
Sodium	QC76367	Method Blank	ND	EPA 200.7	9/18/24
Nitrate Nitrogen	QC76294	Blank	ND	EPA 300.0	9/18/24
Nitrite Nitrogen	QC76295	Blank	ND	EPA 300.0	9/18/24
Sulfate	QC76299	Blank	ND	EPA 300.0	9/18/24
Total Dissolved Solids	QC76311	Blank	ND	SM 2540-C	9/19/24
Phosphorus - Total	QC76308	Blank	ND	EPA 365.1	9/18/24
Total Suspended Solids	QC76290	Blank	ND	SM 2540-D	9/19/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Alkalinity	QC76327	Duplicate -240916003-01	0 - 20	-	5.8	SM 2320-B
		LCS	90 - 110	93.4	-	
		LCS-2	90 - 110	103.3	-	
Chloride	QC76297	Duplicate -240918003-02	0 - 20	-	2.8	EPA 300.0

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Date Analyzed = Date Test Completed

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Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		LCS	90 - 110	101.4	-	
		MS -240918003-02	75 - 125	98.8	-	
Cyanide-Total	QC76412	Duplicate -240917123-01	0 - 20	-	16.7	EPA 335.4
		LCS	90 - 110	91.1	-	
		MS -240918003-02C	75 - 125	90.5	-	
Fluoride	QC76298	Duplicate -240918003-02	0 - 20	-	5.9	EPA 300.0
		LCS	90 - 110	95.0	-	
		MS -240918003-02	75 - 125	89.9	-	
Mercury	QC76315	Duplicate -240913036-01	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	106.8	-	
		MS -240913036-01F	80 - 120	100.0	-	
Aluminum	QC76340	LCS	90 - 110	101.0	-	EPA 200.8
		MS -240918002-01	70 - 130	95.4	-	
		MSD -240918002-01	0 - 10	-	0.5	
Antimony	QC76340	LCS	90 - 110	100.2	-	EPA 200.8
		MS -240918002-01	70 - 130	106.4	-	
		MSD -240918002-01	0 - 10	-	1.2	
Arsenic	QC76340	LCS	90 - 110	100.3	-	EPA 200.8
		MS -240918002-01	70 - 130	109.1	-	
		MSD -240918002-01	0 - 10	-	3.0	
Barium	QC76340	LCS	90 - 110	101.3	-	EPA 200.8
		MS -240918002-01	70 - 130	108.4	-	
		MSD -240918002-01	0 - 10	-	1.6	
Beryllium	QC76340	LCS	90 - 110	101.3	-	EPA 200.8
		MS -240918002-01	70 - 130	109.3	-	
		MSD -240918002-01	0 - 10	-	3.7	
Cadmium	QC76340	LCS	90 - 110	96.8	-	EPA 200.8
		MS -240918002-01	70 - 130	105.7	-	
		MSD -240918002-01	0 - 10	-	1.8	
Chromium	QC76340	LCS	90 - 110	108.5	-	EPA 200.8
		MS -240918002-01	70 - 130	114.3	-	
		MSD -240918002-01	0 - 10	-	0.8	
Copper	QC76340	LCS	90 - 110	108.2	-	EPA 200.8
		MS -240918002-01	70 - 130	103.1	-	
		MSD -240918002-01	0 - 10	-	2.4	
Lead	QC76340	LCS	90 - 110	100.9	-	EPA 200.8
		MS -240918002-01	70 - 130	106.3	-	
		MSD -240918002-01	0 - 10	-	1.8	
Manganese	QC76340	LCS	90 - 110	105.8	-	EPA 200.8
		MS -240918002-01	70 - 130	108.2	-	
		MSD -240918002-01	0 - 10	-	0.7	
Molybdenum	QC76340	LCS	90 - 110	99.4	-	EPA 200.8
		MS -240918002-01	70 - 130	109.4	-	
		MSD -240918002-01	0 - 10	-	1.1	
Nickel	QC76340	LCS	90 - 110	104.9	-	EPA 200.8
		MS -240918002-01	70 - 130	105.8	-	
		MSD -240918002-01	0 - 10	-	1.5	
Selenium	QC76340	LCS	90 - 110	98.1	-	EPA 200.8
		MS -240918002-01	70 - 130	109.3	-	
		MSD -240918002-01	0 - 10	-	1.1	
Silica (as Si)	QC76340	LCS	90 - 110	106.4	-	EPA 200.8

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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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -240918002-01	70 - 130	86.0	-	
		MSD -240918002-01	0 - 10	-	2.2	
Silver	QC76340	LCS	90 - 110	102.4	-	EPA 200.8
		MS -240918002-01	70 - 130	101.2	-	
		MSD -240918002-01	0 - 10	-	2.0	
Thallium	QC76340	LCS	90 - 110	102.7	-	EPA 200.8
		MS -240918002-01	70 - 130	107.7	-	
		MSD -240918002-01	0 - 10	-	2.4	
Uranium	QC76340	LCS	90 - 110	98.2	-	EPA 200.8
		MS -240918002-01	70 - 130	105.7	-	
		MSD -240918002-01	0 - 10	-	1.2	
Vanadium	QC76340	LCS	90 - 110	101.8	-	EPA 200.8
		MS -240918002-01	70 - 130	111.5	-	
		MSD -240918002-01	0 - 10	-	0.5	
Zinc	QC76340	LCS	90 - 110	103.5	-	EPA 200.8
		MS -240918002-01	70 - 130	88.7	-	
		MSD -240918002-01	0 - 10	-	3.3	
Boron	QC76367	Duplicate -240918023-01	0 - 20	-	14.0	EPA 200.7
		LCS	90 - 110	106.2	-	
		MS -240918003-03	75 - 125	108.6	-	
Calcium	QC76367	Duplicate -240918023-01	0 - 20	-	1.9	EPA 200.7
		LCS	90 - 110	98.9	-	
		MS -240918003-03	75 - 125	93.1	-	
Iron	QC76367	Duplicate -240918023-01	0 - 20	-	11.0	EPA 200.7
		LCS	90 - 110	108.8	-	
		MS -240918003-03	75 - 125	109.0	-	
Magnesium	QC76367	Duplicate -240918023-01	0 - 20	-	1.1	EPA 200.7
		LCS	90 - 110	105.6	-	
		MS -240918003-03	75 - 125	112.4	-	
Potassium	QC76367	Duplicate -240918023-01	0 - 20	-	8.8	EPA 200.7
		LCS	90 - 110	99.2	-	
		MS -240918003-03	75 - 125	121.3	-	
Sodium	QC76367	Duplicate -240918023-01	0 - 20	-	3.3	EPA 200.7
		LCS	90 - 110	95.6	-	
		MS -240918003-03	75 - 125	115.4	-	
Nitrate Nitrogen	QC76294	Duplicate -240917065-02	0 - 20	-	1.1	EPA 300.0
		LCS	90 - 110	97.4	-	
		MS -240917065-02	75 - 125	93.5	-	
Nitrite Nitrogen	QC76295	Duplicate -240917065-02	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	98.1	-	
		MS -240917065-02	75 - 125	94.9	-	
Sulfate	QC76299	Duplicate -240918003-02	0 - 20	-	0.5	EPA 300.0
		LCS	90 - 110	99.8	-	
		MS -240918003-02	75 - 125	104.0	-	
Total Dissolved Solids	QC76311	Duplicate -240918117-07	0 - 10	-	3.2	SM 2540-C
		LCS	85 - 115	104.7	-	
Phosphorus - Total	QC76308	Duplicate -240917065-01	0 - 20	-	5.7	EPA 365.1
		LCS	90 - 110	99.5	-	
		MS -240917058-05	75 - 125	92.5	-	
Total Suspended Solids	QC76290	Duplicate -240918046-01	0 - 10	-	7.3	SM 2540-D
		LCS	90 - 110	98.3	-	

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ND = Not Detected at Reporting Limit.

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
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ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 L	Address:	Task Number (Lab Use Only)
City Ouray State CO Zip 81427	City State Zip	CAL Task 240918003 JAK
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

- **Water (CWA / NPDES)** ☒ — Includes wastewater, non-potable samples not intended for drinking water use.
- **Drinking Water (SDWA)** ☐ — Includes finished drinking water, raw (untreated) water samples intended for human consumption.
- **Solid (Sludge) (503 Regs / RCRA/ SW-846)** ☐

	Date	Time	Sample ID	No. of Containers	Grab or Composite	QB0240109476
	~~9/17~~		~~MW-5~~	~~5~~		~~X~~
*	9/17	12:00/8:25	MW-2	5		X
Δ	9/17	8:55	MW-8	5		X
	9/17	12:55	GW-3R	5		X
	9/17	13:05	GW-99	5		X
	9/17	15:00	GW-3B	5		X

Tests Requested

* Time of collection on two bottles is 12:00. Logged as 12:00 for latest time of collection. (25)

Instructions: Δ Time of collection corrected to 8:55A. JK 9/18/24

C/S Info:

Deliver Via: UPS C/S Charge ☒ $

Seals Present Yes ☐ No ☐

Temp. 4 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	9/17 5:00p					Adams	9/18/24 933

CAL Task
240918003

Colorado Analytical LABORATORIES, INC.

JAK

Quotation for Analytical Services

Quote ID: QBO24010976

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Wednesday, January 31, 2024**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
DRMS

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Alkalinity - B-C	N/A	12	$16.00	$192.00
Water - Ground	Alkalinity	SM 2320-B	12	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	12	Incl.	Incl.
Water - Ground	Hardness - Total	SM 2340-B	12	$0.00	$0.00
Water - Ground	Nitrate/ Nitrite Nitrogen	Calculation	12	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Fe - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	K - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Na - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ph	SM 4500-H-B	12	$13.00	$156.00
Water - Ground	Specific Conductance	EPA 120.1	12	$14.00	$168.00
Water - Ground	Ag - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Al - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	As - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ba - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Be - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cd - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cr - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cu - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mo - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ni - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Pb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Sb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Se - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Si - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TDS	SM 2540-C	12	$16.00	$192.00

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

JML

Colorado Analytical LABORATORIES, INC.

CAL Task
240918003
JAK

Quotation for Analytical Services
Quote ID: QBO24010976

Water - Ground	Tl - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TSS	SM 2540-D	12	$16.00	$192.00
Water - Ground	V - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Zn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Chloride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Fluoride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrate Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrite Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Sulfate	EPA 300.0	12	$18.00	$216.00
Water - Ground	U - Dis	EPA 200.8	12	$23.00	$276.00
Water - Ground	Total Phosphorus	EPA 365.1	12	$26.00	$312.00
Water - Ground	Hg - Dissolved	EPA 245.7	12	$27.00	$324.00
Water - Ground	Cyanide-Total	EPA 335.4	12	$40.00	$480.00

$8,076.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

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

JML

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240919021

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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID UG-5
Sample Date/Time: 9/18/24 7:40 AM
Lab Number: 240919021-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**52.2 mg/L as CaCO3**	SM 2320-B	4.0	1	9/23/24	QC76416	KJP
Bicarbonate	**52.2 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Chloride	**0.33 mg/L**	EPA 300.0	0.10	0.007	9/19/24	QC76353	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.19 mg/L**	EPA 300.0	0.10	0.024	9/19/24	QC76354	NRP
Nitrate Nitrogen	**0.25 mg/L**	EPA 300.0	0.05	0.02	9/19/24	QC76355	NRP
Nitrate/ Nitrite Nitrogen	**0.25 mg/L**	Calculation	0.05	0.02	9/23/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/19/24	QC76356	NRP
pH	**7.31 units**	SM 4500-H-B	0.01	0.01	9/19/24	-	ARH
Specific Conductance	**303 umhos/cm @ 25c**	EPA 120.1	5	5	9/19/24	-	ARH
Sulfate	**90.6 mg/L**	EPA 300.0	0.10	0.012	9/19/24	QC76358	NRP
Total Dissolved Solids	**203 mg/L**	SM 2540-C	5	2	9/24/24	QC76377	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/24/24	QC76391	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/20/24	QC76317	ARH
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/26/24	QC76494	JJA
Aluminum	**0.011 mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/24/24	QC76387	AMJ
Arsenic	**0.0024 mg/L**	EPA 200.8	0.0006	0.00006	9/24/24	QC76387	AMJ
Barium	**0.0293 mg/L**	EPA 200.8	0.0007	0.00007	9/24/24	QC76387	AMJ
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/24/24	QC76387	AMJ
Cadmium	**0.0013 mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/24/24	QC76387	AMJ

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

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240919021

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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID UG-5
Sample Date/Time: 9/18/24 7:40 AM
Lab Number: 240919021-01

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Lead	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Manganese	**1.47 mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Molybdenum	**0.0035 mg/L**	EPA 200.8	0.0005	0.00005	9/24/24	QC76387	AMJ
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/24/24	QC76387	AMJ
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/24/24	QC76387	AMJ
Silica (as Si)	**3.81 mg/L**	EPA 200.8	0.30	0.03	9/24/24	QC76387	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/24/24	QC76387	AMJ
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/24/24	QC76387	AMJ
Uranium	**0.0003 mg/L**	EPA 200.8	0.0002	0.000002	9/24/24	QC76387	AMJ
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/24/24	QC76387	AMJ
Zinc	**0.391 mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/24/24	QC76389	JJA
Calcium	**56.6 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/24/24	QC76389	JJA
Magnesium	**2.38 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA
Potassium	**0.3 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Sodium	**5.9 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Total							
Total Hardness	**145.7 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/24/24	-	JJA
Calcium	**53.6 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Magnesium	**2.86 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA

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Colorado Analytical LABORATORIES, INC.

Analytical Results

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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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID GW-2A
Sample Date/Time: 9/18/24 8:55 AM
Lab Number: 240919021-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**27.2 mg/L as CaCO3**	SM 2320-B	4.0	1	9/23/24	QC76416	KJP
Bicarbonate	**27.2 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Chloride	**0.15 mg/L**	EPA 300.0	0.10	0.007	9/19/24	QC76353	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.19 mg/L**	EPA 300.0	0.10	0.024	9/19/24	QC76354	NRP
Nitrate Nitrogen	**0.19 mg/L**	EPA 300.0	0.05	0.02	9/19/24	QC76355	NRP
Nitrate/ Nitrite Nitrogen	**0.19 mg/L**	Calculation	0.05	0.02	9/23/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/19/24	QC76356	NRP
pH	**6.28 units**	SM 4500-H-B	0.01	0.01	9/19/24	-	ARH
Specific Conductance	**198 umhos/cm @ 25c**	EPA 120.1	5	5	9/19/24	-	ARH
Sulfate	**61.9 mg/L**	EPA 300.0	0.10	0.012	9/19/24	QC76358	NRP
Total Dissolved Solids	**138 mg/L**	SM 2540-C	5	2	9/24/24	QC76377	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/24/24	QC76391	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/20/24	QC76317	ARH
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/26/24	QC76494	JJA
Aluminum	**0.001 mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/24/24	QC76387	AMJ
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	9/24/24	QC76387	AMJ
Barium	**0.0513 mg/L**	EPA 200.8	0.0007	0.00007	9/24/24	QC76387	AMJ
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/24/24	QC76387	AMJ
Cadmium	**0.0006 mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/24/24	QC76387	AMJ

Abbreviations/ References:

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Colorado Analytical LABORATORIES, INC.

Analytical Results

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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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID GW-2A
Sample Date/Time: 9/18/24 8:55 AM
Lab Number: 240919021-02

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Lead	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Molybdenum	**0.0009 mg/L**	EPA 200.8	0.0005	0.00005	9/24/24	QC76387	AMJ
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/24/24	QC76387	AMJ
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/24/24	QC76387	AMJ
Silica (as Si)	**3.23 mg/L**	EPA 200.8	0.30	0.03	9/24/24	QC76387	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/24/24	QC76387	AMJ
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/24/24	QC76387	AMJ
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	9/24/24	QC76387	AMJ
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/24/24	QC76387	AMJ
Zinc	**0.465 mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/24/24	QC76389	JJA
Calcium	**33.5 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/24/24	QC76389	JJA
Magnesium	**2.62 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA
Potassium	**0.6 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Sodium	**2.4 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Total							
Total Hardness	**95.9 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/24/24	-	JJA
Calcium	**34.1 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Magnesium	**2.63 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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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.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240919021

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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID GW-2B
Sample Date/Time: 9/18/24 8:15 AM
Lab Number: 240919021-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**30.4 mg/L as CaCO3**	SM 2320-B	4.0	1	9/23/24	QC76416	KJP
Bicarbonate	**30.4 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Chloride	**0.14 mg/L**	EPA 300.0	0.10	0.007	9/20/24	QC76353	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.21 mg/L**	EPA 300.0	0.10	0.024	9/20/24	QC76354	NRP
Nitrate Nitrogen	**0.15 mg/L**	EPA 300.0	0.05	0.02	9/20/24	QC76355	NRP
Nitrate/ Nitrite Nitrogen	**0.15 mg/L**	Calculation	0.05	0.02	9/23/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/20/24	QC76356	NRP
pH	**6.34 units**	SM 4500-H-B	0.01	0.01	9/19/24	-	ARH
Specific Conductance	**192 umhos/cm @ 25c**	EPA 120.1	5	5	9/19/24	-	ARH
Sulfate	**56.1 mg/L**	EPA 300.0	0.10	0.012	9/20/24	QC76358	NRP
Total Dissolved Solids	**131 mg/L**	SM 2540-C	5	2	9/24/24	QC76377	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/24/24	QC76391	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/20/24	QC76317	ARH
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/26/24	QC76494	JJA
Aluminum	**0.001 mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/24/24	QC76387	AMJ
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	9/24/24	QC76387	AMJ
Barium	**0.0578 mg/L**	EPA 200.8	0.0007	0.00007	9/24/24	QC76387	AMJ
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/24/24	QC76387	AMJ
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/24/24	QC76387	AMJ

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Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240919021

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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID GW-2B
Sample Date/Time: 9/18/24 8:15 AM
Lab Number: 240919021-03

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Lead	**ND mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Molybdenum	**0.0009 mg/L**	EPA 200.8	0.0005	0.00005	9/24/24	QC76387	AMJ
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/24/24	QC76387	AMJ
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/24/24	QC76387	AMJ
Silica (as Si)	**3.30 mg/L**	EPA 200.8	0.30	0.03	9/24/24	QC76387	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/24/24	QC76387	AMJ
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/24/24	QC76387	AMJ
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	9/24/24	QC76387	AMJ
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/24/24	QC76387	AMJ
Zinc	**0.266 mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/24/24	QC76389	JJA
Calcium	**32.9 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/24/24	QC76389	JJA
Magnesium	**2.71 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Sodium	**2.0 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Total							
Total Hardness	**93.9 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/24/24	-	JJA
Calcium	**33.1 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Magnesium	**2.75 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA

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Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240919021

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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID GW-1B
Sample Date/Time: 9/18/24 10:20 AM
Lab Number: 240919021-04

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	**31.0 mg/L as CaCO3**	SM 2320-B	4.0	1	9/23/24	QC76416	KJP
Bicarbonate	**31.0 mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Carbonate	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Hydroxide	**ND mg/L as CaCO3**	SM 2320-B	0.2	0.2	9/23/24	-	KJP
Chloride	**0.26 mg/L**	EPA 300.0	0.10	0.007	9/20/24	QC76353	NRP
Cyanide-Total	**ND mg/L**	EPA 335.4	0.005	0.0005	9/24/24	QC76412	KRB
Fluoride	**0.17 mg/L**	EPA 300.0	0.10	0.024	9/20/24	QC76354	NRP
Nitrate Nitrogen	**0.07 mg/L**	EPA 300.0	0.05	0.02	9/20/24	QC76355	NRP
Nitrate/ Nitrite Nitrogen	**0.07 mg/L**	Calculation	0.05	0.02	9/23/24	-	NRP
Nitrite Nitrogen	**ND mg/L**	EPA 300.0	0.03	0.01	9/20/24	QC76356	NRP
pH	**6.69 units**	SM 4500-H-B	0.01	0.01	9/19/24	-	ARH
Specific Conductance	**188 umhos/cm @ 25c**	EPA 120.1	5	5	9/19/24	-	ARH
Sulfate	**54.1 mg/L**	EPA 300.0	0.10	0.012	9/20/24	QC76358	NRP
Total Dissolved Solids	**119 mg/L**	SM 2540-C	5	2	9/24/24	QC76377	ISG
Phosphorus - Total	**ND mg/L**	EPA 365.1	0.05	0.006	9/24/24	QC76391	TAB
Total Suspended Solids	**ND mg/L**	SM 2540-D	5	2	9/20/24	QC76317	ARH
Dissolved							
Mercury	**ND mg/L**	EPA 245.7	0.0002	0.00002	9/26/24	QC76494	JJA
Aluminum	**ND mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Antimony	**ND mg/L**	EPA 200.8	0.0012	0.00012	9/24/24	QC76387	AMJ
Arsenic	**ND mg/L**	EPA 200.8	0.0006	0.00006	9/24/24	QC76387	AMJ
Barium	**0.0494 mg/L**	EPA 200.8	0.0007	0.00007	9/24/24	QC76387	AMJ
Beryllium	**ND mg/L**	EPA 200.8	0.0001	0.000008	9/24/24	QC76387	AMJ
Cadmium	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Chromium	**ND mg/L**	EPA 200.8	0.0015	0.00015	9/24/24	QC76387	AMJ

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Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 240919021

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.: 240919021
Client PO:
Client Project: DRMS

Date Received: 9/19/24
Date Reported: 9/27/24
Matrix: Water

Customer Sample ID GW-1B
Sample Date/Time: 9/18/24 10:20 AM
Lab Number: 240919021-04

Test	Result / Units	Method	RL	MDL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved							
Copper	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Lead	**0.0001 mg/L**	EPA 200.8	0.0001	0.000006	9/24/24	QC76387	AMJ
Manganese	**ND mg/L**	EPA 200.8	0.0008	0.00001	9/24/24	QC76387	AMJ
Molybdenum	**0.0012 mg/L**	EPA 200.8	0.0005	0.00005	9/24/24	QC76387	AMJ
Nickel	**ND mg/L**	EPA 200.8	0.0009	0.00005	9/24/24	QC76387	AMJ
Selenium	**ND mg/L**	EPA 200.8	0.0008	0.00008	9/24/24	QC76387	AMJ
Silica (as Si)	**2.40 mg/L**	EPA 200.8	0.30	0.03	9/24/24	QC76387	AMJ
Silver	**ND mg/L**	EPA 200.8	0.0005	0.000003	9/24/24	QC76387	AMJ
Thallium	**ND mg/L**	EPA 200.8	0.0002	0.000003	9/24/24	QC76387	AMJ
Uranium	**ND mg/L**	EPA 200.8	0.0002	0.000002	9/24/24	QC76387	AMJ
Vanadium	**ND mg/L**	EPA 200.8	0.001	0.0001	9/24/24	QC76387	AMJ
Zinc	**0.060 mg/L**	EPA 200.8	0.001	0.00003	9/24/24	QC76387	AMJ
Boron	**ND mg/L**	EPA 200.7	0.05	0.01	9/24/24	QC76389	JJA
Calcium	**31.2 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Iron	**ND mg/L**	EPA 200.7	0.005	0.0005	9/24/24	QC76389	JJA
Magnesium	**2.72 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA
Potassium	**0.5 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Sodium	**1.9 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Total							
Total Hardness	**90.0 mg/L as CaCO3**	SM 2340-B	0.1	0.01	9/24/24	-	JJA
Calcium	**31.6 mg/L**	EPA 200.7	0.1	0.01	9/24/24	QC76389	JJA
Magnesium	**2.73 mg/L**	EPA 200.7	0.02	0.002	9/24/24	QC76389	JJA

Abbreviations/ References:

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 240919021

Report To: CJ Dickerson
Company: Thorin Resources, LLC

Receive Date: 9/19/24
Project Name: DRMS

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Total Alkalinity	QC76416	Blank	ND	SM 2320-B	9/23/24
Chloride	QC76353	Blank	ND	EPA 300.0	9/19/24
Cyanide-Total	QC76412	Blank	ND	EPA 335.4	9/24/24
Fluoride	QC76354	Blank	ND	EPA 300.0	9/19/24
Mercury	QC76494	Method Blank	ND	EPA 245.7	9/26/24
Aluminum	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Antimony	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Arsenic	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Barium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Beryllium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Cadmium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Chromium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Copper	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Lead	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Manganese	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Molybdenum	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Nickel	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Selenium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Silica (as Si)	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Silver	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Thallium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Uranium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Vanadium	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Zinc	QC76387	Method Blank	ND	EPA 200.8	9/19/24
Boron	QC76389	Method Blank	ND	EPA 200.7	9/19/24
Calcium	QC76389	Method Blank	ND	EPA 200.7	9/19/24
Iron	QC76389	Method Blank	ND	EPA 200.7	9/19/24
Magnesium	QC76389	Method Blank	ND	EPA 200.7	9/19/24
Potassium	QC76389	Method Blank	ND	EPA 200.7	9/19/24
Sodium	QC76389	Method Blank	ND	EPA 200.7	9/19/24
Nitrate Nitrogen	QC76355	Blank	ND	EPA 300.0	9/19/24
Nitrite Nitrogen	QC76356	Blank	ND	EPA 300.0	9/19/24
Sulfate	QC76358	Blank	ND	EPA 300.0	9/19/24
Total Dissolved Solids	QC76377	Blank	ND	SM 2540-C	9/23/24
Phosphorus - Total	QC76391	Blank	ND	EPA 365.1	9/23/24
Total Suspended Solids	QC76317	Blank	ND	SM 2540-D	9/20/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Alkalinity	QC76416	Duplicate -240918062-02	0 - 20	-	0.9	SM 2320-B
		LCS	90 - 110	99.1	-	
		LCS-2	90 - 110	107.7	-	
Chloride	QC76353	Duplicate -240919012-07	0 - 20	-	0.6	EPA 300.0

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Date Analyzed = Date Test Completed

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ND = Not Detected at Reporting Limit.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		LCS	90 - 110	103.3	-	
		MS -240919012-07	75 - 125	102.4	-	
Cyanide-Total	QC76412	Duplicate -240917123-01	0 - 20	-	16.7	EPA 335.4
		LCS	90 - 110	91.1	-	
		MS -240918003-02C	75 - 125	90.5	-	
Fluoride	QC76354	Duplicate -240919012-07	0 - 20	-	0.4	EPA 300.0
		LCS	90 - 110	92.6	-	
		MS -240919012-07	75 - 125	87.5	-	
Mercury	QC76494	Duplicate -240919091-03	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	104.8	-	
		MS -240919091-03	80 - 120	88.0	-	
Aluminum	QC76387	LCS	90 - 110	101.3	-	EPA 200.8
		MS -240919001-01A	70 - 130	89.4	-	
		MSD -240919001-01A	0 - 10	-	5.5	
Antimony	QC76387	LCS	90 - 110	104.1	-	EPA 200.8
		MS -240919001-01A	70 - 130	104.5	-	
		MSD -240919001-01A	0 - 10	-	1.5	
Arsenic	QC76387	LCS	90 - 110	102.7	-	EPA 200.8
		MS -240919001-01A	70 - 130	125.1	-	
		MSD -240919001-01A	0 - 10	-	0.1	
Barium	QC76387	LCS	90 - 110	100.6	-	EPA 200.8
		MS -240919001-01A	70 - 130	102.9	-	
		MSD -240919001-01A	0 - 10	-	1.5	
Beryllium	QC76387	LCS	90 - 110	100.4	-	EPA 200.8
		MS -240919001-01A	70 - 130	75.7	-	
		MSD -240919001-01A	0 - 10	-	1.5	
Cadmium	QC76387	LCS	90 - 110	100.0	-	EPA 200.8
		MS -240919001-01A	70 - 130	90.6	-	
		MSD -240919001-01A	0 - 10	-	0.2	
Chromium	QC76387	LCS	90 - 110	104.2	-	EPA 200.8
		MS -240919001-01A	70 - 130	103.3	-	
		MSD -240919001-01A	0 - 10	-	1.1	
Copper	QC76387	LCS	90 - 110	104.9	-	EPA 200.8
		MS -240919001-01A	70 - 130	94.6	-	
		MSD -240919001-01A	0 - 10	-	2.7	
Lead	QC76387	LCS	90 - 110	97.9	-	EPA 200.8
		MS -240919001-01A	70 - 130	87.3	-	
		MSD -240919001-01A	0 - 10	-	2.8	
Manganese	QC76387	LCS	90 - 110	106.6	-	EPA 200.8
		MS -240919001-01A	70 - 130	103.0	-	
		MSD -240919001-01A	0 - 10	-	2.2	
Molybdenum	QC76387	LCS	90 - 110	101.3	-	EPA 200.8
		MS -240919001-01A	70 - 130	105.3	-	
		MSD -240919001-01A	0 - 10	-	0.1	
Nickel	QC76387	LCS	90 - 110	103.4	-	EPA 200.8
		MS -240919001-01A	70 - 130	91.4	-	
		MSD -240919001-01A	0 - 10	-	0.5	
Selenium	QC76387	LCS	90 - 110	102.3	-	EPA 200.8
		MS -240919001-01A	70 - 130	105.1	-	
		MSD -240919001-01A	0 - 10	-	1.4	
Silica (as Si)	QC76387	LCS	90 - 110	108.0	-	EPA 200.8

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.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS -240919001-01A	70 - 130	117.7	-	
		MSD -240919001-01A	0 - 10	-	0.6	
Silver	QC76387	LCS	90 - 110	101.2	-	EPA 200.8
		MS -240919001-01A	70 - 130	77.3	-	
		MSD -240919001-01A	0 - 10	-	0.2	
Thallium	QC76387	LCS	90 - 110	98.9	-	EPA 200.8
		MS -240919001-01A	70 - 130	89.8	-	
		MSD -240919001-01A	0 - 10	-	2.7	
Uranium	QC76387	LCS	90 - 110	92.6	-	EPA 200.8
		MS -240919001-01A	70 - 130	84.5	-	
		MSD -240919001-01A	0 - 10	-	0.7	
Vanadium	QC76387	LCS	90 - 110	99.0	-	EPA 200.8
		MS -240919001-01A	70 - 130	106.6	-	
		MSD -240919001-01A	0 - 10	-	1.8	
Zinc	QC76387	LCS	90 - 110	105.4	-	EPA 200.8
		MS -240919001-01A	70 - 130	106.6	-	
		MSD -240919001-01A	0 - 10	-	0.2	
Boron	QC76389	Duplicate -240919001-01	0 - 20	-	1.0	EPA 200.7
		LCS	90 - 110	98.3	-	
		MS -240919021-02D	75 - 125	114.0	-	
Calcium	QC76389	Duplicate -240919001-01	0 - 20	-	1.8	EPA 200.7
		LCS	90 - 110	104.4	-	
		MS -240919021-02D	75 - 125	96.4	-	
Iron	QC76389	Duplicate -240919001-01	0 - 20	-	6.5	EPA 200.7
		LCS	90 - 110	93.5	-	
		MS -240919021-02D	75 - 125	114.0	-	
Magnesium	QC76389	Duplicate -240919001-01	0 - 20	-	0.7	EPA 200.7
		LCS	90 - 110	100.3	-	
		MS -240919021-02D	75 - 125	106.4	-	
Potassium	QC76389	Duplicate -240919001-01	0 - 20	-	2.6	EPA 200.7
		LCS	90 - 110	97.7	-	
		MS -240919021-02D	75 - 125	108.2	-	
Sodium	QC76389	Duplicate -240919001-01	0 - 20	-	0.6	EPA 200.7
		LCS	90 - 110	99.2	-	
		MS -240919021-02D	75 - 125	113.4	-	
Nitrate Nitrogen	QC76355	Duplicate -240919012-07	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	97.3	-	
		MS -240919012-07	75 - 125	91.4	-	
Nitrite Nitrogen	QC76356	Duplicate -240919012-07	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	94.0	-	
		MS -240919012-07	75 - 125	89.5	-	
Sulfate	QC76358	Duplicate -240919012-07	0 - 20	-	0.5	EPA 300.0
		LCS	90 - 110	99.9	-	
		MS -240919012-07	75 - 125	101.3	-	
Total Dissolved Solids	QC76377	Duplicate -240919115-06	0 - 10	-	0.6	SM 2540-C
		LCS	85 - 115	100.1	-	
Phosphorus - Total	QC76391	Duplicate -240919076-01	0 - 20	-	2.8	EPA 365.1
		LCS	90 - 110	95.6	-	
		MS -240919002-05	75 - 125	117.9	-	
Total Suspended Solids	QC76317	Duplicate -240919031-01	0 - 10	-	2.9	SM 2540-D
		LCS	90 - 110	97.4	-	

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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.

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.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
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

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 01	Address:	Task Number (Lab Use Only)
City Ouray State Co Zip 81427	City State Zip	CAL Task 240919021 JAK
Phone: (602) 793-1321	Phone:	
Email: cjdickerson@thorinresources.com	Email:	
Sample Collector:		
Sample Collector Phone:	PO No.:	

Sample Matrix (Select One Only)

- **Water** ☒ **(CWA / NPDES)** Includes wastewater, non-potable samples not intended for drinking water use.
- **Drinking Water** ☐ **(SDWA)** Includes finished drinking water, raw (untreated) water samples intended for human consumption.
- **Solid (Sludge)** ☐ **(503 Regs / RCRA/ SW-846)**

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)		GBD240101976	Tests Requested
9/18	07:40	UG-5	5	X		X	
9/18	08:55	GW-2A	5	X		X	
9/18	08:15	GW-2B	5	X		X	
9/18		~~GW-1A~~	~~5~~			~~X~~	
9/18	10:20	GW-1B	5	X		X	

20

Instructions:

C/S Info:

Deliver Via: UPS C/S Charge ☒

Seals Present Yes ☐ No ☐

Temp. 2 °C/Ice Y Sample Pres. Yes ☐ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
CJ Dickerson	9/18 4:30p					Adams	9/19/24 800

CAL Task
240919021

JAK

Colorado Analytical
LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO24010976

Prepared For: **Thorin Resources, LLC**
1900 Main St
Unit 1
Ouray, CO 81427

Quote Date: **Wednesday, January 31, 2024**
Turn Around Time: **10 Working Days**

Attn: **CJ Dickerson**

Project:
DRMS

Matrix	Description	Method	Qty	Price - each	Total
Water - Ground	Alkalinity - B-C	N/A	12	$16.00	$192.00
Water - Ground	Alkalinity	SM 2320-B	12	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	12	Incl.	Incl.
Water - Ground	Hardness - Total	SM 2340-B	12	$0.00	$0.00
Water - Ground	Nitrate/ Nitrite Nitrogen	Calculation	12	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ca - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Fe - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	K - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Mg - Total	EPA 200.7	12	$13.00	$156.00
Water - Ground	Na - Dis	EPA 200.7	12	$13.00	$156.00
Water - Ground	Ph	SM 4500-H-B	12	$13.00	$156.00
Water - Ground	Specific Conductance	EPA 120.1	12	$14.00	$168.00
Water - Ground	Ag - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Al - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	As - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ba - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Be - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cd - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cr - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Cu - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Mo - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Ni - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Pb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Sb - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Se - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Si - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TDS	SM 2540-C	12	$16.00	$192.00

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

JML

CAL Task
240919021
JAK

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO24010976

Water - Ground	Tl - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	TSS	SM 2540-D	12	$16.00	$192.00
Water - Ground	V - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Zn - Dis	EPA 200.8	12	$16.00	$192.00
Water - Ground	Chloride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Fluoride	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrate Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Nitrite Nitrogen	EPA 300.0	12	$18.00	$216.00
Water - Ground	Sulfate	EPA 300.0	12	$18.00	$216.00
Water - Ground	U - Dis	EPA 200.8	12	$23.00	$276.00
Water - Ground	Total Phosphorus	EPA 365.1	12	$26.00	$312.00
Water - Ground	Hg - Dissolved	EPA 245.7	12	$27.00	$324.00
Water - Ground	Cyanide-Total	EPA 335.4	12	$40.00	$480.00

$8,076.00

****Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

***Colorado Analytical Laboratory maintains certification by the Colorado Department of Health* (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.**

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guaranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts; all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

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

JML

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

March 28, 2024

CJ Dickerson
Thorin Resources
6208 County Road 26
Ouray, CO 81427

Dear CJ:

Enclosed is the report for chronic biomonitoring tests performed for Thorin Resources on effluent from the Wastewater Treatment Plant 002A outfall. There was no statistically significant toxicity to either test species at any effluent concentration. The effluent passes WET (Whole Effluent Toxicity) testing requirements for this sampling period.

If you have any questions or concerns, please do not hesitate to contact me at (303) 661-9324.

Best regards,

Catherine McDonald
Laboratory Manager
Enclosure(s): Invoice
Report

REPORT OF CHRONIC BIOMONITORING TESTS CONDUCTED FOR THORIN RESOURCES ON EFFLUENT FROM THE WWTP 002A OUTFALL

Prepared for:

CJ Dickerson
Thorin Resources
6208 County Road 26
Ouray, CO 81427

Prepared by:

Catherine McDonald
SeaCrest Group
500 S Arthur Ave. Suite 450
Louisville, Colorado 80027-3065
(303) 661-9324

March 28, 2024

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Chronic Toxicity Test Summary

Test:	7-day static renewal using *Ceriodaphnia dubia* 7-day static renewal using fathead minnow *(Pimephales promelas)*
Client:	Thorin Resources
Test Procedure Followed:	*Ceriodaphnia dubia*: EPA/821/R-02-013. Method 1002.0 (2002) fathead minnow: EPA/821/R-02-013. Method 1000.0 (2002)
Sample Number:	524110.B
Dilution Water:	moderately hard laboratory reconstituted water
Test Organism Source:	SeaCrest Group
Reference Toxicant:	Sodium Chloride

Sample	Time of Collection	Date of Collection	Time of Receipt	Date of Receipt
Effluent 1	0916	03-11-2024	0835	03-12-2024
Effluent 2	1215	03-13-2024	0830	03-14-2024
Effluent 3	1030	03-14-2024	0847	03-15-2024

	Ceriodaphnia dubia	fathead minnow
Test Initiation Time	1100	1100
Test Initiation Date	03-12-2024	03-12-2024
Test Completion Time	1030	1200
Test Completion Date	03-18-2024	03-19-2024

Abstract with Results

Test Concentrations:	Control (0%), 23%, 45%, 89%, 95%, 100%
Number of Organisms/Concentration:	10 for *Ceriodaphnia dubia* 40 for fathead minnow
Replicates at each Concentration:	10 for *Ceriodaphnia dubia* 4 for fathead minnow

	Ceriodaphnia dubia	**fathead minnow**
Test vessel size/Exposure volume	30ml/15ml	500ml/200ml
Sub-lethal NOEL/IC25	100%/>100%	100%/>100%
Pass/Fail Status	**PASS**	**PASS**
Temperature Range (°C)	24.1 – 25.4	24.1 – 25.2
Dissolved Oxygen Range (mg/L)	6.8– 8.9	4.6 – 8.5
pH Range	7.5 – 8.1	7.3 – 8.2

	Control (*Cerio*/FHM)	**Effluent Sample**
Hardness (mg/L as $CaCO_3$)	85/83	267/206/167
Alkalinity (mg/L as $CaCO_3$)	57/61	68/86/71
Total residual chlorine (mg/L)	<0.01	<0.01/<0.01/0.02
Total ammonia (mg/L as NH_3)	<0.03	<0.03

INTRODUCTION

Biomonitoring provides an effective means by which the toxicity of discharges from municipal, industrial, and mining operations can be tested. Among the advantages of biomonitoring is the ability to test complex effluents containing a broad range of contaminants. Biomonitoring, when used in conjunction with chemical analyses, can generate data capable of identifying a much wider range of contaminants.

The Colorado Water Quality Control Division requires certain NPDES permittees to perform acute and/or chronic biomonitoring tests. The chronic test measures significant differences in lethality and in reproduction (*Ceriodaphnia dubia*) or growth (fathead minnow – *Pimephales promelas*) between control and effluent-exposed organisms.

The present report discusses the results of chronic biomonitoring tests conducted on effluent from the Thorin Resources WWTP 002A discharge. These tests were conducted in accordance with EPA and State of Colorado procedures in March 2024.

MATERIALS AND METHODS

Sample Collection

Three gallons of the effluent were collected on three separate dates as specified in Permit CO-0000003. Samples were delivered chilled to the SeaCrest lab where they were held at 0-6°C. Chain of custody forms showing sample collection and laboratory arrival times are included (Appendix 1).

Dilution Water

Laboratory reconstituted water was used as both the dilution water source and the control for the tests. Reconstituted water for the *Ceriodaphnia dubia* test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, potassium chloride, and sodium selenate to deionized water. Reconstituted water for the fathead minnow test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, and potassium chloride to deionized water.

Test Organisms

The biomonitoring test used *Ceriodaphnia dubia,* cultured in the SeaCrest laboratory. The organisms are cultured in brood culture boards from which individual females are monitored for survival and reproduction for periods of up to two weeks. Neonates less than 24-hours old, released from third or subsequent broods of eight or more within an 8-hour period, are collected from the brood chambers and used in tests. The animals are fed daily with a mixture of Yeast, Cereal Leaves, and Trout Chow (YCT), produced in-house. This is supplemented with cultured green algae *(Selenastrum capricornutum)* provided by Aquatic Biosystems.

Less than one-day-old fathead minnow, cultured in the laboratory, were also used in the test. Adult fish are maintained in 10-gallon aquaria where females deposit their eggs on the under-surface of split PVC pipe sections. The eggs are collected daily and transferred to aerated containers where they hatch after three to four days. The larval fish are fed newly hatched brine shrimp *(Artemia* sp.) at least twice per day.

In-house organisms are tested monthly in a reference toxicant test using sodium chloride to monitor overall health and test reproducibility (Appendix 4).

Test Procedures

Upon receipt at the lab, samples were analyzed for alkalinity, ammonia, chlorine, conductivity, dissolved oxygen, hardness, and pH.

Methods used in chemical analysis

Alkalinity	EPA 310.2	Hach 8203	I-2030-85.2
Ammonia	SM4500-NH_3, C-E1997	ASTM D1426-08	
Chlorine	SM4500-Cl D	Hach 10026	
Conductivity	SM2510		
Dissolved Oxygen	SM4500-O	Electrode: G-2001	Winkler (QC): B-F-2001
Hardness	SM2340 B or C	Hach 8213	
pH	SM4500-H+ B-2000		

The test followed procedures in EPA[3] and CDPHE[4] guidelines. Exposure concentrations included control (0%), 23%, 45%, 89%, 95%, and 100% mixtures, diluted with moderately hard laboratory reconstituted water.

Individual *Ceriodaphnia dubia* were placed in 30ml plastic containers containing approximately 15ml of exposure medium. Ten replicates at each concentration were used. The animals were fed daily with the YCT mixture and an equal volume of the green algae *(Selenastrum capricornutum)*. The exposure medium was changed daily in each container and the number of young released overnight were counted and recorded. Young were removed from the containers daily and discarded. Routine measurements were made each day of temperature, dissolved oxygen, and pH before and after the water changes.

Fathead minnow were exposed in 500ml plastic cups to which 250ml of media was replaced daily. Four replicates were used at each concentration. Ten fish, less than 24-hours old, were placed in each cup. The fish were monitored daily for survival and fed live brine shrimp at least twice per day. After seven days, the fish were removed from the cups, euthanized with isopropyl alcohol, and then placed in aluminum pans and dried in an oven for a minimum of six hours at 100ºC. The pans were then weighed on a five-place analytical balance to determine the average dry weight of the fish from each replicate.

Data Analysis

Data from the tests were analyzed on a personal computer using the CETIS program (developed by Tidepool Scientific Software). Statistical tests used in the analyses are shown in Table 1. Test acceptability was determined using control survival and reproduction/growth criteria, concentration-response relationships, and percent minimum significant differences (USEPA [5,6]).

Table 1. Statistical methods used in testing for significant differences in test parameters.

Variance	Distribution
Bartlett Equality of Variance Test	Shapiro-Wilk W Normality Test

Statistical Difference				
Species	Survival	Growth	Reproduction	IC_{25}
Ceriodaphnia dubia	N/A	N/A	Dunnett Multiple Comparison Test	ICp
fathead minnow	Steel Many-One Rank Sum Test	Dunnett Multiple Comparison Test	N/A	ICp

RESULTS

Ceriodaphnia dubia Test Results

Test results for the *Ceriodaphnia dubia* are summarized in Table 2 and provided on the data sheets located in Appendix 2. Survival was 100% in the 100% effluent and was 100% in the remaining effluent concentrations. Control survival was 100%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL (No Observed Effect Level) for lethality was 100% and the LC_{25} (Lethal Concentration 25) for lethality was >100%.

Average number of neonates was 28.6 in the 100% effluent concentration and ranged from 26.4 – 28.2 in the remaining effluent concentrations. The average number of neonates in the control was 26.6 for statistical analyses and test acceptability criteria. No statistically significant differences in the number of neonates were found between the control and any effluent concentration. The NOEL for reproduction was 100% and the IC_{25} (Inhibition Concentration 25) for reproduction was >100%.

Table 2. Summary of *Ceriodaphnia dubia* test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Mean Neonates	Min.	Max.	Significant Difference	
					Lethality	Reprod.
Control (0%)	100	26.6	15	34		
23%	100	27.5	19	36		
45%	100	26.4	14	34		
89%	100	28.1	20	36		
95%	100	28.2	17	35		
100%	100	28.6	18	34		

Fathead Minnow Test Results

Fathead minnow results are summarized in Table 3 and are provided on data sheets in Appendix 3. Survival was 100% in the 100% effluent concentration and ranged from 93% - 95% in the remaining effluent concentrations. Control survival was 100%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL for lethality was 100% and the LC_{25} for lethality was >100%.

Average weight in the 100% effluent concentration was 0.253mg and ranged from 0.248mg - 0.259mg per individual in the remaining effluent concentrations. The average weight for the control fish was 0.253mg for statistical analyses and test acceptability criteria. No statistically significant differences for growth were measured in any effluent concentration when compared to the control. The NOEL for growth was 100% and the IC_{25} for growth was >100%.

Table 3. Summary of fathead minnow test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Average Weight (mg)	Min.	Max.	Significant Difference	
					Lethality	Growth
Control (0%)	100	0.253	0.234	0.268		
23%	93	0.248	0.202	0.309		
45%	95	0.251	0.210	0.283		
89%	95	0.259	0.210	0.294		
95%	95	0.255	0.184	0.302		
100%	100	0.253	0.220	0.305		

Test Acceptability

Acceptable control survival (80%) was achieved in both tests. Similarly, *Ceriodaphnia dubia* reproduction (average 15 neonates/organism) and fathead minnow growth (average 0.250mg/test container) in control organisms met required levels. PMSD was within the required limits for an acceptable test (Table 4).

Table 4. PMSD for chronic test parameters.

	fathead minnow growth		***C. dubia* reproduction**	
	Lower bound	Upper bound	Lower bound	Upper bound
PMSD	12	30	13	47
(% Minimum significant difference)	26.1		22.1	

DISCUSSION

A failed test for this discharge occurs when there is an NOEL or IC_{25} less than the IWC (Instream Waste Concentration) of 89%. The NOEL represents the highest effluent concentration at which no statistically significant effect is observed. The IC_{25} represents an estimate of the effluent concentration that would cause a 25 percent reduction of a non-quantal biological measurement. A violation for this discharge occurs when both the NOEL and the IC_{25} are less than the IWC. Since neither test species demonstrated statistically significant differences meeting these criteria, the discharge passes WET testing requirements for this sampling period.

REFERENCES

1. **Hach Chemical Company.** 2008. *Hach's Water Analysis Handbook*. Fifth Edition. Hach Chemical Company, Loveland, Colorado**.** Digital Medium.
2. **APHA/AWWA/WEF.** 1998. *Standard Methods for the Examination of Water and Wastewater*. 20th Edition. American Public Health Association, Washington, D.C.
3. **USEPA.** 2002. *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms.* EPA-821-R-02-013. 335 pp.
4. **CDPHE (Colorado Department of Public Health and Environment).** 1998. *Laboratory Guidelines for Conducting Whole Effluent Toxicity Tests.* Water Quality Control Division.
5. **USEPA.** 2000. *Method of Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 CFR Part 136). EPA/821/B-00/004.
6. **USEPA**. 2000. *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications under the National Pollutant Discharge Elimination System Program*. EPA/833/R-00/003.

Appendix 1 – Chain of Custody with Sample Receipt Forms

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: Thorin Resources
P. O./Project Number:
Contact: CJ Dickerson
Address: 1900 Main St Unit 1
Phone # 970 316 2294 E-Mail: cjdickerson@thorinresources.com
Fax # Sampler: CJ Dickerson
Report By: ☐ Mail ☐ PDF ☐ FAX

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Analysis (Check all applicable)										Number of Containers	Total Volume
										Metals (List Below)											
										Solids (TS/TDS/TSS) (Circle)											
										Anions (List Below)											
										Chromium III/VI (Circle)											
										Oil and Grease											
										Coliform (Total/Fecal/E-Coli) (Circle)											
										BOD/COD (Circle)											
										Other Analysis (List Below)											
OF002A	3/11/24	9:10am	Grab	524110.B #1		X														3	3

Turnaround Requirements (Analytical Testing Only)
Standard (10 days) ____ 6-9 Day
____ 3-5 Day ____ 1-2 Day
Requested Report Date:

Test Species: ☐ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:
Pimephales Pronelas

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
	10:19am 3/11/24	UPS		UPS			031224 0935

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2024

Project # 524110.B Sample #: 1
Date: 031224 Initials: MK
Samples Were:
1. FedEx (UPS) Courier Hand Delivery (circle one)
Notes:

2. Chilled to Ship Ambient (Chilled)

3. Cooler Received Broken or Leaking Y (N) NA
Notes:

4. Sample Received Broken or Leaking Y (N)
Notes:

5. Received Within 36hr Holding Time (Y) N
Notes:

6. Aeration necessary Y (N)

7. pH adjustment necessary Y (N)

8. Sample Received at Temperature between 0-6° C . (Y) N NA
Notes:

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
Effluent: no visible prn
Receiving: N/A
Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
524110.B#1	3.7	7.8	7.7	512

Custody Seals:

1. Present on Outer Package	Y	(N)	
2. Unbroken on Outer Package	Y	N	(NA)
3. Present on Sample	Y	(N)	
4. Unbroken on Sample	Y	N	(NA)

Custody Documentation (Chain of Custody):
1. Present Upon Receipt of Sample (Y) N

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: Thorin Resources
P. O./Project Number:
Contact: CS Dickerson
Address: 1900 Main St Unit 1, Bucyrus, CO 81127
Phone # (970) 316 2294 E-Mail: cjdickerson@hurricanedam.com
Fax # Sampler: CS Dickerson
Report By: ☐ Mail ☐ PDF ☐ FAX

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	Analysis (Check all applicable)																Number of Containers	Total Volume
					WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)					
OF0224	3/13	12:15p	Grab	524110.B#2		X															3	3

Turnaround Requirements (Analytical Testing Only)
Standard (10 days) _____ 6-9 Day
3-5 Day _____ 1-2 Day
Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
	4:35pm	UPS		UPS			05/4/24 0830

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2024

Project # 524110.B Sample #: 2
Date: 03/14/24 Initials: AN

Samples Were:

1. FedEx (UPS) Courier Hand Delivery (circle one)
   Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — (Y) N NA
   Notes:

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: clear, no visible pm
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
524110.B #2	0.4	8.4	7.5	545

Custody Seals:

1. Present on Outer Package — Y (N)
2. Unbroken on Outer Package — Y N (NA)
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — (Y) N

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: Thorin Resources
P. O./Project Number:
Contact: CJ Dickerson
Address: 1900 Main St. Unit 1
Phone # 970 316 2294 E-Mail: cjdickerson@thorinresources.com
Fax # Sampler: CJ Dickerson
Report By: ☐ Mail ☒ PDF ☐ FAX

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Analysis (Check all applicable) Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)			Number of Containers	Total Volume
0 F002A	3/14/24	10:30a	G	524110.03		X														3	30

Turnaround Requirements (Analytical Testing Only)
Standard (10 days) _____ 6-9 Day
3-5 Day _____ 1-2 Day
Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

Relinquished By (1)	Received By (1)	Relinquished By (2)	Received By (2)
Signature	Signature	Signature	Signature
Date/Time 3/14/24 3:30P	Date/Time	Date/Time	Date/Time 031524 0847
	UPS	UPS	

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2024

Project # 524 110.B Sample #: 3
Date: 031524 Initials: CM

Samples Were:

1. FedEx (UPS) Courier Hand Delivery (circle one)
   Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — (Y) N NA
   Notes:

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: Clear, No visible P.M
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
110.B#3	3.1	8.6	7.6	455

Custody Seals:

1. Present on Outer Package — Y (N)
2. Unbroken on Outer Package — Y N (NA)
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — (Y) N

CM

Appendix 2 – Data Sheets for the *Ceriodaphnia dubia* Test

WET TEST REPORT FORM – CHRONIC

Permittee: Thorin Resources
Permit No.: CO-0000003

Outfall: 002A – IWC: 89%

Test Type: Routine ☒ Accelerated ☐ Screen ☐

Test Species: *Ceriodaphnia dubia*

Test Start Time	Test Start Date	Test End Time	Test End Date
1100	03-12-2024	1030	03-18-2024

Test Results	Lethality/TCP3B	Reproduction/TKP3B
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	23%	45%	89%	95%	100%
Exposed organisms	10	10	10	10	10	10
Survival for day 1	10	10	10	10	10	10
Survival for day 2	10	10	10	10	10	10
Survival for day 3	10	10	10	10	10	10
Survival for day 4	10	10	10	10	10	10
Survival for day 5	10	10	10	10	10	10
Survival for day 6	10	10	10	10	10	10
Mean 3 Brood Total	26.6	27.5	26.4	28.1	28.2	28.6

Hardness (mg/L) – Receiving Water: N/A Effluent: 267/206/167 Recon Water: 85
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 68/86/71 Recon Water: 57
Chlorine (mg/L) – Effluent: <0.01/<0.01/0.02 pH (initial/final) – Control: 7.9/7.8 100%: 7.6/7.6
Total Ammonia as NH_3 (mg/L) - Effluent: <0.03

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Daniela Thornton, Mia Kohler, and Catherine McDonald

Signature  *Date* March 28, 2024

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: March 2023

Permittee: Thorin Resources **Lab #:** 524110.B **Site:** 002A
IWC %: 89 **Template #:** 5 **Dilution Water:** MHZ4-006 **Sample Date:** 031124
Age & Source: 031224 4163 **Test Start:** 031224 1100 **Test End:** 031824 1030
Test Conditions:

	0	1	2	3	4	5	6	7	Total
(C)	0	0	0	6	7	1	11		25
	0	0	0	0	7	13	11		31
	0	0	0	0	8	9	13		30
	0	0	0	0	6	12	16		34
	0	0	0	0	8	12	13		33
0	0	0	0	0	6	9	0		15
	0	0	0	5	6	0	10		21
	0	0	0	0	8	11	11		30
	0	0	0	0	8	0	14		22
	0	0	0	0	6	9	10		25
DO	7.1	7.4 | 6.8	7.1 | 7.1	7.3 | 7.2	8.0 | 7.6	7.3 | 6.9	8.1		26.4
Temp	24.6	25.0 | 24.1	25.4 | 24.2	25.4 | 25.0	24.8 | 24.1	24.4 | 24.1	24.5		
pH	7.9	7.8 | 8.0	7.6 | 7.9	7.7 | 7.9	7.9 | 8.1	7.8 | 7.8	7.8		
Cond	355	323	376	371	308	330			
(1)	0	0	0	4	9	1	10		24
	0	0	0	0	4	12	12		28
	0	0	0	0	6	13	11		30
	0	0	0	0	4	14	18		36
	0	0	0	6	6	11	18		23
23	0	0	0	0	8	11	0		19
	0	0	0	4	8	9	1		22
	0	0	0	0	6	12	15		33
	0	0	0	0	6	10	16		32
	0	0	0	0	6	13	9		28
DO	7.9	7.4 | 7.2	7.1 | 7.5	7.3 | 7.5	8.0 | 7.8	7.3 | 7.2	8.1		27.5
Temp	24.6	25.0 | 24.1	25.4 | 24.2	25.4 | 25.0	24.8 | 24.1	24.5 | 24.2	24.5		
pH	7.8	7.8 | 7.8	7.6 | 7.8	7.7 | 7.8	7.9 | 7.9	7.8 | 7.8	7.8		
Cond	390	364	414	419	345	364			
(2)	0	0	0	4	7	0	12		23
	0	0	0	0	4	13	12		29
	0	0	0	0	5	10	13		28
	0	0	0	6	0	14	14		34
45	0	0	0	0	6	12	14		32
	0	0	0	0	4	10	0		14
	0	0	0	6	6	0	11		23
	0	0	0	0	5	11	13		29
	0	0	0	4	9	0	10		23
	0	0	0	0	6	10	13		29
DO	7.8	7.4 | 7.6	7.1 | 7.7	7.3 | 7.8	8.0 | 8.0	7.3 | 7.5	8.1		26.4
Temp	24.5	25.0 | 24.1	25.4 | 24.2	25.4 | 25.0	24.8 | 24.1	24.6 | 24.3	24.5		
pH	7.7	7.8 | 7.8	7.6 | 7.7	7.7 | 7.7	7.8 | 7.7	7.8 | 7.7	7.7		
Cond	431	405	451	460	376	402			
(3)	0	0	0	4	8	0	16		28
	0	0	0	0	0	11	13		30
	0	0	0	0	6	13	14		33
	0	0	0	4	0	12	17		33
89	0	0	0	0	9	13	14		36
	0	0	0	0	7	13	0		20
	0	0	0	3	6	0	11		20
	0	0	0	0	4	10	7		21
	0	0	0	4	12	0	15		31
	0	0	0	0	8	11	10		29
DO	8.2	7.4 | 8.0	7.0 | 8.0	7.3 | 8.2	8.0 | 8.2	7.3 | 8.1	8.2		28.1
Temp	24.4	25.0 | 24.1	25.4 | 24.2	25.4 | 25.0	24.8 | 24.1	24.7 | 24.5	24.6		
pH	7.6	7.7 | 7.7	7.7 | 7.5	7.7 | 7.6	7.8 | 7.7	7.7 | 7.6	7.6		
Cond	504	479	527	540	438	476			

HW

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: March 2023

	0	1	2	3	4	5	6	7	Total
(4)	0	0	0	7	8	1	12		28
	0	0	0	0	6	12	16		34
	0	0	0	0	8	13	14		35
	0	0	0	4	0	9	14		27
95	0	0	0	0	4	11	14		29
	0	0	0	0	6	11	0		17
	0	0	0	4	6	0	12		22
	0	0	0	0	5	14	13		32
	0	0	0	4	12	0	16		32
	0	0	0	0	4	11	11		26
DO	8.6 / 7.4 / 8.4	7.0 / 8.3	7.3 / 8.5	8.0 / 8.4	7.3 / 8.3	8.2			28.2
Temp	24.3 / 25.0 / 24.1	25.4 / 24.2	25.4 / 25.0	24.8 / 24.1	24.7 / 24.6	24.6			
pH	7.6 / 7.7 / 7.7	7.7 / 7.5	7.7 / 7.6	7.7 / 7.6	7.7 / 7.6	7.6			
Cond	516	493	536	555	449	487			
(5)	0	0	0	6	12	10	0		28
	0	0	0	0	7	12	15		34
	0	0	0	0	7	11	16		34
	0	0	0	8	5	12	13		30
100	0	0	0	0	7	10	12		29
	0	0	0	0	6	13	0		19
	0	0	0	0	5	7	6		18
	0	0	0	0	6	12	14		32
	0	0	0	6	12	0	16		34
	0	0	0	0	8	7	13		28
DO	8.9 / 7.4 / 8.8	7.0 / 8.4	7.3 / 8.8	8.0 / 8.6	7.3 / 8.5	8.2			28.6
Temp	24.3 / 25.0 / 24.1	25.4 / 24.2	25.4 / 25.0	24.8 / 24.4	24.7 / 24.6	24.6			
pH	7.6 / 7.7 / 7.6	7.7 / 7.5	7.7 / 7.6	7.7 / 7.6	7.7 / 7.6	7.6			
Cond	527	501	545	564	455	496			
Algae	ABS	ABS	ABS	ABS	ABS	ABS			
YCT	2403	2403	2403	2403	2403	2403			
H_2O	1	1	2	2	3	3			
Initials	MK	MK	JT	cm	CM	MK	MK		

	Eff #1	Eff #2	Eff #3	Recon
Hardness	267	206	167	85
Alkalinity	68	80	71	57
Chlorine	<0.01	<0.01	0.02	<0.01
Ammonia	<0.03	<0.03	<0.03	<0.03

Exposure Chamber:
Total Capacity: 30mL
Total Solution Volume: 15mL

Feeding Schedule:
Fed daily
Food used: YCT, Algae

Units:
DO: mg/L
Temp: °C
pH: N/A
Cond: µS/cm³
Hardness: mg/L
Alkalinity: mg/L
Chlorine: mg/L
Ammonia: mg/L

Comments:

x:y:z = board #:row:column

1	2	3	4	5	6	7	8	9	10
A2	A3	A4	A7	A8	A9	A10	B3	B5	B6

CETIS Analytical Report

Report Date: 26 Mar-24 11:26 (p 1 of 1)
Test Code/ID: 524110CD / 02-3862-9749

Ceriodaphnia 7-d Survival and Reproduction Test **SeaCrest Group**

Analysis ID:	13-3053-6996	**Endpoint:**	Reproduction	**CETIS Version:**	CETIS v2.1.5
Analyzed:	26 Mar-24 11:25	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	26 Mar-24 0:00	**MD5 Hash:**	6F0E33E8805B542B311132BF063A519F	**Editor ID:**	008-269-892-1
Batch ID:	20-8307-9182	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	12 Mar-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	18 Mar-24	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	05-3830-6766	**Code:**	524110.B	**Project:**	WET Quarterly Compliance Test (1Q)
Sample Date:	11 Mar-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	12 Mar-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Untransformed	C > T	100	>100	---	1	5.888	22.14%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Dilution Water		23	18	-0.3499	2.289	5.888	CDF	0.9168	Non-Significant Effect
		45	18	0.07776	2.289	5.888	CDF	0.8092	Non-Significant Effect
		89	18	-0.5832	2.289	5.888	CDF	0.9516	Non-Significant Effect
		95	18	-0.6221	2.289	5.888	CDF	0.9561	Non-Significant Effect
		100	18	-0.7776	2.289	5.888	CDF	0.9707	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	40.5333	8.10667	5	0.2451	0.9405	Non-Significant Effect
Error	1786.2	33.0778	54			
Total	1826.73		59			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	0.1296	15.09	0.9997	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.947	0.9459	0.0113	Normal Distribution

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	26.6	22.27	30.93	27.5	15	34	1.916	22.78%	0.00%
23		10	27.5	23.62	31.38	28	19	36	1.714	19.71%	-3.38%
45		10	26.4	22.27	30.53	28.5	14	34	1.827	21.88%	0.75%
89		10	28.1	23.94	32.26	29.5	20	36	1.841	20.71%	-5.64%
95		10	28.2	24.21	32.19	28.5	17	35	1.763	19.77%	-6.02%
100		10	28.6	24.43	32.77	29.5	18	34	1.845	20.40%	-7.52%

Convergent Rounding (4 sf) CETIS™ v2.1.5.5 (008-269-892-1) Analyst: CM QA: HW

CETIS Analytical Report

Report Date: 26 Mar-24 11:26 (p 1 of 1)
Test Code/ID: 524110CD / 02-3862-9749

Ceriodaphnia 7-d Survival and Reproduction Test **SeaCrest Group**

Analysis ID:	01-6397-3666	**Endpoint:**	Reproduction	**CETIS Version:**	CETIS v2.1.5
Analyzed:	26 Mar-24 11:26	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	26 Mar-24 0:00	**MD5 Hash:**	6F0E33E8805B542B311132BF063A519F	**Editor ID:**	008-269-892-1
Batch ID:	20-8307-9182	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	12 Mar-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	18 Mar-24	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	05-3830-6766	**Code:**	524110.B	**Project:**	WET Quarterly Compliance Test (1Q)
Sample Date:	11 Mar-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	12 Mar-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1428661	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
IC5	>100	---	---	<1	---	---
IC10	>100	---	---	<1	---	---
IC15	>100	---	---	<1	---	---
IC20	>100	---	---	<1	---	---
IC25	>100	---	---	<1	---	---
IC40	>100	---	---	<1	---	---
IC50	>100	---	---	<1	---	---

Reproduction Summary			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	Mean	%Effect
0	D	10	26.6	27.5	15	34	22.78%	0.00%	27.57	0.00%
23		10	27.5	28	19	36	19.71%	-3.38%	27.57	0.00%
45		10	26.4	28.5	14	34	21.88%	0.75%	27.57	0.00%
89		10	28.1	29.5	20	36	20.71%	-5.64%	27.57	0.00%
95		10	28.2	28.5	17	35	19.77%	-6.02%	27.57	0.00%
100		10	28.6	29.5	18	34	20.40%	-7.52%	27.57	0.00%

Convergent Rounding (4 sf) CETIS™ v2.1.5.5 (008-269-892-1) Analyst: CM QA: HW

Appendix 3 – Data Sheets for the Fathead Minnow Test

WET TEST REPORT FORM – CHRONIC

Permittee: Thorin Resources
Permit No.: CO-0000003
Outfall: 002A – IWC: 89%
Test Type: Routine ☒ Accelerated ☐ Screen ☐
Test Species: fathead minnow

Test Start Time	Test Start Date	Test End Time	Test End Date
1100	03-12-2024	1200	03-19-2024

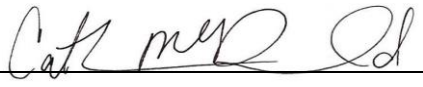
Test Results	Lethality/TCP6C	Growth/TKP6C
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	23%	45%	89%	95%	100%
Exposed organisms	40	40	40	40	40	40
Survival for day 1	40	38	40	40	40	40
Survival for day 2	40	38	40	40	40	40
Survival for day 3	40	38	39	40	39	40
Survival for day 4	40	38	39	40	39	40
Survival for day 5	40	38	38	39	39	40
Survival for day 6	40	38	38	39	39	40
Survival for day 7	40	37	38	38	38	40
Mean Dry Wt. (mg)	0.253	0.248	0.251	0.259	0.255	0.253

Hardness (mg/L) – Receiving Water: N/A Effluent: 267/206/167 Recon Water: 83
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 68/86/71 Recon Water: 61
Chlorine (mg/L) – Effluent: <0.01/<0.01/0.02 pH (initial/final) – Control: 8.0/7.7 100%: 7.7/7.5
Total Ammonia as NH_3 (mg/L) - Effluent: <0.03

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Lindsey Muniz, Mia Kohler, and Aurora Nelson

Signature  *Date* March 28, 2024

SeaCrest Group
Louisville, CO

Fathead Minnow Chronic Benchsheet

Form #: 103a
Effective: March 2022

Client: Thorin Resources Site: 002A Lab #: 524110.B Sample Date: 031124 IWC: 89 Dilution H_2O: MH24-011
Test Start: 031224 1100 Test End: 031324 1200 Species Info: IH031224 Template: FHM Test Conditions:

Conc	Read	0	1		2		3		4		5		6		7
0	DO	6.8	6.0	6.8	5.2	6.9	5.6	6.8	4.6	6.8	5.0	7.0	5.5	6.8	6.5
	Temp	24.1	24.3	24.3	25.2	24.8	24.8	24.2	24.9	24.8	24.1	25.0	24.3	24.6	24.8
	pH	8.0	7.7	8.0	7.7	8.1	7.8	8.0	7.4	7.7	7.9	8.2	7.8	8.1	7.7
	Cond	374	371		413		412		355		358		341		
23	DO	7.0	6.1	7.1	5.1	7.1	5.6	7.0	4.7	7.1	5.1	7.1	5.5	7.1	6.3
	Temp	24.3	24.3	24.3	25.1	24.7	24.6	24.2	24.8	24.7	24.1	25.9	24.4	24.7	24.6
	pH	8.0	7.7	8.0	7.7	7.9	7.8	7.9	7.4	7.7	7.8	8.0	7.8	7.9	7.7
	Cond	407	390		448		443		388		386		374		
45	DO	7.2	6.2	7.5	5.0	7.2	5.6	7.2	4.8	7.4	5.2	7.2	5.5	7.4	6.7
	Temp	24.5	24.2	24.2	25.0	24.5	24.5	24.2	24.8	24.5	24.1	25.7	24.5	24.7	24.5
	pH	7.9	7.7	7.8	7.6	7.9	7.7	7.9	7.4	7.7	7.7	7.9	7.7	7.8	7.6
	Cond	440	430		475		479		384		414		412		
89	DO	7.4	6.2	7.8	4.9	7.4	5.6	7.4	4.9	7.6	5.3	7.3	5.5	7.5	6.0
	Temp	24.7	24.2	24.2	24.9	24.4	24.4	24.1	24.3	24.4	24.1	24.6	24.7	24.8	24.3
	pH	7.7	7.7	7.7	7.6	7.9	7.7	7.7	7.3	7.5	7.7	7.8	7.7	7.7	7.5
	Cond	494	477		533		533		962		462		471		
95	DO	7.6	6.3	8.2	4.8	7.5	5.6	7.6	5.0	7.9	5.4	7.4	5.5	7.9	5.9
	Temp	24.9	24.1	24.1	24.8	24.2	24.3	24.1	24.7	24.2	24.1	24.5	24.8	24.8	24.2
	pH	7.7	7.7	7.7	7.5	7.7	7.6	7.7	7.3	7.5	7.6	7.8	7.6	7.7	7.5
	Cond	502	480		540		539		464		467		475		
100	DO	7.8	6.4	8.5	4.7	7.6	5.6	7.8	5.1	8.2	5.5	7.5	5.5	8.2	5.8
	Temp	25.1	24.1	24.1	24.7	24.1	24.1	24.1	24.6	24.1	24.1	24.3	24.9	24.9	24.1
	pH	7.7	7.7	7.7	7.5	7.7	7.6	7.7	7.3	7.5	7.5	7.7	7.6	7.7	7.5
	Cond	512	488		546		549		472		478		491		
	DO														
	Temp														
	pH														
	Cond														
Initials		lm	lm		AN		AN		AN		lm		lm		MR
Water #		1	1		2		2		3		3		3		

Conc	Read	0	1	2	3	4	5	6	7	#	Fish & Tare	Tare	Fish Wt mg	Ave wt
0	DO	10	10	10	10	10	10	10	10	#1	1.07186	1.06923	0.263	0.253
	Temp	10	10	10	10	10	10	10	10	#2	1.06549	1.06302	0.247	
	pH	10	10	10	10	10	10	10	10	#3	1.06994	1.06726	0.268	
	Cond	10	10	10	10	10	10	10	10	#4	1.06523	1.06289	0.234	
23	DO	10	10	10	10	10	10	10	10	#5	1.08265	1.07956	0.309	0.248
	Temp	10	8	8	8	8	8	8	7	#6	1.08067	1.07865	0.202	
	pH	10	10	10	10	10	10	10	10	#7	1.08022	1.07779	0.243	
	Cond	10	10	10	10	10	10	10	10	#8	1.06496	1.06259	0.237	
45	DO	10	10	10	9	9	9	9	9	#9	1.07534	1.07255	0.279	0.251
	Temp	10	10	10	10	10	10	10	10	#10	1.06781	1.06498	0.283	
	pH	10	10	10	10	10	10	10	10	#11	1.07181	1.06951	0.230	
	Cond	10	10	10	10	10	9	9	9	#12	1.06455	1.06245	0.210	
89	DO	10	10	10	10	10	10	10	10	#13	1.08069	1.07775	0.294	0.259
	Temp	10	10	10	10	10	10	10	10	#14	1.06989	1.06706	0.283	
	pH	10	10	10	10	10	10	10	9	#15	1.06277	1.06067	0.210	
	Cond	10	10	10	10	10	9	9	9	#16	1.08097	1.07848	0.249	
95	DO	10	10	10	10	10	10	10	10	#17	1.07729	1.07427	0.302	0.255
	Temp	10	10	10	9	9	9	9	8	#18	1.07773	1.07506	0.267	
	pH	10	10	10	10	10	10	10	10	#19	1.08456	1.08188	0.268	
	Cond	10	10	10	10	10	10	10	10	#20	1.07216	1.07032	0.184	
100	DO	10	10	10	10	10	10	10	10	#21	1.08329	1.08024	0.305	0.253
	Temp	10	10	10	10	10	10	10	10	#22	1.08570	1.08308	0.262	
	pH	10	10	10	10	10	10	10	10	#23	1.07606	1.07386	0.220	
	Cond	10	10	10	10	10	10	10	10	#24	1.07872	1.07646	0.226	
	DO	10								#				
	Temp	10								#				
	pH	10								#				
	Cond	10								#				
Initials										pretest	#25	1.07174	1.07154	
Water #														

	Eff 1	Eff 2	Eff 3	Recon	Rcv 1	Rcv 2	Rcv 3	MR
Hard	267	206	107	83				
Alk	108	86	71	61				
Chlor	<0.01	<0.01	0.02	<0.01				
NH_3	<0.03	<0.03	<0.03	<0.03				

Exposure Chamber

Total Capacity:	500 mL
Test Solution Volume:	250 mL
Test Solution Surface Area:	50.2 cm
Water Depth (constant):	6.5 cm

Units:

DO: mg/L	Hard: mg/L
Temp: °C	Alk: mg/L
pH: N/A	Chlor: mg/L
Cond: µS/cm³	NH_3: mg/L

Comments:

Feeding	0	1	2	3	4	5	6	7
AM		✓	✓	✓	✓	✓	✓	✓
Initials		lm	AN	AN	AN	lm	lm	MR
PM	✓	✓	✓	✓		✓	✓	
Initials	lm	lm	AN	AN	AN	lm	lm	

Feeding Schedule

Fed:	2x per day
Food Used:	<24hr artemia

CETIS Analytical Report

Report Date: 24 Mar-24 12:29 (p 1 of 3)
Test Code/ID: 524110fhm / 12-4728-8265

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	11-2893-9763	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	24 Mar-24 12:28	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Batch ID:	01-1185-4928	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	12 Mar-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	19 Mar-24	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	16-9242-3399	**Code:**	524110.B	**Project:**	WET Quarterly Compliance Test (1Q)
Sample Date:	11 Mar-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	12 Mar-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	C > T	100	>100	n/a	1	12.52%

Steel Many-One Rank Sum Test

Control vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water	23	16	10	1	6	CDF	0.6105	Non-Significant Effect
	45	14	10	1	6	CDF	0.3451	Non-Significant Effect
	89	14	10	1	6	CDF	0.3451	Non-Significant Effect
	95	16	10	1	6	CDF	0.6105	Non-Significant Effect
	100	18	10	1	6	CDF	0.8333	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0415602	0.0083120	5	0.5852	0.7112	Non-Significant Effect
Error	0.255669	0.0142038	18			
Total	0.297229		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.8173	0.884	5.7E-04	Non-Normal Distribution

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
23		4	0.9250	0.6863	1.0000	1.0000	0.7000	1.0000	0.0750	16.22%	7.50%
45		4	0.9500	0.8581	1.0000	0.9500	0.9000	1.0000	0.0289	6.08%	5.00%
89		4	0.9500	0.8581	1.0000	0.9500	0.9000	1.0000	0.0289	6.08%	5.00%
95		4	0.9500	0.7909	1.0000	1.0000	0.8000	1.0000	0.0500	10.53%	5.00%
100		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%
23		4	1.307	0.972	1.642	1.412	0.9912	1.412	0.1052	16.10%	7.45%
45		4	1.331	1.181	1.48	1.331	1.249	1.412	0.04705	7.07%	5.77%
89		4	1.331	1.181	1.48	1.331	1.249	1.412	0.04705	7.07%	5.77%
95		4	1.336	1.093	1.578	1.412	1.107	1.412	0.07622	11.41%	5.40%
100		4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%

003-715-114-2 CETIS™ v1.9.6.14 Analyst: CM QA: HW

CETIS Analytical Report

Report Date: 24 Mar-24 12:29 (p 1 of 2)
Test Code/ID: 524110fhm / 12-4728-8265

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	13-0034-4710	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	24 Mar-24 12:29	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	01-1185-4928	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	12 Mar-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	19 Mar-24	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	16-9242-3399	**Code:**	524110.B	**Project:**	WET Quarterly Compliance Test (1Q)
Sample Date:	11 Mar-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	12 Mar-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	98928	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
LC5	>100	n/a	n/a	<1	n/a	n/a
LC10	>100	n/a	n/a	<1	n/a	n/a
LC15	>100	n/a	n/a	<1	n/a	n/a
LC20	>100	n/a	n/a	<1	n/a	n/a
LC25	>100	n/a	n/a	<1	n/a	n/a
LC40	>100	n/a	n/a	<1	n/a	n/a
LC50	>100	n/a	n/a	<1	n/a	n/a

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	D	4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	1	0.0%
23		4	0.9250	0.7000	1.0000	0.1500	16.22%	7.5%	37/40	0.955	4.5%
45		4	0.9500	0.9000	1.0000	0.0577	6.08%	5.0%	38/40	0.955	4.5%
89		4	0.9500	0.9000	1.0000	0.0577	6.08%	5.0%	38/40	0.955	4.5%
95		4	0.9500	0.8000	1.0000	0.1000	10.53%	5.0%	38/40	0.955	4.5%
100		4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	0.955	4.5%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
23		1.0000	0.7000	1.0000	1.0000
45		0.9000	1.0000	1.0000	0.9000
89		1.0000	1.0000	0.9000	0.9000
95		1.0000	0.8000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

003-715-114-2 CETIS™ v1.9.6.14 Analyst: CM QA HW

CETIS Analytical Report

Report Date: 25 Mar-24 16:51 (p 1 of 1)
Test Code/ID: 524110fhm / 12-4728-8265

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	16-7257-8227	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.6
Analyzed:	25 Mar-24 16:50	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Batch ID:	01-1185-4928	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	12 Mar-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	19 Mar-24	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	16-9242-3399	**Code:**	524110.B	**Project:**	WET Quarterly Compliance Test (1Q)
Sample Date:	11 Mar-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	12 Mar-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	100	>100	n/a	1	26.10%

Dunnett Multiple Comparison Test

Control vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water	23	0.1913	2.407	0.066	6	CDF	0.7709	Non-Significant Effect
	45	0.09088	2.407	0.066	6	CDF	0.8052	Non-Significant Effect
	89	-0.2187	2.407	0.066	6	CDF	0.8896	Non-Significant Effect
	95	-0.0822	2.407	0.066	6	CDF	0.8564	Non-Significant Effect
	100	-0.009344	2.407	0.066	6	CDF	0.8361	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0002993	5.986E-05	5	0.03976	0.9990	Non-Significant Effect
Error	0.0270982	0.0015055	18			
Total	0.0273975		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	3.204	15.09	0.6686	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9859	0.884	0.9755	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.253	0.2283	0.2777	0.255	0.234	0.268	0.007757	6.13%	0.00%
23		4	0.2477	0.1767	0.3188	0.24	0.202	0.309	0.02233	18.02%	2.07%
45		4	0.2505	0.1929	0.3081	0.2545	0.21	0.283	0.01809	14.44%	0.99%
89		4	0.259	0.1987	0.3193	0.266	0.21	0.294	0.01893	14.62%	-2.37%
95		4	0.2553	0.1754	0.3351	0.2675	0.184	0.302	0.0251	19.67%	-0.89%
100		4	0.2533	0.1909	0.3156	0.244	0.22	0.305	0.01958	15.47%	-0.10%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.263	0.247	0.268	0.234
23		0.309	0.202	0.243	0.237
45		0.279	0.283	0.23	0.21
89		0.294	0.283	0.21	0.249
95		0.302	0.267	0.268	0.184
100		0.305	0.262	0.22	0.226

003-715-114-2 CETIS™ v1.9.6.14 Analyst: CM QA: HW

CETIS Analytical Report

Report Date: 25 Mar-24 16:51 (p 1 of 1)
Test Code/ID: 524110fhm / 12-4728-8265

Fathead Minnow 7-d Larval Survival and Growth Test **SeaCrest Group**

Analysis ID:	12-5238-8481	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.6
Analyzed:	25 Mar-24 16:51	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	01-1185-4928	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	12 Mar-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	19 Mar-24	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	16-9242-3399	**Code:**	524110.B	**Project:**	WET Quarterly Compliance Test (1Q)
Sample Date:	11 Mar-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	12 Mar-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1913651	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	n/a	n/a	<1	n/a	n/a
IC10	>100	n/a	n/a	<1	n/a	n/a
IC15	>100	n/a	n/a	<1	n/a	n/a
IC20	>100	n/a	n/a	<1	n/a	n/a
IC25	>100	n/a	n/a	<1	n/a	n/a
IC40	>100	n/a	n/a	<1	n/a	n/a
IC50	>100	n/a	n/a	<1	n/a	n/a

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	D	4	0.253	0.234	0.268	0.01551	6.13%	0.0%	0.2531	0.0%
23		4	0.2477	0.202	0.309	0.04466	18.02%	2.08%	0.2531	0.0%
45		4	0.2505	0.21	0.283	0.03618	14.44%	0.99%	0.2531	0.0%
89		4	0.259	0.21	0.294	0.03787	14.62%	-2.37%	0.2531	0.0%
95		4	0.2553	0.184	0.302	0.05021	19.67%	-0.89%	0.2531	0.0%
100		4	0.2533	0.22	0.305	0.03917	15.47%	-0.1%	0.2531	0.0%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.263	0.247	0.268	0.234
23		0.309	0.202	0.243	0.237
45		0.279	0.283	0.23	0.21
89		0.294	0.283	0.21	0.249
95		0.302	0.267	0.268	0.184
100		0.305	0.262	0.22	0.226

003-715-114-2 CETIS™ v1.9.6.14 Analyst: CM QA: HW

Appendix 4 – QA/QC and Reference Toxicant Test Chart

Quality Assurance Check List – Chronic Whole Effluent Toxicity Test

Client:	Thorin Resources
SeaCrest Sample No:	524110.B
Species Tested:	*Ceriodaphnia dubia* and fathead minnow

Sample Dates	**Start Date of Test (*Ceriodaphnia dubia)***	**Start Date of Test (fathead minnow)**
03-11-2024		
03-13-2024		
03-14-2024	03-12-2024	03-12-2024

Sample received in lab properly preserved (0-6°C)?	**Y**
Sample received at laboratory within 36 hours of collection?	**Y**
Sample delivered on ice or equivalent?	**Y**
Test initiated within 36-hours of collection?	**Y**
Test protocol conforms to CDPHE guidelines (*Ceriodaphnia dubia)*?	**Y**
Test protocol conforms to CDPHE guidelines (fathead minnow)?	**Y**
Average test temp. ±1°C (*Ceriodaphnia dubia*)?	**Y**
Average test temp. ±1°C (fathead minnow)?	**Y**
DO level ≥4.0mg/L; no super-saturation (*Ceriodaphnia dubia*)?	**Y**
DO level ≥4.0mg/L; no super-saturation (fathead minnow)?	**Y**
Survival in control ≥80% (*Ceriodaphnia dubia*)?	**Y**
Survival in control ≥80% (fathead minnow)?	**Y**
Ceriodaphnia dubia neonates <24-hours old?	**Y**
Fathead minnow larvae <24-hours old?	**Y**
Appropriate reference toxicity test conducted?	**Y**
Reference toxicity test results within the confidence limits for the lab?	**Y**

Author Cat Mel *Date* March 28, 2024

Position: Laboratory Manager

Quality Control Haley West *Date* March 28, 2024

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

METHOD QC

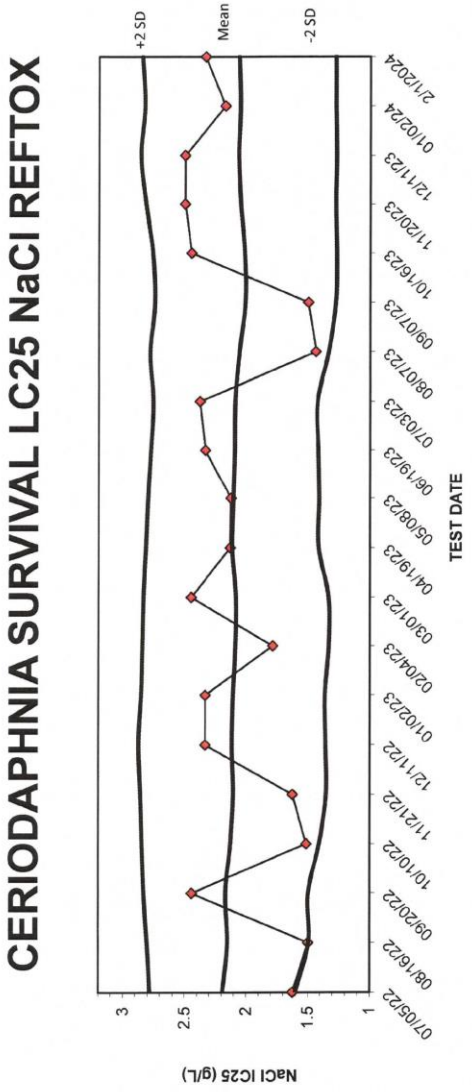
Method	Analyte	Date	LCS (rec)	%REC	%RPD	QC LIMITS
2320 B	Alkalinity - Total	2/1/2024	104.80%	96.14%	0.82%	± 5.00%
2320 B	Alkalinity - Total	2/8/2024	104.40%	101.32%	-4.22%	± 5.00%
2320 B	Alkalinity - Total	2/15/2024	104.40%	104.76%	4.29%	± 5.00%
2320 B	Alkalinity - Total	2/22/2024	104.00%	104.41%	1.82%	± 5.00%
4500 NH_3 D	Ammonia	2/1/2024	100.40%	104.91%	-4.06%	± 10.00%
4500 NH_3 D	Ammonia	2/8/2024	102.60%	101.84%	-4.69%	± 10.00%
4500 NH_3 D	Ammonia	2/14/2024	105.00%	96.00%	0.00%	± 10.00%
4500 NH_3 D	Ammonia	2/21/2024	95.00%	102.41%	-3.61%	± 10.00%
4500 Cl D	Chlorine	2/28/2024	96.88%	105.71%	0.00%	± 5.00, ± 20.00%
2340 B	Hardness - Total	2/3/2024	100.00%	103.51%	0.72%	± 5.00%
2340 B	Hardness - Total	2/6/2024	96.50%	97.00%	-1.38%	± 5.00%
2340 B	Hardness - Total	2/13/2024	102.00%	100.00%	0.00%	± 5.00%
2340 B	Hardness - Total	2/20/2024	103.51%	101.12%	0.00%	± 5.00%

			LCS (rec)	%REC M1	%REC M2	QC Limits
4500 O	DO - Winkler	2/1/2024	N/A	97.10%	95.71%	± 5.00%
4500 O	DO - Winkler	2/6/2024	N/A	98.53%	98.53%	± 5.00%
4500 O	DO - Winkler	2/13/2024	N/A	95.59%	98.55%	± 5.00%
4500 O	DO - Winkler	2/20/2024	N/A	98.57%	98.57%	± 5.00%

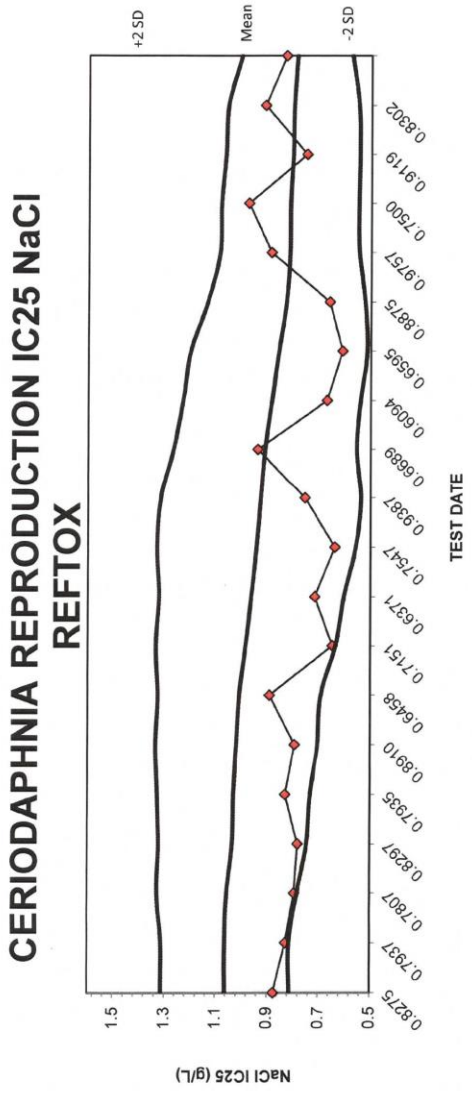
			Blank	%REC MR S	%RPD	QC Limits
2540 D	Suspended Solids (TTL)	2/13/2024	100.00%	109.00%	0.00%	± 15%
2540 C	Dissolved Solids (TTL)	2/13/2024	100.00%	93.55%	0.00%	± 15%

Signature: Hailey Hunt
Date: March 1, 2024

Signature: Cat McDonald
Date: March 1, 2024

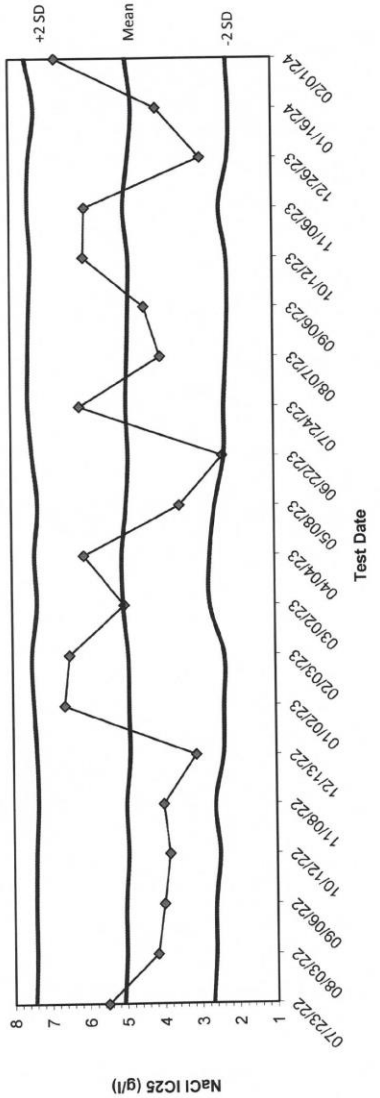


Date	IC25	Mean	-2 SD	+2 SD
07/05/22	1.6250	2.1930	1.6031	2.7828
08/16/22	1.5000	2.1506	1.4959	2.8054
09/20/22	2.4440	2.1658	1.4989	2.8328
10/10/22	1.5130	2.1268	1.4070	2.8465
11/21/22	1.6250	2.1055	1.3533	2.8578
12/11/22	2.3330	2.1154	1.3566	2.8742
01/02/23	2.3330	2.1075	1.3622	2.8527
02/04/23	1.7860	2.0869	1.3307	2.8430
03/01/23	2.4480	2.0844	1.3336	2.8352
04/19/23	2.1300	2.1144	1.4129	2.8158
05/08/23	2.1250	2.1045	1.4102	2.7988
06/19/23	2.3330	2.0965	1.4176	2.7755
07/03/23	2.3780	2.0907	1.4243	2.7571
08/07/23	1.4375	2.0580	1.3336	2.7824
09/07/23	1.5000	2.0104	1.2766	2.7441
10/16/23	2.4480	2.0158	1.2703	2.7613
11/20/23	2.5000	2.0476	1.2784	2.8168
12/11/23	2.5000	2.0655	1.2717	2.8592
01/02/24	2.1720	2.0518	1.2767	2.8269
2/1/2024	2.3330	2.0617	1.2774	2.8460



Date	IC25	Mean	-2 SD	+2 SD
07/05/22	0.8750	1.0628	0.8126	1.3129
8/16/2022	0.8275	1.063015	0.813773698	1.312256302
09/20/22	0.7937	1.0554	0.7830	1.3279
10/10/22	0.7807	1.0340	0.7456	1.3223
11/21/22	0.8297	1.0301	0.7328	1.3275
12/11/22	0.7935	1.0197	0.7041	1.3353
01/02/23	0.8910	1.0085	0.6912	1.3258
02/04/23	0.6458	0.9841	0.6340	1.3342
03/01/23	0.7151	0.9621	0.6021	1.3221
04/19/23	0.6371	0.9431	0.5562	1.3300
05/08/23	0.7547	0.9267	0.5369	1.3165
06/19/23	0.9387	0.9105	0.5540	1.2670
07/03/23	0.6689	0.8843	0.5384	1.2302
08/07/23	0.6094	0.8575	0.5136	1.2014
09/07/23	0.6595	0.8290	0.5226	1.1353
10/16/23	0.8875	0.8164	0.5450	1.0878
11/20/23	0.9757	0.8150	0.5474	1.0826
12/11/23	0.7500	0.8049	0.5440	1.0658
01/02/24	0.9119	0.8019	0.5477	1.0560
02/01/24	0.8302	0.7888	0.5736	1.0040

FHM SURVIVAL LC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
07/23/22	5.5000	5.0819	2.7150	7.4488
08/03/22	4.1820	5.0220	2.6328	7.4112
09/06/22	4.0000	5.0185	2.6233	7.4137
10/12/22	3.8420	4.9507	2.5089	7.3925
11/08/22	4.0000	4.9848	2.6228	7.3468
12/13/22	3.1230	4.8843	2.3996	7.3690
01/02/23	6.6150	4.9051	2.3687	7.4415
02/03/23	6.4800	4.9171	2.3524	7.4818
03/02/23	5.0000	5.0364	2.7367	7.3361
04/04/23	6.0800	5.0628	2.7278	7.3978
05/08/23	3.5230	4.9385	2.5790	7.2979
06/22/23	2.3600	4.8775	2.3230	7.4321
07/24/23	6.1696	4.9250	2.3130	7.5370
08/07/23	4.0000	4.8853	2.2436	7.5269
09/06/23	4.4240	4.8500	2.2052	7.4948
10/12/23	6.0360	4.8354	2.2221	7.4487
11/06/23	6.0000	4.9627	2.4111	7.5142
12/26/23	2.9120	4.8223	2.1721	7.4725
01/16/24	4.0800	4.7287	2.1284	7.3289
02/01/24	6.7670	4.8732	2.1868	7.5596

FHM GROWTH IC25 NaCl REFTOX

Date	IC25	Mean	-2 SD	+2 SD
07/23/22	5.0500	5.9498	3.7409	8.1587
08/03/22	4.6040	5.9482	3.7354	8.1611
09/06/22	4.5630	5.8716	3.5812	8.1620
10/12/22	6.3570	5.9716	3.7966	8.1465
11/08/22	4.5530	5.9137	3.6531	8.1744
12/13/22	5.5530	5.8673	3.6196	8.1150
01/02/23	6.2350	5.8373	3.6291	8.0455
02/03/23	7.4870	6.0624	4.2424	7.8824
03/02/23	6.5000	6.0758	4.2468	7.9047
04/04/23	6.9180	6.0931	4.2384	7.9479
05/08/23	6.1200	6.0879	4.2341	7.9416
06/22/23	4.4340	5.9816	4.0146	7.9487
07/24/23	6.6760	6.0591	4.1185	7.9998
08/07/23	6.5670	6.1170	4.1925	8.0415
09/06/23	4.6810	6.0194	4.0192	8.0196
10/12/23	6.1750	6.0363	4.0372	8.0354
11/06/23	6.6360	6.0352	4.0375	8.0330
12/26/23	4.0036	5.8797	3.7796	7.9799
01/16/24	4.5690	5.7497	3.6808	7.8186
02/01/24	5.4310	5.6958	3.6572	7.7345

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

July 5, 2024

CJ Dickerson
Thorin Resources
6208 County Road 26
Ouray, CO 81427

Dear CJ:

Enclosed is the report for chronic biomonitoring tests performed for Thorin Resources on effluent from the Wastewater Treatment Plant 002A outfall. There was no statistically significant toxicity to either test species at any effluent concentration. The effluent passes WET (Whole Effluent Toxicity) testing requirements for this sampling period.

If you have any questions or concerns, please do not hesitate to contact me at (303) 661-9324.

Best regards,

Catherine McDonald
Laboratory Manager

REPORT OF CHRONIC BIOMONITORING TESTS CONDUCTED FOR THORIN RESOURCES ON EFFLUENT FROM THE WWTP 002A OUTFALL

Prepared for:

CJ Dickerson
Thorin Resources
6208 County Road 26
Ouray, CO 81427

Prepared by:

Catherine McDonald
SeaCrest Group
500 S Arthur Ave. Suite 450
Louisville, Colorado 80027-3065
(303) 661-9324

July 5, 2024

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Chronic Toxicity Test Summary

Test:	7-day static renewal using *Ceriodaphnia dubia* 7-day static renewal using fathead minnow *(Pimephales promelas)*
Client:	Thorin Resources
Test Procedure Followed:	*Ceriodaphnia dubia*: EPA/821/R-02-013. Method 1002.0 (2002) fathead minnow: EPA/821/R-02-013. Method 1000.0 (2002)
Sample Number:	524290.B
Dilution Water:	moderately hard laboratory reconstituted water
Test Organism Source:	SeaCrest Group
Reference Toxicant:	Sodium Chloride

Sample	Time of Collection	Date of Collection	Time of Receipt	Date of Receipt
Effluent 1	1030	06-24-2024	0845	06-25-2024
Effluent 2	1340	06-26-2024	0854	06-27-2024
Effluent 3	1200	06-27-2024	0845	06-28-2024

	Ceriodaphnia dubia	fathead minnow
Test Initiation Time	1530	1145
Test Initiation Date	06-25-2024	06-25-2024
Test Completion Time	1500	1200
Test Completion Date	07-01-2024	07-02-2024

Abstract with Results

Test Concentrations:	Control (0%), 23%, 45%, 89%, 95%, 100%
Number of Organisms/Concentration:	10 for *Ceriodaphnia dubia* 40 for fathead minnow
Replicates at each Concentration:	10 for *Ceriodaphnia dubia* 4 for fathead minnow

	Ceriodaphnia dubia	**fathead minnow**
Test vessel size/Exposure volume	30ml/15ml	500ml/200ml
Sub-lethal NOEL/IC25	100%/>100%	100%/>100%
Pass/Fail Status	**PASS**	**PASS**
Temperature Range (°C)	24.3 – 25.9	24.1 – 25.9
Dissolved Oxygen Range (mg/L)	6.7 – 8.1	4.1 – 8.5
pH Range	7.7 – 8.0	7.3 – 8.1

	Control (*Cerio*/FHM)	**Effluent Sample**
Hardness (mg/L as $CaCO_3$)	80/87	97/99/130
Alkalinity (mg/L as $CaCO_3$)	57/60	70/53/55
Total residual chlorine (mg/L)	<0.01	<0.01
Total ammonia (mg/L as NH_3)	<0.03	<0.03

INTRODUCTION

Biomonitoring provides an effective means by which the toxicity of discharges from municipal, industrial, and mining operations can be tested. Among the advantages of biomonitoring is the ability to test complex effluents containing a broad range of contaminants. Biomonitoring, when used in conjunction with chemical analyses, can generate data capable of identifying a much wider range of contaminants.

The Colorado Water Quality Control Division requires certain NPDES permittees to perform acute and/or chronic biomonitoring tests. The chronic test measures significant differences in lethality and in reproduction (*Ceriodaphnia dubia*) or growth (fathead minnow – *Pimephales promelas*) between control and effluent-exposed organisms.

The present report discusses the results of chronic biomonitoring tests conducted on effluent from the Thorin Resources WWTP 002A discharge. These tests were conducted in accordance with EPA and State of Colorado procedures in June and July 2024.

MATERIALS AND METHODS

Sample Collection

Three gallons of the effluent were collected on three separate dates as specified in Permit CO-0000003. Samples were delivered chilled to the SeaCrest lab where they were held at 0-6°C. Chain of custody forms showing sample collection and laboratory arrival times are included (Appendix 1).

Dilution Water

Laboratory reconstituted water was used as both the dilution water source and the control for the tests. Reconstituted water for the *Ceriodaphnia dubia* test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, potassium chloride, and sodium selenate to deionized water. Reconstituted water for the fathead minnow test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, and potassium chloride to deionized water.

Test Organisms

The biomonitoring test used *Ceriodaphnia dubia,* cultured in the SeaCrest laboratory. The organisms are cultured in brood culture boards from which individual females are monitored for survival and reproduction for periods of up to two weeks. Neonates less than 24-hours old, released from third or subsequent broods of eight or more within an 8-hour period, are collected from the brood chambers and used in tests. The animals are fed daily with a mixture of Yeast, Cereal Leaves, and Trout Chow (YCT), produced in-house. This is supplemented with cultured green algae *(Selenastrum capricornutum)* provided by Aquatic Biosystems.

Less than one-day-old fathead minnow, cultured in the laboratory, were also used in the test. Adult fish are maintained in 10-gallon aquaria where females deposit their eggs on the under-surface of split PVC pipe sections. The eggs are collected daily and transferred to aerated containers where they hatch after three to four days. The larval fish are fed newly hatched brine shrimp *(Artemia* sp.) at least twice per day.

In-house organisms are tested monthly in a reference toxicant test using sodium chloride to monitor overall health and test reproducibility (Appendix 4).

Test Procedures

Upon receipt at the lab, samples were analyzed for alkalinity, ammonia, chlorine, conductivity, dissolved oxygen, hardness, and pH.

Methods used in chemical analysis

Alkalinity	EPA 310.2	Hach 8203	I-2030-85.2
Ammonia	SM4500-NH_3, C-E1997	ASTM D1426-08	
Chlorine	SM4500-Cl D	Hach 10026	
Conductivity	SM2510		
Dissolved Oxygen	SM4500-O	Electrode: G-2001	Winkler (QC): B-F-2001
Hardness	SM2340 B or C	Hach 8213	
pH	SM4500-H+ B-2000		

The test followed procedures in EPA[3] and CDPHE[4] guidelines. Exposure concentrations included control (0%), 23%, 45%, 89%, 95%, and 100% mixtures, diluted with moderately hard laboratory reconstituted water.

Individual *Ceriodaphnia dubia* were placed in 30ml plastic containers containing approximately 15ml of exposure medium. Ten replicates at each concentration were used. The animals were fed daily with the YCT mixture and an equal volume of the green algae *(Selenastrum capricornutum)*. The exposure medium was changed daily in each container and the number of young released overnight were counted and recorded. Young were removed from the containers daily and discarded. Routine measurements were made each day of temperature, dissolved oxygen, and pH before and after the water changes.

Fathead minnow were exposed in 500ml plastic cups to which 250ml of media was replaced daily. Four replicates were used at each concentration. Ten fish, less than 24-hours old, were placed in each cup. The fish were monitored daily for survival and fed live brine shrimp at least twice per day. After seven days, the fish were removed from the cups, euthanized with isopropyl alcohol, and then placed in aluminum pans and dried in an oven for a minimum of six hours at 100ºC. The pans were then weighed on a five-place analytical balance to determine the average dry weight of the fish from each replicate.

Data Analysis

Data from the tests were analyzed on a personal computer using the CETIS program (developed by Tidepool Scientific Software). Statistical tests used in the analyses are shown in Table 1. Test acceptability was determined using control survival and reproduction/growth criteria, concentration-response relationships, and percent minimum significant differences (USEPA [5,6]).

Table 1. Statistical methods used in testing for significant differences in test parameters.

Variance	Distribution
Bartlett Equality of Variance Test	Shapiro-Wilk W Normality Test

Statistical Difference				
Species	Survival	Growth	Reproduction	IC_{25}
Ceriodaphnia dubia	Fisher Exact/Bonferroni Holm Test	N/A	Steel Many-One Rank Sum Test	ICp
fathead minnow	Steel Many-One Rank Sum Test	Dunnett Multiple Comparison Test	N/A	ICp

RESULTS

Ceriodaphnia dubia Test Results

Test results for the *Ceriodaphnia dubia* are summarized in Table 2 and provided on the data sheets located in Appendix 2. Survival was 100% in the 100% effluent and ranged from 90% – 100% in the remaining effluent concentrations. Control survival was 80%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL (No Observed Effect Level) for lethality was 100% and the LC_{25} (Lethal Concentration 25) for lethality was >100%.

Average number of neonates was 31.3 in the 100% effluent concentration and ranged from 26.0 – 29.8 in the remaining effluent concentrations. The average number of neonates in the control was 21.9 for statistical analyses and test acceptability criteria. No statistically significant differences in the number of neonates were found between the control and any effluent concentration. The NOEL for reproduction was 100% and the IC_{25} (Inhibition Concentration 25) for reproduction was >100%.

Table 2. Summary of *Ceriodaphnia dubia* test results. An asterisk (*) denotes a statistically significant difference from the control.

					Significant Difference	
Concentration	**Percent Survival**	**Mean Neonates**	**Min.**	**Max.**	**Lethality**	**Reprod.**
Control (0%)	80	21.9	5	30		
23%	90	27.1	6	36		
45%	100	29.8	16	41		
89%	90	26.0	0	36		
95%	90	28.6	3	38		
100%	100	31.3	24	37		

Fathead Minnow Test Results

Fathead minnow results are summarized in Table 3 and are provided on data sheets in Appendix 3. Survival was 95% in the 100% effluent concentration and ranged from 90% - 98% in the remaining effluent concentrations. Control survival was 98%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL for lethality was 100% and the LC_{25} for lethality was >100%.

Average weight in the 100% effluent concentration was 0.353mg and ranged from 0.334mg - 0.362mg per individual in the remaining effluent concentrations. The average weight for the control fish was 0.345mg for statistical analyses and test acceptability criteria. No statistically significant differences for growth were measured in any effluent concentration when compared to the control. The NOEL for growth was 100% and the IC_{25} for growth was >100%.

Table 3. Summary of fathead minnow test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Average Weight (mg)	Min.	Max.	Significant Difference	
					Lethality	Growth
Control (0%)	98	0.345	0.306	0.374		
23%	98	0.362	0.339	0.400		
45%	98	0.358	0.294	0.387		
89%	98	0.360	0.341	0.370		
95%	90	0.334	0.274	0.377		
100%	95	0.353	0.344	0.368		

Test Acceptability

Acceptable control survival (80%) was achieved in both tests. Similarly, *Ceriodaphnia dubia* reproduction (average 15 neonates/organism) and fathead minnow growth (average 0.250mg/test container) in control organisms met required levels. PMSD was within the required limits for an acceptable test (Table 4).

Table 4. PMSD for chronic test parameters.

	fathead minnow growth		***C. dubia* reproduction**	
	Lower bound	Upper bound	Lower bound	Upper bound
PMSD	12	30	13	47
(% Minimum significant difference)	15.2		38.9	

DISCUSSION

A failed test for this discharge occurs when there is an NOEL or IC_{25} less than the IWC (Instream Waste Concentration) of 89%. The NOEL represents the highest effluent concentration at which no statistically significant effect is observed. The IC_{25} represents an estimate of the effluent concentration that would cause a 25 percent reduction of a non-quantal biological measurement. A violation for this discharge occurs when both the NOEL and the IC_{25} are less than the IWC. Since neither test species demonstrated statistically significant differences meeting these criteria, the discharge passes WET testing requirements for this sampling period.

REFERENCES

1. **Hach Chemical Company.** 2008. *Hach's Water Analysis Handbook*. Fifth Edition. Hach Chemical Company, Loveland, Colorado**.** Digital Medium.
2. **APHA/AWWA/WEF.** 1998. *Standard Methods for the Examination of Water and Wastewater*. 20th Edition. American Public Health Association, Washington, D.C.
3. **USEPA.** 2002. *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms.* EPA-821-R-02-013. 335 pp.
4. **CDPHE (Colorado Department of Public Health and Environment).** 1998. *Laboratory Guidelines for Conducting Whole Effluent Toxicity Tests.* Water Quality Control Division.
5. **USEPA.** 2000. *Method of Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 CFR Part 136). EPA/821/B-00/004.
6. **USEPA**. 2000. *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications under the National Pollutant Discharge Elimination System Program*. EPA/833/R-00/003.

Appendix 1 – Chain of Custody with Sample Receipt Forms

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: Thorin Resources
P. O./Project Number:
Contact: CJ Dickerson
Address: 1900 Main St Unit 1, Dwray, CO 81427
Phone # (602) 793-1321 E-Mail: cjdickerson@thinresources.com
Fax # Sampler: CJ Dickerson
Report By: ☐ Mail ☒ PDF ☐ FAX

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (Lab Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)				Number of Containers	Total Volume
DF002A	6/24	10:30am	Grab	S24290B #1		X															3	3gal

Turnaround Requirements (Analytical Testing Only)
Standard (10 days) ____ 6-9 Day
3-5 Day ____ 1-2 Day
Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments: Pimephales Promelas

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
	6/24 3:30p	UPS		UPS		Haley Hut	062524 0845

MK

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2024

Project # 524 290.B Sample #: 1
Date: 062524 Initials: HW

Samples Were:

1. FedEx (UPS) Courier Hand Delivery (circle one)
   Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — (Y) N NA
   Notes:

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: clear, minimal PM
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
290#1	5.7°C	8.5	7.9	2916

Custody Seals:

1. Present on Outer Package — Y (N)
2. Unbroken on Outer Package — Y N (NA)
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — (Y) N

MK

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: Thorin Resources
P. O./Project Number:
Contact: CJ Dickerson
Address: 1900 Main St. Unit 1, Olney, Co 81427
Phone # (970) 316-2294 E-Mail: cjdickerson@thorinresources.com
Fax # Sampler: CJ Dickerson
Report By: ☐ Mail ☒ PDF ☐ FAX

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Analysis (Check all applicable)											Number of Containers	Total Volume
										Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)					
OFUOZA	6/26	1:40	grab	524290.B#2		X															23	

Turnaround Requirements (Analytical Testing Only)
Standard (10 days) ____ 6-9 Day
3-5 Day ____ 1-2 Day
Requested Report Date:

Test Species: ☒ Fathead Minnow ☑ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
	6/26/3:45	UPS		UPS			062724 0854

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2024

Project # 524290.B Sample #: 2
Date: 062724 Initials: MK

Samples Were:

1. FedEx (UPS) Courier Hand Delivery (circle one)
   Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — (Y) N NA
   Notes:

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: light pm
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
524290.B#2	5.9	7.8	8.1	273

Custody Seals:

1. Present on Outer Package — Y (N)
2. Unbroken on Outer Package — Y N (NA)
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — (Y) N

CM

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: Thorin Resources
P. O./Project Number:
Contact: CJ Dickerson
Address: 1900 Main St Unit 1
Phone # (970) 316-2294 E-Mail: cjdickerson@thorinresources.com
Fax # Sampler: CJ Dickerson
Report By: ☐ Mail ☑ PDF ☐ FAX

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)			Number of Containers	Total Volume
OF002A	06/27	12:00pm	grab	524290.B3		X														3	3991

Turnaround Requirements (Analytical Testing Only)
Standard (10 days) ____ 6-9 Day
3-5 Day ____ 1-2 Day
Requested Report Date:

Test Species: ☑ Fathead Minnow ☑ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
	3:50p 6/27	UPS		UPS		D. Thornton	062824 0845

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2024

Project # 524290.B Sample #: 3
Date: 062824 Initials: KM

Samples Were:

1. FedEx (UPS) Courier Hand Delivery (circle one)
   Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — (Y) N NA
   Notes:

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: very low p.m., clear
   Receiving: n/a
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
524290.B3	3.1	7.3	7.9	259

Custody Seals:

1. Present on Outer Package — Y (N)
2. Unbroken on Outer Package — Y N (NA)
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — (Y) N

CM

Appendix 2 – Data Sheets for the *Ceriodaphnia dubia* Test

WET TEST REPORT FORM – CHRONIC

Permittee: Thorin Resources
Permit No.: CO-0000003

Outfall: 002A – IWC: 89%

Test Type: Routine ☒ Accelerated ☐ Screen ☐

Test Species: *Ceriodaphnia dubia*

Test Start Time	Test Start Date	Test End Time	Test End Date
1530	06-25-2024	1500	07-01-2024

Test Results	Lethality/TCP3B	Reproduction/TKP3B
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	23%	45%	89%	95%	100%
Exposed organisms	10	10	10	10	10	10
Survival for day 1	10	10	10	10	10	10
Survival for day 2	10	10	10	10	10	10
Survival for day 3	10	10	10	9	10	10
Survival for day 4	10	10	10	9	9	10
Survival for day 5	8	9	10	9	9	10
Survival for day 6	8	9	10	9	9	10
Mean 3 Brood Total	21.9	27.1	29.8	26.0	28.6	31.3

Hardness (mg/L) – Receiving Water: N/A Effluent: 97/99/130 Recon Water: 80
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 70/53/55 Recon Water: 57
Chlorine (mg/L) – Effluent: <0.01 pH (initial/final) – Control: 8.0/7.9 100%: 8.0/7.7
Total Ammonia as NH_3 (mg/L) - Effluent: <0.03

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Haley West, Lisa Sibrell, Mia Kohler, and Katie Maranowski

Signature *Date* July 5, 2024

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: March 2023

Permittee: Thorin Resources **Lab #:** 524290.B **Site:** 002A
IWC %: 89 **Template #:** 5 **Dilution Water:** MH24-013 **Sample Date:** 062425
Age & Source: 062524 2171 **Test Start:** 062524 1530 **Test End:** 070124 1500
Test Conditions:

	0	1	2	3	4	5	6	7	Total
(C)	0	0	0	4	0	6	13		23
	0	0	0	0	5	9	11		25
	0	0	0	3	7	0 D			ø 10 D
	0	0	0	5	0	0 D			ø 5 D
0	0	0	0	3	3	0	15		21
	0	0	0	3	0	10	15		28
	0	0	0	4	0	8	12		24
	0	0	0	4	0	10	16		30
	0	0	0	5	0	10	12		27
	0	0	0	5	0	8	15		28
DO	6.8	6.8 | 6.8	6.9 | 6.8	7.0 | 6.8	7.1 | 6.8	6.9 | 6.8	6.9		
Temp	25.8	25.4 | 25.9	25.3 | 25.9	25.5 | 24.9	25.5 | 24.3	25.4 | 25.9	25.2		21.9
pH	8.0	7.9 | 7.8	7.7 | 7.8	7.9 | 8.0	7.9 | 8.0	7.8 | 7.9	7.9		
Cond	324	307	313	305	288	296			
(1)	0	0	0	3	0	9	15		27
	0	0	0	5	0	2	17		24
	0	0	0	4	0	1	18		32
	0	0	0	5	0	0	15		30
23	0	0	0	4	5	0	16		25
	0	0	0	6	0	10	13		29
	0	0	0	5	0	10	18		33
	0	0	0	4	0	15	17		36
	0	0	0	5	0	9	15		29
	0	0	0	6	0	0 D			ø 6 D
DO	6.8	6.8 | 6.8	6.9 | 7.0	7.0 | 6.9	7.1 | 6.8	6.9 | 6.8	6.9		
Temp	25.8	25.4 | 25.9	25.3 | 25.9	25.5 | 25.0	25.5 | 24.6	25.4 | 25.9	25.2		27.1
pH	8.0	7.9 | 7.9	7.7 | 7.8	7.9 | 7.9	7.9 | 8.0	7.8 | 7.9	7.9		
Cond	311	296	296	296	277	280			
(2)	0	0	0	3	10	0	15		28
	0	0	0	4	11	0	11		26
	0	0	0	3	7	0	16		26
	0	0	0	5	9	0	16		30
	0	0	0	6	11	2	20		39
45	0	0	0	3	0	13	17		33
	0	0	0	3	5	0	8		16
	0	0	0	5+1	6	15	20		47
	0	0	0	5	0	12	12		29
	0	0	0	4	0	11	18		33
DO	6.8	6.8 | 6.8	6.9 | 7.2	6.9 | 7.0	7.1 | 7.0	6.8 | 6.9	6.9		
Temp	25.8	25.4 | 25.9	25.3 | 25.9	25.5 | 25.2	25.5 | 24.9	25.4 | 25.9	25.2		29.8
pH	8.0	7.9 | 7.9	7.7 | 7.9	7.9 | 7.9	7.9 | 8.0	7.8 | 7.9	7.8		
Cond	299	285	285	287	269	275			
(3)	0	0	0	0	3	9	18		30
	0	0	0	3	9	0	16		28
	0	0	0	5	8	1	19		28
	0	0	0	4	11	0	18		33
89	0	0	0	3	9	0	12		24
	0	0	0	3	0	8	9		20
	0	0	0	6	3	0	16		25
	0	0	0	4	8	13	18		35
	0	0	0	4	0	14			34
	0	0	0	0 D					0 D
DO	6.7	6.7 | 6.8	6.8 | 7.5	6.9 | 7.1	7.2 | 7.2	6.8 | 7.0	6.8		
Temp	25.8	25.4 | 25.9	25.3 | 25.9	25.4 | 25.4	25.6 | 25.3	25.4 | 25.9	25.2		26.0
pH	8.0	7.9 | 7.9	7.7 | 7.9	7.8 | 7.9	7.9 | 8.0	7.8 | 7.9	7.8		
Cond	274	258	263	266	250	254			

CM

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: March 2023

	0	1	2	3	4	5	6	7	Total
(4)	0	0	0	3	6	0	19		28
	0	0	0	4	8	0	20		32
	0	0	0	4	6	0	16		26
	0	0	0	5	4	0	18		34
	0	0	0	7	4	0	20		36
95	0	0	0	6	8	13	17		36
	0	0	0	3	8	0	15		26
	0	0	0	6	8	13	19		38
	0	0	0	3	0 D				83 D
	0	0	0	3	0	12	14		29
DO	6.7	6.7 / 6.8	6.8 / 7.8	10.8 / 7.2	7.2 / 7.4	6.7 / 7.1	6.8		28.0
Temp	25.8	25.9 / 25.9	25.3 / 25.9	25.4 / 25.1	25.1 / 25.1	25.4 / 25.9	25.2		
pH	8.0	7.9 / 7.8	7.7 / 7.9	7.8 / 7.9	7.9 / 8.0	7.8 / 7.9	7.7		
Cond	271	257	261	263	249	251			
(5)	0	0	0	5	3	0	16		24
	0	0	0	4	3	0	20		27
	0	0	0	3	0	10	15		28
	0	0	0	5	9	0	19		31
	0	0	0	6	8	2	19		35
100	0	0	0	5	8	14	13		32
	0	0	0	4	8	1	16		29
	0	0	0	3	8	7	16		34
	0	0	0	5	8	13	17		35
	0	0	0	3	8	15	18		36
DO	6.7	6.7 / 6.8	6.8 / 8.1	6.8 / 7.3	7.2 / 7.6	6.7 / 7.2	6.8		31.3
Temp	25.8	25.9 / 25.9	25.3 / 25.9	25.4 / 25.7	25.7 / 25.9	25.4 / 25.9	25.2		
pH	8.0	7.9 / 7.9	7.7 / 8.0	7.8 / 7.9	7.9 / 8.0	7.8 / 7.9	7.7		
Cond	267	253	259	259	246	249			
Algae	ABS	ABS	ABS	ABS	ABS	ABS			
YCT	2405	2405	2405	2405	2405	2405			
H_2O	1	1	2	3	3	3			
Initials	MK	LS	LS	KM	KM	LS	HW		

	Eff #1	Eff #2	Eff #3	Recon
Hardness	97	99	130	80
Alkalinity	70	53	55	57
Chlorine	<0.01	<0.01	<0.01	<0.01
Ammonia	<0.03	<0.03	<0.03	<0.03

Exposure Chamber:
Total Capacity: 30mL
Total Solution Volume: 15mL

Feeding Schedule:
Fed daily
Food used: YCT, Algae

Units:
DO: mg/L
Temp: °C
pH: N/A
Cond: µS/cm³
Hardness: mg/L
Alkalinity: mg/L
Chlorine: mg/L
Ammonia: mg/L

Comments:

x:y:z = board #:row:column

1	2	3	4	5	6	7	8	9	10
A1	A4	A5	A6	A9	B1	B2	B6	B7	C8

CM

CETIS Analytical Report

Report Date: 01 Jul-24 15:27 (p 1 of 1)
Test Code/ID: 524290cd / 08-1622-9617

Ceriodaphnia 7-d Survival and Reproduction Test **SeaCrest Group**

Analysis ID:	14-5804-7006	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	01 Jul-24 15:26	**Analysis:**	STP 2xK Contingency Tables	**Status Level:**	1
Batch ID:	16-5295-8672	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	25 Jun-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	01 Jul-24	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	14-5781-3114	**Code:**	524290.B	**Project:**	WET Quarterly Compliance Test (2Q)
Sample Date:	25 Jun-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	25 Jun-24	**CAS (PC):**		**Station:**	002A
Sample Age:	n/a	**Client:**	Thorin Resources		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU
Untransformed	C > T	100	>100	n/a	1

Fisher Exact/Bonferroni-Holm Test

Control vs	Group	Test Stat	P-Type	P-Value	Decision(α:5%)
Dilution Water	23	0.8947	Exact	1.0000	Non-Significant Effect
	45	1.0000	Exact	1.0000	Non-Significant Effect
	89	0.8947	Exact	1.0000	Non-Significant Effect
	95	0.8947	Exact	1.0000	Non-Significant Effect
	100	1.0000	Exact	1.0000	Non-Significant Effect

Data Summary

Conc-%	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
0	D	8	2	10	0.8	0.2	0.0%
23		9	1	10	0.9	0.1	-12.5%
45		10	0	10	1	0	-25.0%
89		9	1	10	0.9	0.1	-12.5%
95		9	1	10	0.9	0.1	-12.5%
100		10	0	10	1	0	-25.0%

003-715-114-2 CETIS™ v1.9.6.14 Analyst: CM QA: HW

CETIS Analytical Report

Report Date: 01 Jul-24 15:27 (p 1 of 2)
Test Code/ID: 524290cd / 08-1622-9617

Ceriodaphnia 7-d Survival and Reproduction Test **SeaCrest Group**

Analysis ID:	11-2294-3323	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	01 Jul-24 15:26	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	16-5295-8672	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	25 Jun-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	01 Jul-24	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	14-5781-3114	**Code:**	524290.B	**Project:**	WET Quarterly Compliance Test (2Q)
Sample Date:	25 Jun-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	25 Jun-24	**CAS (PC):**		**Station:**	002A
Sample Age:	n/a	**Client:**	Thorin Resources		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	2089930	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
LC5	>100	n/a	n/a	<1	n/a	n/a
LC10	>100	n/a	n/a	<1	n/a	n/a
LC15	>100	n/a	n/a	<1	n/a	n/a
LC20	>100	n/a	n/a	<1	n/a	n/a
LC25	>100	n/a	n/a	<1	n/a	n/a
LC40	>100	n/a	n/a	<1	n/a	n/a
LC50	>100	n/a	n/a	<1	n/a	n/a

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	D	10	0.8000	0.0000	1.0000	0.4216	52.70%	0.0%	8/10	0.9167	0.0%
23		10	0.9000	0.0000	1.0000	0.3162	35.14%	-12.5%	9/10	0.9167	0.0%
45		10	1.0000	1.0000	1.0000	0.0000	0.00%	-25.0%	10/10	0.9167	0.0%
89		10	0.9000	0.0000	1.0000	0.3162	35.14%	-12.5%	9/10	0.9167	0.0%
95		10	0.9000	0.0000	1.0000	0.3162	35.14%	-12.5%	9/10	0.9167	0.0%
100		10	1.0000	1.0000	1.0000	0.0000	0.00%	-25.0%	10/10	0.9167	0.0%

003-715-114-2 CETIS™ v1.9.6.14 Analyst: CM QA: HW

CETIS Analytical Report

Report Date: 01 Jul-24 15:27 (p 1 of 1)
Test Code/ID: 524290cd / 08-1622-9617

Ceriodaphnia 7-d Survival and Reproduction Test **SeaCrest Group**

Analysis ID:	11-4723-4479	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.9.6
Analyzed:	01 Jul-24 15:26	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Batch ID:	16-5295-8672	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	25 Jun-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	01 Jul-24	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	14-5781-3114	**Code:**	524290.B	**Project:**	WET Quarterly Compliance Test (2Q)
Sample Date:	25 Jun-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	25 Jun-24	**CAS (PC):**		**Station:**	002A
Sample Age:	n/a	**Client:**	Thorin Resources		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	100	>100	n/a	1	38.91%

Steel Many-One Rank Sum Test

Control	vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water		23	131.5	75	3	18	CDF	0.9996	Non-Significant Effect
		45	134	75	1	18	CDF	0.9999	Non-Significant Effect
		89	124.5	75	4	18	CDF	0.9970	Non-Significant Effect
		95	133.5	75	2	18	CDF	0.9998	Non-Significant Effect
		100	143.5	75	2	18	CDF	1.0000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	546.95	109.39	5	1.579	0.1818	Non-Significant Effect
Error	3741.9	69.2944	54			
Total	4288.85		59			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	6.61	15.09	0.2513	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.8637	0.9459	7.9E-06	Non-Normal Distribution

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	21.9	16.05	27.75	23.5	5	30	2.584	37.31%	0.00%
23		10	27.1	21.2	33	29	6	36	2.61	30.45%	-23.74%
45		10	29.8	24.65	34.95	28.5	16	41	2.274	24.14%	-36.07%
89		10	26	18.61	33.39	28	0	36	3.266	39.72%	-18.72%
95		10	28.6	21.36	35.84	30.5	3	38	3.201	35.40%	-30.59%
100		10	31.3	28.1	34.5	31.5	24	37	1.415	14.29%	-42.92%

003-715-114-2 CETIS™ v1.9.6.14 Analyst: CM QA: HW

CETIS Analytical Report

Report Date: 01 Jul-24 15:27 (p 2 of 2)
Test Code/ID: 524290cd / 08-1622-9617

Ceriodaphnia 7-d Survival and Reproduction Test **SeaCrest Group**

Analysis ID:	10-0270-2315	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.9.6
Analyzed:	01 Jul-24 15:27	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	16-5295-8672	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	25 Jun-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	01 Jul-24	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	14-5781-3114	**Code:**	524290.B	**Project:**	WET Quarterly Compliance Test (2Q)
Sample Date:	25 Jun-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	25 Jun-24	**CAS (PC):**		**Station:**	002A
Sample Age:	n/a	**Client:**	Thorin Resources		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	982871	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	n/a	n/a	<1	n/a	n/a
IC10	>100	n/a	n/a	<1	n/a	n/a
IC15	>100	n/a	n/a	<1	n/a	n/a
IC20	>100	n/a	n/a	<1	n/a	n/a
IC25	>100	n/a	n/a	<1	n/a	n/a
IC40	>100	n/a	n/a	<1	n/a	n/a
IC50	>100	n/a	n/a	<1	n/a	n/a

Reproduction Summary

			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	D	10	21.9	5	30	8.171	37.31%	0.0%	27.45	0.0%
23		10	27.1	6	36	8.252	30.45%	-23.74%	27.45	0.0%
45		10	29.8	16	41	7.193	24.14%	-36.07%	27.45	0.0%
89		10	26	0	36	10.33	39.72%	-18.72%	27.45	0.0%
95		10	28.6	3	38	10.12	35.40%	-30.59%	27.45	0.0%
100		10	31.3	24	37	4.473	14.29%	-42.92%	27.45	0.0%

003-715-114-2 CETIS™ v1.9.6.14 Analyst: UM QA: HW

Appendix 3 – Data Sheets for the Fathead Minnow Test

WET TEST REPORT FORM – CHRONIC

Permittee: Thorin Resources
Permit No.: CO-0000003
Outfall: 002A – IWC: 89%
Test Type: Routine ☒ Accelerated ☐ Screen ☐
Test Species: fathead minnow

Test Start Time	Test Start Date	Test End Time	Test End Date
1145	06-25-2024	1200	07-02-2024

Test Results	Lethality/TCP6C	Growth/TKP6C
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	23%	45%	89%	95%	100%
Exposed organisms	40	40	40	40	40	40
Survival for day 1	40	40	40	40	40	39
Survival for day 2	40	40	40	40	40	39
Survival for day 3	40	40	40	40	40	38
Survival for day 4	40	40	40	40	40	38
Survival for day 5	40	40	39	40	38	38
Survival for day 6	39	40	39	40	37	38
Survival for day 7	39	39	39	39	36	38
Mean Dry Wt. (mg)	0.345	0.362	0.358	0.360	0.334	0.353

Hardness (mg/L) – Receiving Water: N/A Effluent: 97/99/130 Recon Water: 87
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 70/53/55 Recon Water: 60
Chlorine (mg/L) – Effluent: <0.01 pH (initial/final) – Control: 7.9/7.7 100%: 7.9/7.6
Total Ammonia as NH_3 (mg/L) - Effluent: <0.03

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Mia Kohler and Aurora Nelson

Signature  *Date* July 5, 2024

SeaCrest Group
Louisville, CO

Fathead Minnow Chronic Benchsheet

Form #: 103a
Effective: March 2022

Client: Thorin Resources Site: 002A Lab #: 524290.B Sample Date: 062424 IWC: 89 Dilution H_2O: MH24-029
Test Start: 062524 1145 Test End: 070224 1200 Species Info: 062524 1A Template: FHM Test Conditions:

Conc	Read	0	1		2		3		4		5		6		7
0	DO	7.1	5.7	7.1	4.3	6.9	6.7	6.9	5.6	7.1	5.0	7.0	5.2	6.9	4.9
	Temp	25.0	25.8	24.6	24.1	24.7	25.9	24.9	25.9	24.3	25.9	25.0	24.7	24.2	24.9
	pH	7.9	7.8	8.0	7.4	8.1	7.8	8.1	7.7	8.0	7.7	8.1	7.7	8.1	7.7
	Cond	340	343		352		351		349		313		317		
23	DO	7.3	5.7	7.1	4.3	7.1	6.6	7.1	5.6	7.2	4.9	7.1	5.1	6.9	4.9
	Temp	25.0	25.7	24.6	24.1	24.9	25.8	25.1	25.3	24.5	25.8	25.0	24.8	24.4	24.9
	pH	7.9	7.8	8.0	7.4	8.1	7.8	8.1	7.7	8.0	7.7	8.1	7.7	8.1	7.7
	Cond	325	328		336		338		335		305		309		
45	DO	7.6	5.7	7.2	4.2	7.3	6.4	7.2	5.6	7.3	4.9	7.3	5.0	7.0	4.9
	Temp	25.1	25.6	24.7	24.2	25.1	25.8	25.3	25.6	24.7	25.6	24.9	24.9	24.6	25.0
	pH	7.9	7.7	8.0	7.4	8.1	7.8	8.1	7.7	8.0	7.7	8.1	7.7	8.1	7.7
	Cond	308	313		318		320		316		297		298		
89	DO	8.3	5.8	7.3	4.2	7.6	6.3	7.4	5.2	7.4	4.8	7.4	4.9	7.1	4.8
	Temp	25.2	25.4	24.7	24.4	25.5	25.7	25.5	25.4	25.0	25.5	24.9	25.0	25.1	25.1
	pH	7.9	7.7	8.0	7.3	8.1	7.7	8.1	7.6	7.9	7.6	8.1	7.6	8.1	7.6
	Cond	279	285		286		284		282		270		279		
95	DO	8.4	5.8	7.4	4.1	7.7	6.1	7.5	5.7	7.5	4.8	7.6	4.8	7.2	4.8
	Temp	25.3	25.3	24.8	24.5	25.6	25.7	25.7	25.5	25.2	25.3	24.8	25.1	25.3	25.2
	pH	7.9	7.6	8.0	7.3	8.1	7.7	8.1	7.6	7.9	7.6	8.1	7.6	8.0	7.6
	Cond	275	280		279		280		278		278		276		
100	DO	8.5	5.8	7.4	4.1	7.8	6.0	7.7	5.2	7.6	4.7	7.7	4.8	7.2	4.8
	Temp	25.3	25.2	24.8	24.5	25.7	25.6	25.9	25.1	25.4	25.2	24.8	25.2	25.5	25.2
	pH	7.9	7.6	7.9	7.3	8.1	7.7	8.1	7.6	7.9	7.6	8.1	7.6	8.0	7.6
	Cond	2960	274		273		274		273		275		274		
	DO														
	Temp														
	pH														
	Cond														
Initials		MK	MK		MK		AN		AN		AN		MK		MK
Water #		1	1		2		2		3		3		3		

	0	1	2	3	4	5	6	7
Feeding								
AM		✓	✓	✓	✓	✓	✓	✓
Initials		MK	MK	AN	AN	AN	MK	MK
PM	✓	✓	✓	✓	✓	✓	✓	
Initials	MK	MK	MK	AN	AN	AN	MK	

Feeding Schedule
Fed: 2x per day
Food Used: <24hr artemia

	0	1	2	3	4	5	6	7	#	Fish & Tare	Tare	Fish Wt mg	Ave wt
	10	10	10	10	10	10	9	9	#1	1.08801	1.08495	0.306	0.345
	10	10	10	10	10	10	10	10	#2	1.09134	1.08760	0.374	
	10	10	10	10	10	10	10	10	#3	1.08823	1.08464	0.359	
	10	10	10	10	10	10	10	10	#4	1.09561	1.09220	0.341	
	10	10	10	10	10	10	10	10	#5	1.08708	1.08338	0.370	0.362
	10	10	10	10	10	10	10	9	#6	1.08388	1.08049	0.339	
	10	10	10	10	10	10	10	10	#7	1.09637	1.09237	0.400	
	10	10	10	10	10	10	10	10	#8	1.09434	1.09094	0.340	
	10	10	10	10	10	10	10	10	#9	1.10181	1.09794	0.387	0.358
	10	10	10	10	10	10	10	10	#10	1.09948	1.09576	0.372	
	10	10	10	10	10	9	9	9	#11	1.08895	1.08601	0.294	
	10	10	10	10	10	10	10	10	#12	1.08890	1.08512	0.378	
	10	10	10	10	10	10	10	10	#13	1.09877	1.09536	0.341	0.340
	10	10	10	10	10	10	10	10	#14	1.09417	1.09055	0.362	
	10	10	10	10	10	10	10	10	#15	1.07817	1.07450	0.367	
	10	10	10	10	10	10	10	9	#16	1.10220	1.09850	0.370	
	10	10	10	10	10	10	10	10	#17	1.11328	1.10951	0.377	0.334
	10	10	10	10	9	8	7	#18		1.07582	1.07308	0.274	
	10	10	10	10	9	9	9	#19		1.09128	1.08788	0.340	
	10	10	10	10	10	10	10	10	#20	1.10333	1.09989	0.344	
	10	10	10	10	10	10	10	10	#21	1.09694	1.09326	0.368	0.353
	10	10	10	10	10	10	10	10	#22	1.09684	1.09340	0.344	
	10	9	9	8	8	8	8	8	#23	1.09250	1.08893	0.357	
	10	10	10	10	10	10	10	10	#24	1.08484	1.08140	0.344	
	10								#				
	10								#				
	10								#				
	10								#				
									pretest #	1.09087	1.09088		

	Eff 1	Eff 2	Eff 3	Recon	Rcv 1	Rcv 2	Rcv 3	MR
Hard	97	99	130	87				
Alk	70	53	55	60				
Chlor	<0.01	<0.01	<0.01	<0.01				
NH_3	<0.03	<0.03	<0.03	<0.03				

Exposure Chamber

Total Capacity:	500 mL
Test Solution Volume:	250 mL
Test Solution Surface Area:	50.2 cm
Water Depth (constant):	6.5 cm

Units:
DO: mg/L Hard: mg/L
Temp: °C Alk: mg/L
pH: N/A Chlor: mg/L
Cond: µS/cm³ NH_3: mg/L

Comments:

CETIS Analytical Report

Report Date: 03 Jul-24 11:38 (p 1 of 3)
Test Code/ID: 524290fhm / 15-3983-8022

Fathead Minnow 7-d Larval Survival and Growth Test **SeaCrest Group**

Analysis ID:	14-9394-2097	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	03 Jul-24 11:38	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Batch ID:	15-7293-8396	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	25 Jun-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	02 Jul-24	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	05-8158-2230	**Code:**	524290.B	**Project:**	WET Quarterly Compliance Test (2Q)
Sample Date:	24 Jun-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	25 Jun-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	C > T	100	>100	n/a	1	13.52%

Steel Many-One Rank Sum Test

Control	vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water		23	18	10	2	6	CDF	0.8333	Non-Significant Effect
		45	18	10	2	6	CDF	0.8333	Non-Significant Effect
		89	18	10	2	6	CDF	0.8333	Non-Significant Effect
		95	15.5	10	2	6	CDF	0.5438	Non-Significant Effect
		100	17.5	10	1	6	CDF	0.7867	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0361188	0.0072238	5	0.4854	0.7827	Non-Significant Effect
Error	0.267854	0.0148808	18			
Total	0.303973		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	4.797	15.09	0.4411	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.8121	0.884	4.7E-04	Non-Normal Distribution

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	0.00%
23		4	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	0.00%
45		4	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	0.00%
89		4	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	0.00%
95		4	0.9000	0.6750	1.0000	0.9500	0.7000	1.0000	0.0707	15.71%	7.69%
100		4	0.9500	0.7909	1.0000	1.0000	0.8000	1.0000	0.0500	10.53%	2.56%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.371	1.242	1.501	1.412	1.249	1.412	0.04074	5.94%	0.00%
23		4	1.371	1.242	1.501	1.412	1.249	1.412	0.04074	5.94%	0.00%
45		4	1.371	1.242	1.501	1.412	1.249	1.412	0.04074	5.94%	0.00%
89		4	1.371	1.242	1.501	1.412	1.249	1.412	0.04074	5.94%	0.00%
95		4	1.266	0.9499	1.582	1.331	0.9912	1.412	0.09936	15.70%	7.67%
100		4	1.336	1.093	1.578	1.412	1.107	1.412	0.07622	11.41%	2.59%

003-715-114-2 CETIS™ v1.9.6.14 Analyst: CM QA: HW

CETIS Analytical Report

Report Date: 03 Jul-24 11:38 (p 1 of 2)
Test Code/ID: 524290fhm / 15-3983-8022

Fathead Minnow 7-d Larval Survival and Growth Test **SeaCrest Group**

Analysis ID:	17-8364-9329	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	03 Jul-24 11:38	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	15-7293-8396	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	25 Jun-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	02 Jul-24	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	05-8158-2230	**Code:**	524290.B	**Project:**	WET Quarterly Compliance Test (2Q)
Sample Date:	24 Jun-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	25 Jun-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	2104037	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
LC5	94.85	81.97	n/a	1.054	n/a	1.22
LC10	>100	n/a	n/a	<1	n/a	n/a
LC15	>100	n/a	n/a	<1	n/a	n/a
LC20	>100	n/a	n/a	<1	n/a	n/a
LC25	>100	n/a	n/a	<1	n/a	n/a
LC40	>100	n/a	n/a	<1	n/a	n/a
LC50	>100	n/a	n/a	<1	n/a	n/a

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	D	4	0.9750	0.9000	1.0000	0.0500	5.13%	0.0%	39/40	0.975	0.0%
23		4	0.9750	0.9000	1.0000	0.0500	5.13%	0.0%	39/40	0.975	0.0%
45		4	0.9750	0.9000	1.0000	0.0500	5.13%	0.0%	39/40	0.975	0.0%
89		4	0.9750	0.9000	1.0000	0.0500	5.13%	0.0%	39/40	0.975	0.0%
95		4	0.9000	0.7000	1.0000	0.1414	15.71%	7.69%	36/40	0.925	5.13%
100		4	0.9500	0.8000	1.0000	0.1000	10.53%	2.56%	38/40	0.925	5.13%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.9000	1.0000	1.0000	1.0000
23		1.0000	0.9000	1.0000	1.0000
45		1.0000	1.0000	0.9000	1.0000
89		1.0000	1.0000	1.0000	0.9000
95		1.0000	0.7000	0.9000	1.0000
100		1.0000	1.0000	0.8000	1.0000

003-715-114-2 CETIS™ v1.9.6.14 Analyst: CM QA: HW

CETIS Analytical Report

Report Date: 03 Jul-24 11:38 (p 3 of 3)
Test Code/ID: 524290fhm / 15-3983-8022

Fathead Minnow 7-d Larval Survival and Growth Test **SeaCrest Group**

Analysis ID:	11-9080-2991	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.6
Analyzed:	03 Jul-24 11:37	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Batch ID:	15-7293-8396	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	25 Jun-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	02 Jul-24	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	05-8158-2230	**Code:**	524290.B	**Project:**	WET Quarterly Compliance Test (2Q)
Sample Date:	24 Jun-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	25 Jun-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	100	>100	n/a	1	15.22%

Dunnett Multiple Comparison Test

Control vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water	23	-0.7907	2.407	0.053	6	CDF	0.9701	Non-Significant Effect
	45	-0.5845	2.407	0.053	6	CDF	0.9504	Non-Significant Effect
	89	-0.6876	2.407	0.053	6	CDF	0.9613	Non-Significant Effect
	95	0.5158	2.407	0.053	6	CDF	0.6406	Non-Significant Effect
	100	-0.3779	2.407	0.053	6	CDF	0.9208	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0023431	0.0004686	5	0.4924	0.7777	Non-Significant Effect
Error	0.0171296	0.0009516	18			
Total	0.0194726		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	6.822	15.09	0.2342	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9369	0.884	0.1393	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.345	0.2984	0.3916	0.35	0.306	0.374	0.01464	8.49%	0.00%
23		4	0.3622	0.3161	0.4084	0.355	0.339	0.4	0.01449	8.00%	-5.00%
45		4	0.3578	0.2894	0.4261	0.375	0.294	0.387	0.02148	12.01%	-3.70%
89		4	0.36	0.3392	0.3808	0.3645	0.341	0.37	0.006544	3.64%	-4.35%
95		4	0.3337	0.2651	0.4024	0.342	0.274	0.377	0.02157	12.93%	3.26%
100		4	0.3532	0.3348	0.3717	0.3505	0.344	0.368	0.005793	3.28%	-2.39%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.306	0.374	0.359	0.341
23		0.37	0.339	0.4	0.34
45		0.387	0.372	0.294	0.378
89		0.341	0.362	0.367	0.37
95		0.377	0.274	0.34	0.344
100		0.368	0.344	0.357	0.344

003-715-114-2 CETIS™ v1.9.6.14 Analyst: QA:

CETIS Analytical Report

Report Date: 03 Jul-24 11:38 (p 2 of 2)
Test Code/ID: 524290fhm / 15-3983-8022

Fathead Minnow 7-d Larval Survival and Growth Test **SeaCrest Group**

Analysis ID:	11-6796-5740	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.6
Analyzed:	03 Jul-24 11:38	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	15-7293-8396	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	25 Jun-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	02 Jul-24	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	05-8158-2230	**Code:**	524290.B	**Project:**	WET Quarterly Compliance Test (2Q)
Sample Date:	24 Jun-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	25 Jun-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	18023	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	n/a	n/a	<1	n/a	n/a
IC10	>100	n/a	n/a	<1	n/a	n/a
IC15	>100	n/a	n/a	<1	n/a	n/a
IC20	>100	n/a	n/a	<1	n/a	n/a
IC25	>100	n/a	n/a	<1	n/a	n/a
IC40	>100	n/a	n/a	<1	n/a	n/a
IC50	>100	n/a	n/a	<1	n/a	n/a

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	D	4	0.345	0.306	0.374	0.02929	8.49%	0.0%	0.3563	0.0%
23		4	0.3622	0.339	0.4	0.02899	8.00%	-5.0%	0.3563	0.0%
45		4	0.3578	0.294	0.387	0.04295	12.01%	-3.7%	0.3563	0.0%
89		4	0.36	0.341	0.37	0.01309	3.64%	-4.35%	0.3563	0.0%
95		4	0.3337	0.274	0.377	0.04315	12.93%	3.26%	0.3435	3.58%
100		4	0.3532	0.344	0.368	0.01159	3.28%	-2.39%	0.3435	3.58%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.306	0.374	0.359	0.341
23		0.37	0.339	0.4	0.34
45		0.387	0.372	0.294	0.378
89		0.341	0.362	0.367	0.37
95		0.377	0.274	0.34	0.344
100		0.368	0.344	0.357	0.344

003-715-114-2 CETIS™ v1.9.6.14 Analyst: CM QA: HW

Appendix 4 – QA/QC and Reference Toxicant Test Chart

Quality Assurance Check List – Chronic Whole Effluent Toxicity Test

Client:	Thorin Resources
SeaCrest Sample No:	524290.B
Species Tested:	*Ceriodaphnia dubia* and fathead minnow

Sample Dates	**Start Date of Test (*Ceriodaphnia dubia)***	**Start Date of Test (fathead minnow)**
06-24-2024		
06-26-2024		
06-27-2024	06-25-2024	06-25-2024

Sample received in lab properly preserved (0-6°C)?	**Y**
Sample received at laboratory within 36 hours of collection?	**Y**
Sample delivered on ice or equivalent?	**Y**
Test initiated within 36-hours of collection?	**Y**
Test protocol conforms to CDPHE guidelines (*Ceriodaphnia dubia)*?	**Y**
Test protocol conforms to CDPHE guidelines (fathead minnow)?	**Y**
Average test temp. ±1°C (*Ceriodaphnia dubia*)?	**Y**
Average test temp. ±1°C (fathead minnow)?	**Y**
DO level ≥4.0mg/L; no super-saturation (*Ceriodaphnia dubia*)?	**Y**
DO level ≥4.0mg/L; no super-saturation (fathead minnow)?	**Y**
Survival in control ≥80% (*Ceriodaphnia dubia*)?	**Y**
Survival in control ≥80% (fathead minnow)?	**Y**
Ceriodaphnia dubia neonates <24-hours old?	**Y**
Fathead minnow larvae <24-hours old?	**Y**
Appropriate reference toxicity test conducted?	**Y**
Reference toxicity test results within the confidence limits for the lab?	**Y**

Author Cathy Mel *Date* July 5, 2024

Position: Laboratory Manager

Quality Control Haley West *Date* July 5, 2024

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

METHOD QC

Method	Analyte	Date	LCS (rec)	%REC	%RPD	QC LIMITS
2320 B	Alkalinity - Total	5/8/2024	100.00%	104.28%	2.90%	± 5.00%
2320 B	Alkalinity - Total	5/15/2024	102.40%	98.89%	-3.36%	± 5.00%
2320 B	Alkalinity - Total	5/23/2024	99.20%	104.97%	-0.77%	± 5.00%
2320 B	Alkalinity - Total	5/29/2024	104.00%	95.83%	-1.69%	± 5.00%
4500 NH_3 D	Ammonia	5/9/2024	95.20%	104.76%	1.04%	± 10.00%
4500 NH_3 D	Ammonia	5/16/2024	95.20%	95.02%	4.80%	± 10.00%
4500 NH_3 D	Ammonia	5/22/2024	102.00%	102.00%	4.88%	± 10.00%
4500 NH_3 D	Ammonia	5/28/2024	102.20%	95.36%	-4.44%	± 10.00%
4500 Cl D	Chlorine	5/31/2024	96.88%	96.77%	0.00%	± 5.00, ± 20.00%
2340 B	Hardness - Total	5/9/2024	101.75%	97.83%	-1.61%	± 5.00%
2340 B	Hardness - Total	5/15/2024	102.00%	101.00%	0.49%	± 5.00%
2340 B	Hardness - Total	5/22/2024	104.00%	101.00%	-1.03%	± 5.00%
2340 B	Hardness - Total	5/30/2024	101.75%	101.53%	0.00%	± 5.00%

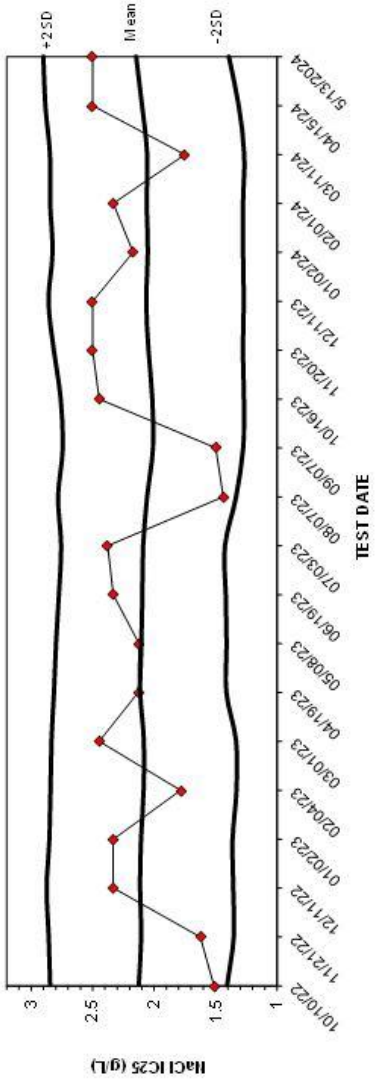
			LCS (rec)	%REC M1	%REC M2	QC Limits
4500 O	DO - Winkler	5/9/2024	N/A	98.59%	100.00%	± 5.00%
4500 O	DO - Winkler	5/17/2024	N/A	100.00%	98.59%	± 5.00%
4500 O	DO - Winkler	5/24/2024	N/A	96.97%	96.97%	± 5.00%
4500 O	DO - Winkler	5/31/2024	N/A	98.57%	98.57%	± 5.00%

			Blank	%REC MR S	%RPD	QC Limits
2540 D	Suspended Solids (TTL)	5/27/2024	100.00%	100.94%	0.00%	± 15%
2540 C	Dissolved Solids (TTL)	5/27/2024	100.00%	105.85%	0.00%	± 15%

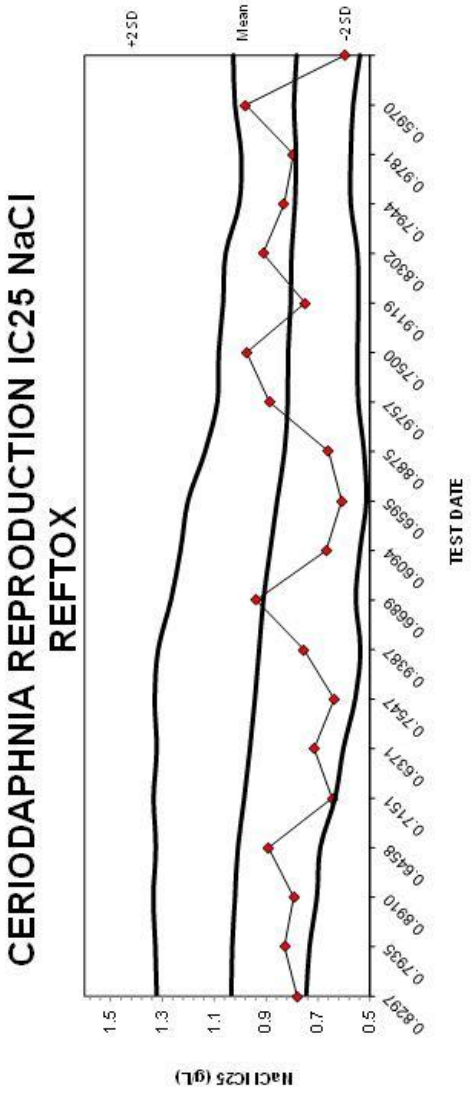
Signature: Cat McR Ol
Date: June 3, 2024

Signature: Haley West
Date: June 3, 2024

CERIODAPHNIA SURVIVAL LC25 NaCl REFTOX

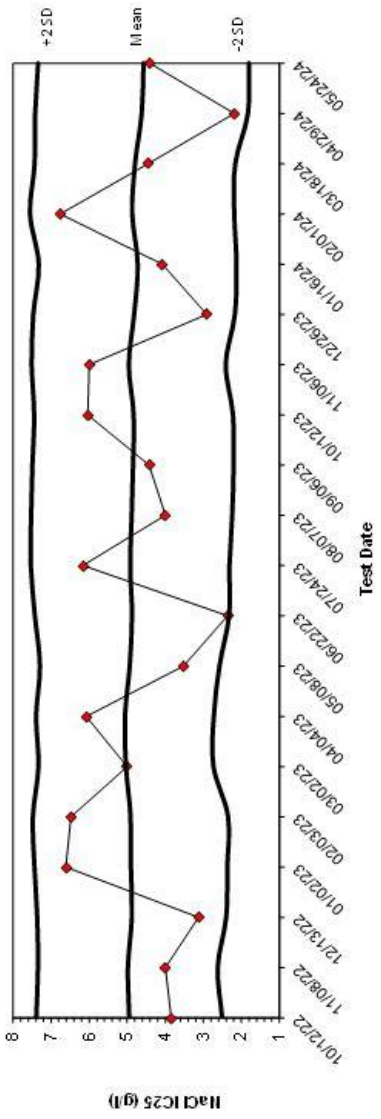


Date	IC25	Mean	-2 SD	+2 SD
10/10/22	1.5130	2.1268	1.4070	2.8465
11/21/22	1.6250	2.1055	1.3533	2.8578
12/11/22	2.3330	2.1154	1.3566	2.8742
01/02/23	2.3330	2.1075	1.3622	2.8527
02/04/23	1.7860	2.0869	1.3307	2.8430
03/01/23	2.4480	2.0844	1.3336	2.8352
04/19/23	2.1300	2.1144	1.4129	2.8158
05/08/23	2.1250	2.1045	1.4102	2.7988
06/19/23	2.3330	2.0965	1.4176	2.7755
07/03/23	2.3780	2.0907	1.4243	2.7571
08/07/23	1.4375	2.0580	1.3336	2.7824
09/07/23	1.5000	2.0104	1.2766	2.7441
10/16/23	2.4480	2.0158	1.2703	2.7613
11/20/23	2.5000	2.0476	1.2784	2.8168
12/11/23	2.5000	2.0655	1.2717	2.8592
01/02/24	2.1720	2.0518	1.2767	2.8269
02/01/24	2.3330	2.0617	1.2774	2.8460
03/11/24	1.7500	2.0578	1.2678	2.8477
04/15/24	2.5000	2.0995	1.3131	2.8858
5/13/2024	2.5000	2.1471	1.3927	2.9014



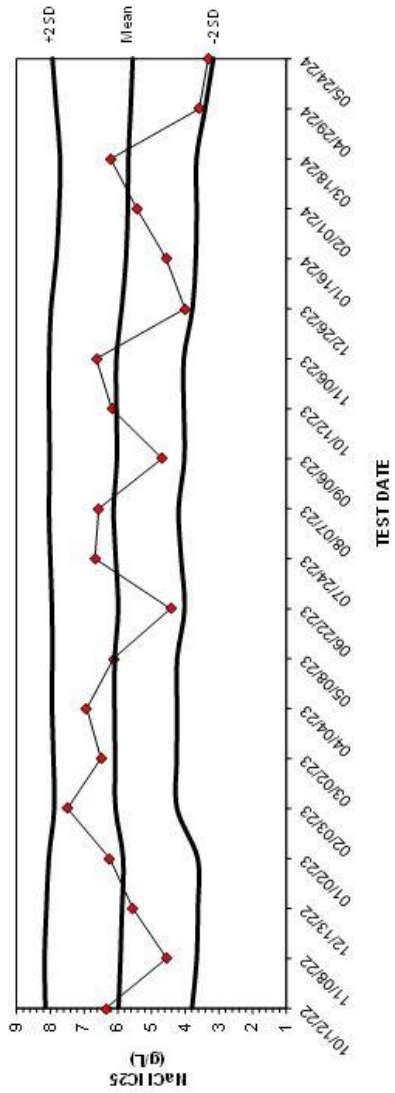
Date	IC25	Mean	-2 SD	+2 SD
10/10/22	0.7807	1.0340	0.7456	1.3223
11/21/2022	0.8297	1.03014755	0.732770361	1.327524739
12/11/22	0.7935	1.0197	0.7041	1.3353
01/02/23	0.8910	1.0085	0.6912	1.3258
02/04/23	0.6458	0.9841	0.6340	1.3342
03/01/23	0.7151	0.9621	0.6021	1.3221
04/19/23	0.6371	0.9431	0.5562	1.3300
05/08/23	0.7547	0.9267	0.5369	1.3165
06/19/23	0.9387	0.9105	0.5540	1.2670
07/03/23	0.6689	0.8843	0.5384	1.2302
08/07/23	0.6094	0.8575	0.5136	1.2014
09/07/23	0.6595	0.8290	0.5226	1.1353
10/16/23	0.8875	0.8164	0.5450	1.0878
11/20/23	0.9757	0.8150	0.5474	1.0826
12/11/23	0.7500	0.8049	0.5440	1.0658
01/02/24	0.9119	0.8019	0.5477	1.0560
02/01/24	0.8302	0.7888	0.5736	1.0040
03/11/24	0.7944	0.7848	0.5734	0.9962
04/15/24	0.9781	0.7923	0.5644	1.0202
05/13/24	0.5970	0.7824	0.5384	1.0265

FHM SURVIVAL LC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
10/12/22	3.8420	4.9507	2.5089	7.3925
11/08/22	4.0000	4.9848	2.6228	7.3468
12/13/22	3.1230	4.8843	2.3996	7.3690
01/02/23	6.6150	4.9051	2.3687	7.4415
02/03/23	6.4800	4.9171	2.3524	7.4818
03/02/23	5.0000	5.0364	2.7367	7.3361
04/04/23	6.0800	5.0628	2.7278	7.3978
05/08/23	3.5230	4.9385	2.5790	7.2979
06/22/23	2.3600	4.8775	2.3230	7.4321
07/24/23	6.1696	4.9250	2.3130	7.5370
08/07/23	4.0000	4.8853	2.2436	7.5269
09/06/23	4.4240	4.8500	2.2052	7.4948
10/12/23	6.0360	4.8354	2.2221	7.4487
11/06/23	6.0000	4.9627	2.4111	7.5142
12/26/23	2.9120	4.8223	2.1721	7.4725
01/16/24	4.0800	4.7287	2.1284	7.3289
02/01/24	6.7670	4.8732	2.1868	7.5596
03/18/24	4.4550	4.7999	2.1625	7.4374
04/29/24	2.1900	4.6245	1.8268	7.4222
05/24/24	4.4090	4.5749	1.8037	7.3461

FHM GROWTH IC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
10/12/22	6.3570	5.9716	3.7966	8.1465
11/08/22	4.5530	5.9137	3.6531	8.1744
12/13/22	5.5530	5.8673	3.6196	8.1150
01/02/23	6.2350	5.8373	3.6291	8.0455
02/03/23	7.4870	6.0624	4.2424	7.8824
03/02/23	6.5000	6.0758	4.2468	7.9047
04/04/23	6.9180	6.0931	4.2384	7.9479
05/08/23	6.1200	6.0879	4.2341	7.9416
06/22/23	4.4340	5.9816	4.0146	7.9487
07/24/23	6.6760	6.0591	4.1185	7.9998
08/07/23	6.5670	6.1170	4.1925	8.0415
09/06/23	4.6810	6.0194	4.0192	8.0196
10/12/23	6.1750	6.0363	4.0372	8.0354
11/06/23	6.6360	6.0352	4.0375	8.0330
12/26/23	4.0036	5.8797	3.7796	7.9799
01/16/24	4.5690	5.7497	3.6808	7.8186
02/01/24	5.4310	5.6958	3.6572	7.7345
03/18/24	6.2100	5.6820	3.6624	7.7017
04/29/24	3.5807	5.6121	3.4072	7.8170
05/24/24	3.3150	5.5507	3.1637	7.9377

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

September 19, 2024

CJ Dickerson
Thorin Resources
6208 County Road 26
Ouray, CO 81427

Dear CJ:

Enclosed is the report for chronic biomonitoring tests performed for Thorin Resources on effluent from the Wastewater Treatment Plant 002A outfall. There was no statistically significant toxicity to either test species at any effluent concentration. The effluent passes WET (Whole Effluent Toxicity) testing requirements for this sampling period.

If you have any questions or concerns, please do not hesitate to contact me at (303) 661-9324.

Best regards,

Catherine McDonald
Laboratory Manager

REPORT OF CHRONIC BIOMONITORING TESTS CONDUCTED FOR THORIN RESOURCES ON EFFLUENT FROM THE WWTP 002A OUTFALL

Prepared for:

CJ Dickerson
Thorin Resources
6208 County Road 26
Ouray, CO 81427

Prepared by:

Catherine McDonald
SeaCrest Group
500 S Arthur Ave. Suite 450
Louisville, Colorado 80027-3065
(303) 661-9324

September 19, 2024

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Chronic Toxicity Test Summary

Test:	7-day static renewal using *Ceriodaphnia dubia* 7-day static renewal using fathead minnow *(Pimephales promelas)*
Client:	Thorin Resources
Test Procedure Followed:	*Ceriodaphnia dubia*: EPA/821/R-02-013. Method 1002.0 (2002) fathead minnow: EPA/821/R-02-013. Method 1000.0 (2002)
Sample Number:	524423.B
Dilution Water:	moderately hard laboratory reconstituted water
Test Organism Source:	SeaCrest Group
Reference Toxicant:	Sodium Chloride

Sample	Time of Collection	Date of Collection	Time of Receipt	Date of Receipt
Effluent 1	1145	09-09-2024	0900	09-10-2024
Effluent 2	1130	09-11-2024	0850	09-12-2024
Effluent 3	1330	09-12-2024	0800	09-13-2024

	Ceriodaphnia dubia	fathead minnow
Test Initiation Time	1410	1430
Test Initiation Date	09-10-2024	09-10-2024
Test Completion Time	1345	1330
Test Completion Date	09-16-2024	09-17-2024

Abstract with Results

Test Concentrations:	Control (0%), 23%, 45%, 89%, 95%, 100%
Number of Organisms/Concentration:	10 for *Ceriodaphnia dubia* 40 for fathead minnow
Replicates at each Concentration:	10 for *Ceriodaphnia dubia* 4 for fathead minnow

	Ceriodaphnia dubia	**fathead minnow**
Test vessel size/Exposure volume	30ml/15ml	500ml/200ml
Sub-lethal NOEL/IC25	100%/>100%	100%/>100%
Pass/Fail Status	**PASS**	**PASS**
Temperature Range (°C)	24.1 – 25.9	24.1 – 25.9
Dissolved Oxygen Range (mg/L)	6.8 – 8.1	4.1 – 8.3
pH Range	7.5 – 8.1	7.3 – 8.2

	Control (*Cerio*/FHM)	**Effluent Sample**
Hardness (mg/L as $CaCO_3$)	83/81	127/139/135
Alkalinity (mg/L as $CaCO_3$)	57/62	73/61/72
Total residual chlorine (mg/L)	<0.01	<0.01
Total ammonia (mg/L as NH_3)	<0.03	<0.03

INTRODUCTION

Biomonitoring provides an effective means by which the toxicity of discharges from municipal, industrial, and mining operations can be tested. Among the advantages of biomonitoring is the ability to test complex effluents containing a broad range of contaminants. Biomonitoring, when used in conjunction with chemical analyses, can generate data capable of identifying a much wider range of contaminants.

The Colorado Water Quality Control Division requires certain NPDES permittees to perform acute and/or chronic biomonitoring tests. The chronic test measures significant differences in lethality and in reproduction (*Ceriodaphnia dubia*) or growth (fathead minnow – *Pimephales promelas*) between control and effluent-exposed organisms.

The present report discusses the results of chronic biomonitoring tests conducted on effluent from the Thorin Resources WWTP 002A discharge. These tests were conducted in accordance with EPA and State of Colorado procedures in June and July 2024.

MATERIALS AND METHODS

Sample Collection

Three gallons of the effluent were collected on three separate dates as specified in Permit CO-0000003. Samples were delivered chilled to the SeaCrest lab where they were held at 0-6°C. Chain of custody forms showing sample collection and laboratory arrival times are included (Appendix 1).

Dilution Water

Laboratory reconstituted water was used as both the dilution water source and the control for the tests. Reconstituted water for the *Ceriodaphnia dubia* test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, potassium chloride, and sodium selenate to deionized water. Reconstituted water for the fathead minnow test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, and potassium chloride to deionized water.

Test Organisms

The biomonitoring test used *Ceriodaphnia dubia,* cultured in the SeaCrest laboratory. The organisms are cultured in brood culture boards from which individual females are monitored for survival and reproduction for periods of up to two weeks. Neonates less than 24-hours old, released from third or subsequent broods of eight or more within an 8-hour period, are collected from the brood chambers and used in tests. The animals are fed daily with a mixture of Yeast, Cereal Leaves, and Trout Chow (YCT), produced in-house. This is supplemented with cultured green algae *(Selenastrum capricornutum)* provided by Aquatic Biosystems.

Less than one-day-old fathead minnow, cultured in the laboratory, were also used in the test. Adult fish are maintained in 10-gallon aquaria where females deposit their eggs on the under-surface of split PVC pipe sections. The eggs are collected daily and transferred to aerated containers where they hatch after three to four days. The larval fish are fed newly hatched brine shrimp *(Artemia* sp.) at least twice per day.

In-house organisms are tested monthly in a reference toxicant test using sodium chloride to monitor overall health and test reproducibility (Appendix 4).

Test Procedures

Upon receipt at the lab, samples were analyzed for alkalinity, ammonia, chlorine, conductivity, dissolved oxygen, hardness, and pH.

Methods used in chemical analysis

Alkalinity	EPA 310.2	Hach 8203	I-2030-85.2
Ammonia	SM4500-NH_3, C-E1997	ASTM D1426-08	
Chlorine	SM4500-Cl D	Hach 10026	
Conductivity	SM2510		
Dissolved Oxygen	SM4500-O	Electrode: G-2001	Winkler (QC): B-F-2001
Hardness	SM2340 B or C	Hach 8213	
pH	SM4500-H+ B-2000		

The test followed procedures in EPA[3] and CDPHE[4] guidelines. Exposure concentrations included control (0%), 23%, 45%, 89%, 95%, and 100% mixtures, diluted with moderately hard laboratory reconstituted water.

Individual *Ceriodaphnia dubia* were placed in 30ml plastic containers containing approximately 15ml of exposure medium. Ten replicates at each concentration were used. The animals were fed daily with the YCT mixture and an equal volume of the green algae *(Selenastrum capricornutum)*. The exposure medium was changed daily in each container and the number of young released overnight were counted and recorded. Young were removed from the containers daily and discarded. Routine measurements were made each day of temperature, dissolved oxygen, and pH before and after the water changes.

Fathead minnow were exposed in 500ml plastic cups to which 250ml of media was replaced daily. Four replicates were used at each concentration. Ten fish, less than 24-hours old, were placed in each cup. The fish were monitored daily for survival and fed live brine shrimp at least twice per day. After seven days, the fish were removed from the cups, euthanized with isopropyl alcohol, and then placed in aluminum pans and dried in an oven for a minimum of six hours at 100ºC. The pans were then weighed on a five-place analytical balance to determine the average dry weight of the fish from each replicate.

Data Analysis

Data from the tests were analyzed on a personal computer using the CETIS program (developed by Tidepool Scientific Software). Statistical tests used in the analyses are shown in Table 1. Test acceptability was determined using control survival and reproduction/growth criteria, concentration-response relationships, and percent minimum significant differences (USEPA [5,6]).

Table 1. Statistical methods used in testing for significant differences in test parameters.

Variance	Distribution
Bartlett Equality of Variance Test	Shapiro-Wilk W Normality Test

Statistical Difference				
Species	Survival	Growth	Reproduction	IC_{25}
Ceriodaphnia dubia	N/A	N/A	Steel Many-One Rank Sum Test	ICp
fathead minnow	Steel Many-One Rank Sum Test	Dunnett Multiple Comparison Test	N/A	ICp

RESULTS

Ceriodaphnia dubia Test Results

Test results for the *Ceriodaphnia dubia* are summarized in Table 2 and provided on the data sheets located in Appendix 2. Survival was 100% in the 100% effluent and was 100% in the remaining effluent concentrations. Control survival was 100%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL (No Observed Effect Level) for lethality was 100% and the LC_{25} (Lethal Concentration 25) for lethality was >100%.

Average number of neonates was 31.5 in the 100% effluent concentration and ranged from 24.2 – 30.9 in the remaining effluent concentrations. The average number of neonates in the control was 29.9 for statistical analyses and test acceptability criteria. No statistically significant differences in the number of neonates were found between the control and any effluent concentration. The NOEL for reproduction was 100% and the IC_{25} (Inhibition Concentration 25) for reproduction was >100%.

Table 2. Summary of *Ceriodaphnia dubia* test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Mean Neonates	Min.	Max.	Significant Difference	
					Lethality	Reprod.
Control (0%)	100	29.9	26	37		
23%	100	25.7	0	32		
45%	100	30.3	18	38		
89%	100	24.2	17	32		
95%	100	30.9	16	37		
100%	100	31.5	27	38		

Fathead Minnow Test Results

Fathead minnow results are summarized in Table 3 and are provided on data sheets in Appendix 3. Survival was 95% in the 100% effluent concentration and ranged from 95% - 100% in the remaining effluent concentrations. Control survival was 100%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL for lethality was 100% and the LC_{25} for lethality was >100%.

Average weight in the 100% effluent concentration was 0.484mg and ranged from 0.476mg - 0.512mg per individual in the remaining effluent concentrations. The average weight for the control fish was 0.463mg for statistical analyses and test acceptability criteria. No statistically significant differences for growth were measured in any effluent concentration when compared to the control. The NOEL for growth was 100% and the IC_{25} for growth was >100%.

Table 3. Summary of fathead minnow test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Average Weight (mg)	Min.	Max.	Significant Difference	
					Lethality	Growth
Control (0%)	100	0.463	0.403	0.518		
23%	95	0.476	0.428	0.519		
45%	100	0.510	0.481	0.564		
89%	100	0.512	0.483	0.580		
95%	95	0.497	0.439	0.578		
100%	95	0.484	0.462	0.501		

Test Acceptability

Acceptable control survival (80%) was achieved in both tests. Similarly, *Ceriodaphnia dubia* reproduction (average 15 neonates/organism) and fathead minnow growth (average 0.250mg/test container) in control organisms met required levels. PMSD was within the required limits for an acceptable test (Table 4).

Table 4. PMSD for chronic test parameters.

	fathead minnow growth		***C. dubia* reproduction**	
	Lower bound	Upper bound	Lower bound	Upper bound
PMSD	12	30	13	47
(% Minimum significant difference)	16.0		21.0	

DISCUSSION

A failed test for this discharge occurs when there is an NOEL or IC_{25} less than the IWC (Instream Waste Concentration) of 89%. The NOEL represents the highest effluent concentration at which no statistically significant effect is observed. The IC_{25} represents an estimate of the effluent concentration that would cause a 25 percent reduction of a non-quantal biological measurement. A violation for this discharge occurs when both the NOEL and the IC_{25} are less than the IWC. Since neither test species demonstrated statistically significant differences meeting these criteria, the discharge passes WET testing requirements for this sampling period.

REFERENCES

1. **Hach Chemical Company.** 2008. *Hach's Water Analysis Handbook*. Fifth Edition. Hach Chemical Company, Loveland, Colorado**.** Digital Medium.
2. **APHA/AWWA/WEF.** 1998. *Standard Methods for the Examination of Water and Wastewater*. 20th Edition. American Public Health Association, Washington, D.C.
3. **USEPA.** 2002. *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms.* EPA-821-R-02-013. 335 pp.
4. **CDPHE (Colorado Department of Public Health and Environment).** 1998. *Laboratory Guidelines for Conducting Whole Effluent Toxicity Tests.* Water Quality Control Division.
5. **USEPA.** 2000. *Method of Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 CFR Part 136). EPA/821/B-00/004.
6. **USEPA**. 2000. *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications under the National Pollutant Discharge Elimination System Program*. EPA/833/R-00/003.

Appendix 1 – Chain of Custody with Sample Receipt Forms

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: Thorin Resources
P. O./Project Number:
Contact: CJ Dickerson
Address: 1900 Main St Unit 1
Phone # (602) 793-1321 E-Mail: cjdickerson@thorinresources.com
Fax # Sampler: CJ Dickerson
Report By: ☐ Mail ☒ PDF ☐ FAX

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Analysis (Check all applicable)											Number of Containers	Total Volume
										Metals (List Below)											3	3941
OF0024	9/9/24	11:45a	Grab	524423.3#1		X				Solids (TS/TDS/TSS) (Circle)												
										Anions (List Below)												
										Chromium III/VI (Circle)												
										Oil and Grease												
										Coliform (Total/Fecal/E-Coli) (Circle)												
										BOD/COD (Circle)												
										Other Analysis (List Below)												

Turnaround Requirements (Analytical Testing Only)
Standard (10 days) _____ 6-9 Day
3-5 Day _____ 1-2 Day
Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
	9/9/24 4:45p	UPS		UPS		J. Thornton	9/10/24 9:00

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2024

Project # 524 423.3 Sample #: 1
Date: 09 10 24 Initials: DT

Samples Were:
1. FedEx (UPS) Courier Hand Delivery (circle one)
Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
Notes:

4. Sample Received Broken or Leaking — Y (N)
Notes:

5. Received Within 36hr Holding Time — (Y) N
Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — (Y) N NA
Notes:

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
Effluent: light pm, clear
Receiving: N/A
Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
423.3#1	4.2	8.0	7.9	312

Custody Seals:
1. Present on Outer Package — Y (N)
2. Unbroken on Outer Package — Y N (NA)
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):
1. Present Upon Receipt of Sample — (Y) N

HW

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: Thorin Resources

P. O./Project Number:

Contact: CJ Dickerson

Address: 1900 Main St Unit 1

Phone # (602) 793-1321 E-Mail: cjdickerson@thorinresources.com

Fax # Sampler: CJ D.

Report By: ☐ Mail ☒ PDF ☐ FAX

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)	Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)			Number of Containers	Total Volume
OFU02A	9/11	11:30	Grab	524423.B#2		X													3	3

Turnaround Requirements (Analytical Testing Only)

Standard (10 days) _____ 6-9 Day

_____ 3-5 Day _____ 1-2 Day

Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time 9/11 4:10P	Signature UPS	Date/Time	Signature UPS	Date/Time	Signature	Date/Time 091224 0850

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2024

Project # 524423.B Sample #: 2
Date: 09/12/24 Initials: EE

Samples Were:

1. FedEx (UPS) Courier Hand Delivery (circle one)
   Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — (Y) N NA
   Notes:

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: light PM
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
524423.B2	4.9	7.6	7.5	332

Custody Seals:

1. Present on Outer Package — Y (N)
2. Unbroken on Outer Package — Y N (NA)
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — (Y) N

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: Thorin Resources
P. O./Project Number:
Contact: CT Dickerson
Address: 1900 Main St Unit 1
Phone # (602) 793-1371 E-Mail: cjdickerson@thorinresources.com
Fax # Sampler: CT D
Report By: ☐ Mail ☑ PDF ☐ FAX

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)			Number of Containers	Total Volume
										Analysis (Check all applicable)											
OFOOZA	9/12	1:30	Grab	524423.B#3		X														3	3gal

Turnaround Requirements (Analytical Testing Only)
Standard (10 days) ____ 6-9 Day
3-5 Day ____ 1-2 Day
Requested Report Date:

Test Species: ☑ Fathead Minnow ☑ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time 9/12 4:56?	Signature UPS	Date/Time	Signature UPS	Date/Time	Signature D. Thornton	Date/Time 09 13 24 8:00

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2024

Project # 524 423.3 Sample #: 3
Date: 091324 Initials: JT

Samples Were:

1. FedEx (UPS) Courier Hand Delivery (circle one)
   Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — (Y) N NA
   Notes:

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: low pm / clear
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
423.3 #3	5.1	7.7	7.9	347

Custody Seals:

1. Present on Outer Package — Y (N)
2. Unbroken on Outer Package — Y N (NA)
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — (Y) N

HW

Appendix 2 – Data Sheets for the *Ceriodaphnia dubia* Test

WET TEST REPORT FORM – CHRONIC

Permittee: Thorin Resources
Permit No.: CO-0000003

Outfall: 002A – IWC: 89%

Test Type: Routine ☒ Accelerated ☐ Screen ☐

Test Species: *Ceriodaphnia dubia*

Test Start Time	Test Start Date	Test End Time	Test End Date
1410	09-10-2024	1345	09-16-2024

Test Results	Lethality/TCP3B	Reproduction/TKP3B
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	23%	45%	89%	95%	100%
Exposed organisms	10	10	10	10	10	10
Survival for day 1	10	10	10	10	10	10
Survival for day 2	10	10	10	10	10	10
Survival for day 3	10	10	10	10	10	10
Survival for day 4	10	10	10	10	10	10
Survival for day 5	10	10	10	10	10	10
Survival for day 6	10	10	10	10	10	10
Mean 3 Brood Total	29.9	25.7	30.3	24.2	30.9	31.5

Hardness (mg/L) – Receiving Water: N/A Effluent: 127/139/135 Recon Water: 83
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 73/61/72 Recon Water: 57
Chlorine (mg/L) – Effluent: <0.01 pH (initial/final) – Control: 7.8/8.0 100%: 7.9/7.9
Total Ammonia as NH_3 (mg/L) - Effluent: <0.03

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Lisa Sibrell, Ryan Belmont, and Daniela Thornton

Signature  *Date* September 19, 2024

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: March 2023

Permittee: Thorin Resources **Lab #:** 524423.B **Site:** OD2A
IWC %: 89 **Template #:** 5 **Dilution Water:** MH24-019 **Sample Date:** 090924
Age & Source: 091024 4176 **Test Start:** 091024 1410 **Test End:** 091624 1345
Test Conditions:

	0	1	2	3	4	5	6	7	Total
(C)	0	0	0	4	0	12	15		31
	0	0	0	4	0	11	15		30
	0	0	0	0	8	12	17		37
0	0	0	0	4	0	13	15		32
	0	0	0	0	4	11	14		29
	0	0	0	4	8	0	15		27
	0	0	0	4	7	0	15		26
	0	0	0	4	8	0	14		26
	0	0	0	4	0	12	16		32
	0	0	0	5	0	9	15		29
DO	7.2	7.4 7.1	7.4 6.9	7.2 6.8	7.1 6.8	7.1 7.0	7.4		29.9
Temp	24.1	25.7 25.9	25.7 25.0	25.5 24.6	25.6 25.3	25.6 25.2	25.4		
pH	7.8	7.9 7.9	7.8 7.9	8.0 8.0	7.9 8.0	7.9 8.1	8.0		
Cond	302	313	327	342	313	310			
(1)	0	0	0	3	0	10	14		27
	0	0	0	4	0	13	15		32
	0	0	0	4 +1	0	11	16		32
	0	0	0	4	0	11	14		29
	0	0	0	0	6	11	15		32
23	0	0	0	5	5 +2	0	14		26
	0	0	0	5	8	0	14		27
	0	0	0	4	8 +1	0	14		27
	0	0	0	5	6 +1	0	13		25
	0	0	0 7.0	0	0	0	0		0
DO	7.3	7.4 7.2	7.4 ~~7.2~~	7.2 7.0	7.1 6.9	7.1 7.2	7.4		25.7
Temp	24.1	25.7 25.9	25.7 25.0	25.5 24.8	25.6 25.4	25.6 25.2	25.4		
pH	7.8	7.9 7.9	7.2 7.7	8.0 7.8	7.9 7.9	7.9 8.0	8.0		
Cond	304	315	329	340	311	309			
(2)	0	0	0	4	0	10	17		31
	0	0	0	4	0	7	14		25
	0	0	0	4	0	0	14		18
45	0	0	0	4	0	12	20		36
	0	0	0	0	6	9	16		31
	0	0	0	5	0	12	21		38
	0	0	0	5	11	0	17		33
	0	0	0	5	10	0	16		31
	0	0	0	0	7	13	15		35
	0	0	0	4	0	9	12		25
DO	7.4	7.4 7.3	7.4 7.2	7.2 7.3	7.1 7.1	7.1 7.4	7.4		30.3
Temp	24.1	25.7 25.9	25.7 25.0	25.5 25.1	25.6 25.4	25.6 25.2	25.4		
pH	7.8	7.9 7.8	7.2 7.6	8.0 7.8	7.9 7.9	7.9 8.0	8.0		
Cond	309	318	330	341	312	309			
(3)	0	0	0	4	6	0	7		17
	0	0	0	4	0	10	8		22
	0	0	0	4	0	12	14		30
	0	0	0	4	0	15	13		32
89	0	0	0	0	5	12	0		17
	0	0	0	4	0	14	5		23
	0	0	0	6	10	0	12		28
	0	0	0	4	8	0	6		18
	0	0	0	4	0	12	16		32
	0	0	0	4	0	9	10		23
DO	7.9	7.4 7.7	7.4 7.4	7.2 7.6	7.1 7.5	7.1 7.7	7.4		24.2
Temp	24.1	25.7 25.9	25.7 25.0	25.5 25.4	25.6 25.5	25.6 25.2	25.4		
pH	7.8	7.8 7.8	7.8 7.5	8.0 7.8	7.9 7.6	7.8 7.9	7.9		
Cond	309	326	333	342	311	309			

HW

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: March 2023

	0	1	2	3	4	5	6	7	Total
(4)	0	0	0	4	7	0	~~7~~ 20		31
	0	0	0	2	0	12	16		30
	0	0	0	4	6	0	19		29
	0	0	0	5	0	11	20		36
95	0	0	0	0	5	14	18		37
	0	0	0	4	0	11	18		33
	0	0	0	5	9	0	17		31
	0	0	0	4	7	0	18		29
	0	0	0	4	0	11	22		37
	0	0	0	0	0	11	5		16
DO	7.9	7.4 / 7.8	7.4 / 7.5	7.2 / 7.7	7.1 / 7.6	7.1 / 7.9	7.4		30.9
Temp	24.1	25.7 / 25.9	25.7 / 25.0	25.5 / 25.5	25.6 / 25.5	25.6 / 25.2	25.4		
pH	7.8	7.8 / 7.8	7.8 / 7.5	8.0 / 7.9	7.9 / 7.8	7.8 / 7.9	7.9		
Cond	311	328	333	343	311	309			
(5)	0	0	0	4	0	12	16		32
	0	0	0	3	0	13	20		36
	0	0	0	4	0	11	17		32
	0	0	0	5	0	12	21		38
100	0	0	0	0	5	12	11		28
	0	0	0	4	5	0	21		30
	0	0	0	4	11	0	14		29
	0	0	0	5	10	0	12		27
	0	0	0	4	0	14	18		36
	0	0	0	4	0	11	12		27
DO	8.0	7.4 / 7.9	7.4 / 7.6	7.2 / 7.7	7.1 / 7.6	7.1 / 8.1	7.4		31.5
Temp	24.1	25.7 / 25.9	25.7 / 25.0	25.5 / 25.5	25.6 / 25.5	25.6 / 25.2	25.4		
pH	7.9	7.8 / 7.8	7.8 / 7.5	8.0 / 7.9	7.9 / 7.8	7.8 / 7.9	7.9		
Cond	312	329	332	347	312	309			
Algae	ABS	ABS	ABS	ABS	ABS	ABS			
YCT	2407	2407	2407	2407	2407	2407			
H_2O	1	1	2	3	2	3			
Initials	LS	LS	RB	JT	JT	LS	LS		

	Eff #1	Eff #2	Eff #3	Recon
Hardness	137	139	135	83
Alkalinity	73	61	72	57
Chlorine	<0.01	<0.01	<0.01	<0.01
Ammonia	<0.03	<0.03	<0.03	<0.03

Exposure Chamber:
Total Capacity: 30mL
Total Solution Volume: 15mL

Feeding Schedule:
Fed daily
Food used: YCT, Algae

Units:
DO: mg/L Hardness: mg/L
Temp: °C Alkalinity: mg/L
pH: N/A Chlorine: mg/L
Cond: µS/cm³ Ammonia: mg/L

Comments:

x:y:z = board #:row:column

1	2	3	4	5	6	7	8	9	10
A3	A4	A5	A9	A10	B1	B3	B5	B7	B9

HW

CETIS Analytical Report

Report Date: 16 Sep-24 13:36 (p 1 of 1)
Test Code/ID: 524423CD / 15-0672-0790

Ceriodaphnia 7-d Survival and Reproduction Test **SeaCrest Group**

Analysis ID:	13-1065-0207	**Endpoint:**	Reproduction	**CETIS Version:**	CETIS v2.1.5
Analyzed:	16 Sep-24 13:35	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	16 Sep-24 0:00	**MD5 Hash:**	F0A457B8B73867ACDAF1B967060E0E5C	**Editor ID:**	008-269-892-1
Batch ID:	06-7096-9128	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	10 Sep-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	16 Sep-24	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	09-8569-9965	**Code:**	524423.B	**Project:**	WET Quarterly Compliance Test (3Q)
Sample Date:	09 Sep-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	10 Sep-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Untransformed	C > T	100	>100	---	1	6.271	20.97%

Steel Many-One Rank Sum Test

Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Dilution Water		23	18	91.5	75	4	CDF	0.4046	Non-Significant Effect
		45	18	111.5	75	1	CDF	0.9403	Non-Significant Effect
		89	18	79.5	75	2	CDF	0.0977	Non-Significant Effect
		95	18	118.5	75	4	CDF	0.9860	Non-Significant Effect
		100	18	116.5	75	4	CDF	0.9780	Non-Significant Effect

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
Control Resp	29.9	15	>>	Yes	Passes Criteria
PMSD	0.2097	0.13	0.47	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	459.15	91.83	5	2.447	0.0453	Significant Effect
Error	2026.1	37.5204	54			
Total	2485.25		59			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	11.09	15.09	0.0497	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.8747	0.9459	1.8E-05	Non-Normal Distribution

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	29.9	27.5	32.3	29.5	26	37	1.059	11.20%	0.00%
23		10	25.7	18.97	32.43	27	0	32	2.974	36.60%	14.05%
45		10	30.3	25.97	34.63	31	18	38	1.915	19.99%	-1.34%
89		10	24.2	19.94	28.46	23	17	32	1.884	24.62%	19.06%
95		10	30.9	26.54	35.26	31	16	37	1.929	19.74%	-3.34%
100		10	31.5	28.63	34.37	31	27	38	1.267	12.72%	-5.35%

Convergent Rounding (4 sf) CETIS™ v2.1.5.6 x64 (008-269-892-1) Analyst: CM QA: HW

CETIS Analytical Report

Report Date: 16 Sep-24 13:36 (p 1 of 1)
Test Code/ID: 524423CD / 15-0672-0790

Ceriodaphnia 7-d Survival and Reproduction Test **SeaCrest Group**

Analysis ID:	14-0900-1254	**Endpoint:**	Reproduction	**CETIS Version:**	CETIS v2.1.5
Analyzed:	16 Sep-24 13:36	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	16 Sep-24 0:00	**MD5 Hash:**	F0A457B8B73867ACDAF1B967060E0E5C	**Editor ID:**	008-269-892-1
Batch ID:	06-7096-9128	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	10 Sep-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	16 Sep-24	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	09-8569-9965	**Code:**	524423.B	**Project:**	WET Quarterly Compliance Test (3Q)
Sample Date:	09 Sep-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	10 Sep-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1908571	1000	Yes	Two-Point Interpolation

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
Control Resp	29.9	15	>>	Yes	Passes Criteria

Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
IC15	>100	---	---	<1	---	---
IC20	>100	---	---	<1	---	---
IC25	>100	---	---	<1	---	---
IC40	>100	---	---	<1	---	---
IC50	>100	---	---	<1	---	---

Reproduction Summary

			Calculated Variate						Isotonic Variate	
Conc-%	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**Mean**	**%Effect**
0	D	10	29.9	29.5	26	37	11.20%	0.00%	29.9	0.00%
23		10	25.7	27	0	32	36.60%	14.05%	28.52	4.62%
45		10	30.3	31	18	38	19.99%	-1.34%	28.52	4.62%
89		10	24.2	23	17	32	24.62%	19.06%	28.52	4.62%
95		10	30.9	31	16	37	19.74%	-3.34%	28.52	4.62%
100		10	31.5	31	27	38	12.72%	-5.35%	28.52	4.62%

Convergent Rounding (4 sf) CETIS™ v2.1.5.6 x64 (008-269-892-1) Analyst: CM QA: HW

Appendix 3 – Data Sheets for the Fathead Minnow Test

WET TEST REPORT FORM – CHRONIC

Permittee: Thorin Resources
Permit No.: CO-0000003
Outfall: 002A – IWC: 89%
Test Type: Routine ☒ Accelerated ☐ Screen ☐
Test Species: fathead minnow

Test Start Time	Test Start Date	Test End Time	Test End Date
1430	09-10-2024	1330	09-17-2024

Test Results	Lethality/TCP6C	Growth/TKP6C
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	23%	45%	89%	95%	100%
Exposed organisms	40	40	40	40	40	40
Survival for day 1	40	40	40	40	40	40
Survival for day 2	40	40	40	40	40	40
Survival for day 3	40	39	40	40	40	39
Survival for day 4	40	38	40	40	40	39
Survival for day 5	40	38	40	40	40	39
Survival for day 6	40	38	40	40	40	38
Survival for day 7	40	38	40	40	38	38
Mean Dry Wt. (mg)	0.463	0.476	0.510	0.512	0.497	0.484

Hardness (mg/L) – Receiving Water: N/A Effluent: 127/139/135 Recon Water: 81
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 73/61/72 Recon Water: 62
Chlorine (mg/L) – Effluent: <0.01 pH (initial/final) – Control: 8.1/7.6 100%: 8.0/7.5
Total Ammonia as NH_3 (mg/L) - Effluent: <0.03

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Evelyn Esparza and Aurora Nelson

Signature *Date* September 19, 2024

SeaCrest Group
Louisville, CO

Fathead Minnow Chronic Benchsheet

Form #: 103a
Effective: March 2022

Client: Thorin Resources Site: 002A Lab #: 524423.B Sample Date: 090924 IWC: 89 Dilution H_2O: MH24-044
Test Start: 091024 - 1430 Test End: 091724 - 1330 Species Info: H090924 Template: FHM Test Conditions:

Conc	Read	0	1		2		3		4		5	6	7	0	1	2	3	4	5	6	7	#	Fish & Tare	Tare	Fish Wt mg	Ave wt
0	DO	6.9	4.2	7.2	5.4	6.9	5.5	6.9	4.6	7.1	4.7	7.5	4.8	6.9	5.2	10	10	10	10	10	10	10	10	#1	1.04564	1.04518	0.454	0.463
	Temp	24.5	25.9	24.4	24.3	24.1	25.2	24.1	25.5	24.1	25.2	24.1	24.1	24.1	24.8	10	10	10	10	10	10	10	10	#2	1.06102	1.05624	0.478	
	pH	8.1	7.6	8.1	7.5	8.2	7.7	8.1	7.5	8.0	7.5	8.1	7.5	8.1	7.6	10	10	10	10	10	10	10	10	#3	1.04999	1.04481	0.518	
	Cond	303	313		328		341		339		310		312			10	10	10	10	10	10	10	10	#4	1.06799	1.06396	0.403	
23	DO	6.9	4.4	7.1	5.4	7.0	5.3	7.0	4.7	7.2	4.6	7.7	4.7	7.1	5.1	10	10	10	10	10	10	10	10	#5	1.07249	1.06821	0.428	0.476
	Temp	24.4	25.6	24.5	24.3	24.1	25.5	24.5	25.5	24.5	25.2	24.3	24.3	24.1	24.8	10	10	10	9	8	8	8	8	#6	1.05890	1.05386	0.504	
	pH	8.1	7.6	8.1	7.5	8.1	7.6	8.0	7.5	7.9	7.5	8.1	7.5	8.1	7.6	10	10	10	10	10	10	10	10	#7	1.05624	1.05170	0.454	
	Cond	306	318		332		344		344		311		311			10	10	10	10	10	10	10	10	#8	1.05241	1.04722	0.519	
45	DO	7.0	4.6	7.0	5.5	7.1	5.1	7.1	4.7	7.3	4.5	7.9	4.6	7.3	5.1	10	10	10	10	10	10	10	10	#9	1.05492	1.05000	0.492	0.510
	Temp	24.4	25.3	24.7	24.3	24.1	25.4	24.8	25.5	24.9	25.2	24.4	24.4	24.1	24.8	10	10	10	10	10	10	10	10	#10	1.06354	1.05873	0.481	
	pH	8.0	7.6	8.0	7.6	8.0	7.6	7.9	7.5	7.9	7.4	8.1	7.5	8.1	7.6	10	10	10	10	10	10	10	10	#11	1.06471	1.05970	0.501	
	Cond	306	320		335		346		347		312		309			10	10	10	10	10	10	10	10	#12	1.07174	1.06610	0.564	
89	DO	7.0	4.8	6.9	5.6	7.1	4.9	7.3	4.8	7.4	4.4	8.0	4.5	7.5	5.0	10	10	10	10	10	10	10	10	#13	1.06527	1.06044	0.483	0.512
	Temp	24.3	25.0	24.9	24.3	24.1	25.2	25.1	25.4	25.3	25.1	24.5	24.5	24.1	24.9	10	10	10	10	10	10	10	10	#14	1.06377	1.05877	0.500	
	pH	8.0	7.6	8.0	7.6	7.9	7.5	7.8	7.4	7.8	7.4	8.0	7.4	8.0	7.5	10	10	10	10	10	10	10	10	#15	1.06755	1.06175	0.580	
	Cond	306	327		342		352		354		316		307			10	10	10	10	10	10	10	10	#16	1.06157	1.05613	0.484	
95	DO	7.1	4.9	6.8	5.6	7.2	4.8	7.4	4.8	7.5	4.2	8.2	4.4	7.7	4.9	10	10	10	10	10	10	10	9	#17	1.06441	1.06002	0.439	0.497
	Temp	24.2	24.8	25.0	24.3	24.1	25.0	25.3	25.4	25.5	25.1	24.7	24.6	24.1	24.9	10	10	10	10	10	10	10	10	#18	1.05613	1.05134	0.479	
	pH	8.0	7.6	8.0	7.7	7.9	7.5	7.8	7.4	7.8	7.3	8.0	7.4	8.0	7.5	10	10	10	10	10	10	10	9	#19	1.06924	1.06292	0.492	
	Cond	305	328		342		353		355		316		306			10	10	10	10	10	10	10	10	#20	1.06530	1.05952	0.578	
100	DO	7.1	5.0	6.8	5.7	7.3	4.7	7.5	4.9	7.6	4.1	8.3	4.3	7.8	4.8	10	10	10	10	10	10	10	10	#21	1.06305	1.05843	0.462	0.484
	Temp	24.1	24.6	25.1	24.3	24.1	24.8	25.5	25.4	25.7	25.1	24.9	24.8	24.1	24.9	10	10	10	10	10	9	9	10	#22	1.06191	1.05695	0.496	
	pH	8.0	7.6	7.9	7.7	7.9	7.5	7.8	7.4	7.8	7.3	8.0	7.4	8.0	7.5	10	10	10	10	10	10	10	10	#23	1.07517	1.07016	0.501	
	Cond	303	328		343		354		357		317		305			10	10	9	9	9	9	9	9	#24	1.06305	1.05827	0.478	
	DO															10								#				
	Temp															10								#				
	pH															10								#				
	Cond															10								#				
Initials		EE	AN		EE		AN		AN		EE		EE	EE									pretest	#	~~1.0580~~ 1.05813	1.05812		
Water #		1	1		2		2		3		3		3														

	Eff 1	Eff 2	Eff 3	Recon	Rcv 1	Rcv 2	Rcv 3	MR
Hard	127	139	135	81				
Alk	86	85	79	62				
Chlor	<0.01	<0.01	<0.01	<0.01				
NH_3	0.03	0.03	0.03	<0.03				

Feeding	0	1	2	3	4	5	6	7
AM		✓	✓	✓	✓	✓	✓	✓
Initials		AN	EE	AN	AN	EE	EE	EE
PM	✓	✓	✓	✓	✓	✓	✓	
Initials	EE	AN	EE	AN	AN	EE	EE	

Exposure Chamber

Total Capacity:	500 mL
Test Solution Volume:	250 mL
Test Solution Surface Area:	50.2 cm
Water Depth (constant):	6.5 cm

Feeding Schedule

Fed:	2x per day
Food Used:	<24hr artemia

Units:

DO: mg/L	Hard: mg/L
Temp: °C	Alk: mg/L
pH: N/A	Chlor: mg/L
Cond: µS/cm³	NH_3: mg/L

Comments:

Alk 1 73 2 61 3 72

CETIS Analytical Report

Report Date: 18 Sep-24 09:03 (p 1 of 3)
Test Code/ID: 524423.B / 15-9197-0090

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	09-7214-6027	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	18 Sep-24 9:03	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Batch ID:	04-0005-9987	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	10 Sep-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	17 Sep-24	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	00-5048-5176	**Code:**	524423.B	**Project:**	WET Quarterly Compliance Test (3Q)
Sample Date:	09 Sep-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	10 Sep-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	C > T	100	>100	n/a	1	8.70%

Steel Many-One Rank Sum Test

Control vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water	23	16	10	1	6	CDF	0.6105	Non-Significant Effect
	45	18	10	1	6	CDF	0.8333	Non-Significant Effect
	89	18	10	1	6	CDF	0.8333	Non-Significant Effect
	95	14	10	1	6	CDF	0.3451	Non-Significant Effect
	100	14	10	1	6	CDF	0.3451	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0382144	0.0076429	5	1.12	0.3849	Non-Significant Effect
Error	0.122827	0.0068237	18			
Total	0.161041		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.8118	0.884	4.6E-04	Non-Normal Distribution

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
23		4	0.9500	0.7909	1.0000	1.0000	0.8000	1.0000	0.0500	10.53%	5.00%
45		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
89		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
95		4	0.9500	0.8581	1.0000	0.9500	0.9000	1.0000	0.0289	6.08%	5.00%
100		4	0.9500	0.8581	1.0000	0.9500	0.9000	1.0000	0.0289	6.08%	5.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%
23		4	1.336	1.093	1.578	1.412	1.107	1.412	0.07622	11.41%	5.40%
45		4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%
89		4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%
95		4	1.331	1.181	1.48	1.331	1.249	1.412	0.04705	7.07%	5.77%
100		4	1.331	1.181	1.48	1.331	1.249	1.412	0.04705	7.07%	5.77%

003-715-114-2 CETIS™ v1.9.6.14 Analyst: CM QA: HW

CETIS Analytical Report

Report Date: 18 Sep-24 09:03 (p 1 of 2)
Test Code/ID: 524423.B / 15-9197-0090

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	01-9125-2993	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	18 Sep-24 9:03	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	04-0005-9987	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	10 Sep-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	17 Sep-24	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	00-5048-5176	**Code:**	524423.B	**Project:**	WET Quarterly Compliance Test (3Q)
Sample Date:	09 Sep-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	10 Sep-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1337278	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
LC5	100	86.24	n/a	1	n/a	1.16
LC10	>100	n/a	n/a	<1	n/a	n/a
LC15	>100	n/a	n/a	<1	n/a	n/a
LC20	>100	n/a	n/a	<1	n/a	n/a
LC25	>100	n/a	n/a	<1	n/a	n/a
LC40	>100	n/a	n/a	<1	n/a	n/a
LC50	>100	n/a	n/a	<1	n/a	n/a

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	D	4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	1	0.0%
23		4	0.9500	0.8000	1.0000	0.1000	10.53%	5.0%	38/40	0.9833	1.67%
45		4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	0.9833	1.67%
89		4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	0.9833	1.67%
95		4	0.9500	0.9000	1.0000	0.0577	6.08%	5.0%	38/40	0.95	5.0%
100		4	0.9500	0.9000	1.0000	0.0577	6.08%	5.0%	38/40	0.95	5.0%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
23		1.0000	0.8000	1.0000	1.0000
45		1.0000	1.0000	1.0000	1.0000
89		1.0000	1.0000	1.0000	1.0000
95		0.9000	1.0000	0.9000	1.0000
100		1.0000	0.9000	1.0000	0.9000

003-715-114-2 CETIS™ v1.9.6.14 Analyst: CM QA: HW

CETIS Analytical Report

Report Date: 18 Sep-24 09:03 (p 3 of 3)
Test Code/ID: 524423.B / 15-9197-0090

Fathead Minnow 7-d Larval Survival and Growth Test **SeaCrest Group**

Analysis ID:	18-8211-8920	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.6
Analyzed:	18 Sep-24 9:03	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Batch ID:	04-0005-9987	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	10 Sep-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	17 Sep-24	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	00-5048-5176	**Code:**	524423.B	**Project:**	WET Quarterly Compliance Test (3Q)
Sample Date:	09 Sep-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	10 Sep-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	100	>100	n/a	1	16.00%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water		23	-0.4223	2.407	0.074	6	CDF	0.9281	Non-Significant Effect
		45	-1.502	2.407	0.074	6	CDF	0.9959	Non-Significant Effect
		89	-1.575	2.407	0.074	6	CDF	0.9967	Non-Significant Effect
		95	-1.096	2.407	0.074	6	CDF	0.9867	Non-Significant Effect
		100	-0.6821	2.407	0.074	6	CDF	0.9608	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0073574	0.0014715	5	0.776	0.5796	Non-Significant Effect
Error	0.0341317	0.0018962	18			
Total	0.0414892		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	3.299	15.09	0.6539	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9468	0.884	0.2310	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.4633	0.3868	0.5397	0.466	0.403	0.518	0.02403	10.37%	0.00%
23		4	0.4763	0.4086	0.5439	0.479	0.428	0.519	0.02125	8.93%	-2.81%
45		4	0.5095	0.4502	0.5688	0.4965	0.481	0.564	0.01862	7.31%	-9.98%
89		4	0.5118	0.4383	0.5852	0.492	0.483	0.58	0.02308	9.02%	-10.47%
95		4	0.497	0.4039	0.5901	0.4855	0.439	0.578	0.02926	11.77%	-7.29%
100		4	0.4843	0.4559	0.5126	0.487	0.462	0.501	0.008911	3.68%	-4.53%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.454	0.478	0.518	0.403
23		0.428	0.504	0.454	0.519
45		0.492	0.481	0.501	0.564
89		0.483	0.5	0.58	0.484
95		0.439	0.479	0.492	0.578
100		0.462	0.496	0.501	0.478

003-715-114-2 CETIS™ v1.9.6.14 Analyst: QM QA: HW

CETIS Analytical Report

Report Date: 18 Sep-24 09:03 (p 2 of 2)
Test Code/ID: 524423.B / 15-9197-0090

Fathead Minnow 7-d Larval Survival and Growth Test **SeaCrest Group**

Analysis ID:	15-5341-9047	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.6
Analyzed:	18 Sep-24 9:03	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	04-0005-9987	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	10 Sep-24	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	17 Sep-24	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	00-5048-5176	**Code:**	524423.B	**Project:**	WET Quarterly Compliance Test (3Q)
Sample Date:	09 Sep-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	10 Sep-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	147459	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	n/a	n/a	<1	n/a	n/a
IC10	>100	n/a	n/a	<1	n/a	n/a
IC15	>100	n/a	n/a	<1	n/a	n/a
IC20	>100	n/a	n/a	<1	n/a	n/a
IC25	>100	n/a	n/a	<1	n/a	n/a
IC40	>100	n/a	n/a	<1	n/a	n/a
IC50	>100	n/a	n/a	<1	n/a	n/a

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	D	4	0.4633	0.403	0.518	0.04806	10.37%	0.0%	0.4916	0.0%
23		4	0.4763	0.428	0.519	0.04251	8.93%	-2.81%	0.4916	0.0%
45		4	0.5095	0.481	0.564	0.03724	7.31%	-9.98%	0.4916	0.0%
89		4	0.5118	0.483	0.58	0.04616	9.02%	-10.47%	0.4916	0.0%
95		4	0.497	0.439	0.578	0.05852	11.77%	-7.29%	0.4916	0.0%
100		4	0.4843	0.462	0.501	0.01782	3.68%	-4.53%	0.4843	1.49%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.454	0.478	0.518	0.403
23		0.428	0.504	0.454	0.519
45		0.492	0.481	0.501	0.564
89		0.483	0.5	0.58	0.484
95		0.439	0.479	0.492	0.578
100		0.462	0.496	0.501	0.478

003-715-114-2 CETIS™ v1.9.6.14 Analyst: CM QA: HW

Appendix 4 – QA/QC and Reference Toxicant Test Chart

Quality Assurance Check List – Chronic Whole Effluent Toxicity Test

Client:	Thorin Resources
SeaCrest Sample No:	524423.B
Species Tested:	*Ceriodaphnia dubia* and fathead minnow

Sample Dates	**Start Date of Test (*Ceriodaphnia dubia)***	**Start Date of Test (fathead minnow)**
09-09-2024		
09-11-2024		
09-12-2024	09-10-2024	09-10-2024

Sample received in lab properly preserved (0-6°C)?	**Y**
Sample received at laboratory within 36 hours of collection?	**Y**
Sample delivered on ice or equivalent?	**Y**
Test initiated within 36-hours of collection?	**Y**
Test protocol conforms to CDPHE guidelines (*Ceriodaphnia dubia)*?	**Y**
Test protocol conforms to CDPHE guidelines (fathead minnow)?	**Y**
Average test temp. ±1°C (*Ceriodaphnia dubia*)?	**Y**
Average test temp. ±1°C (fathead minnow)?	**Y**
DO level ≥4.0mg/L; no super-saturation (*Ceriodaphnia dubia*)?	**Y**
DO level ≥4.0mg/L; no super-saturation (fathead minnow)?	**Y**
Survival in control ≥80% (*Ceriodaphnia dubia*)?	**Y**
Survival in control ≥80% (fathead minnow)?	**Y**
Ceriodaphnia dubia neonates <24-hours old?	**Y**
Fathead minnow larvae <24-hours old?	**Y**
Appropriate reference toxicity test conducted?	**Y**
Reference toxicity test results within the confidence limits for the lab?	**Y**

Author Cat Mc Ed *Date* September 19, 2024

Position: Laboratory Manager

Quality Control Haley West *Date* September 19, 2024

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

METHOD QC

Method	Analyte	Date	LCS (rec)	%REC	%RPD	QC LIMITS
2320 B	Alkalinity - Total	8/8/2024	97.60%	96.48%	-1.75%	± 5.00%
2320 B	Alkalinity - Total	8/15/2024	101.60%	98.65%	4.33%	± 5.00%
2320 B	Alkalinity - Total	8/22/2024	104.80%	97.87%	-1.00%	± 5.00%
2320 B	Alkalinity - Total	8/28/2024	100.80%	97.01%	-1.02%	± 5.00%
4500 NH_3 D	Ammonia	8/7/2024	103.00%	100.44%	-0.69%	± 10.00%
4500 NH_3 D	Ammonia	8/15/2024	104.00%	105.00%	-3.13%	± 10.00%
4500 NH_3 D	Ammonia	8/23/2024	103.40%	96.50%	-3.57%	± 10.00%
4500 NH_3 D	Ammonia	8/28/2024	95.40%	104.91%	1.98%	± 10.00%
4500 Cl D	Chlorine	8/23/2024	103.45%	103.33%	0.00%	± 5.00, ± 20.00%
2340 B	Hardness - Total	8/8/2024	98.25%	102.48%	1.23%	± 5.00%
2340 B	Hardness - Total	8/15/2024	105.00%	103.00%	-3.39%	± 5.00%
2340 B	Hardness - Total	8/22/2024	102.00%	101.00%	-2.41%	± 5.00%
2340 B	Hardness - Total	8/28/2024	101.75%	104.40%	1.63%	± 5.00%

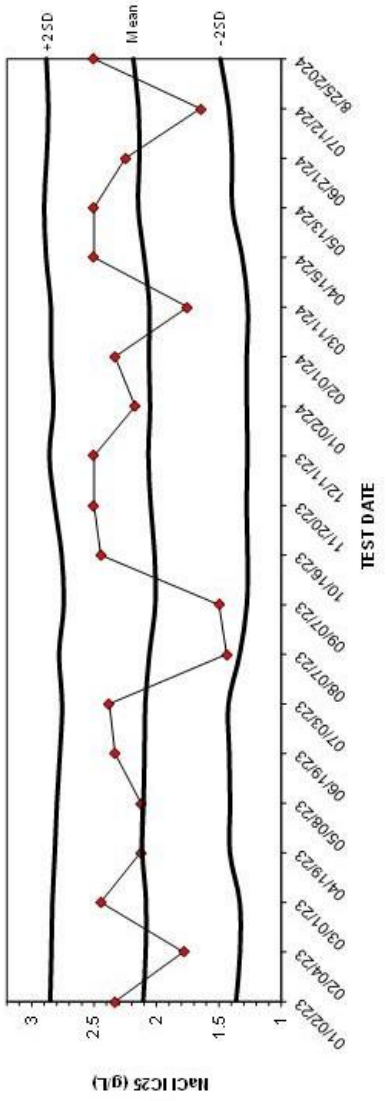
			LCS (rec)	%REC M1	%REC M2	QC Limits
4500 O	DO - Winkler	8/8/2024	N/A	98.55%	98.55%	± 5.00%
4500 O	DO - Winkler	8/15/2024	N/A	98.55%	101.50%	± 5.00%
4500 O	DO - Winkler	8/21/2024	N/A	100.00%	97.14%	± 5.00%
4500 O	DO - Winkler	8/29/2024	N/A	101.45%	102.94%	± 5.00%

			Blank	%REC MR S	%RPD	QC Limits
2540 D	Suspended Solids (TTL)	8/28/2024	100.00%	89.00%	0.00%	± 15%
2540 C	Dissolved Solids (TTL)	8/28/2024	100.00%	110.50%	0.00%	± 15%

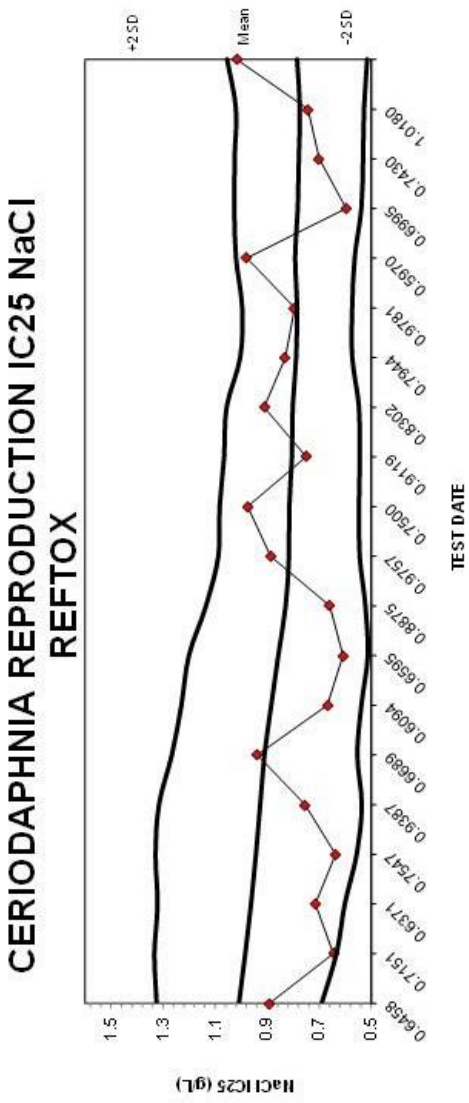
Signature: Catherine Reid
Date: September 1st 2024

Signature: Haley Ulett
Date: September 1, 2024

CERIODAPHNIA SURVIVAL LC25 NaCl REFTOX

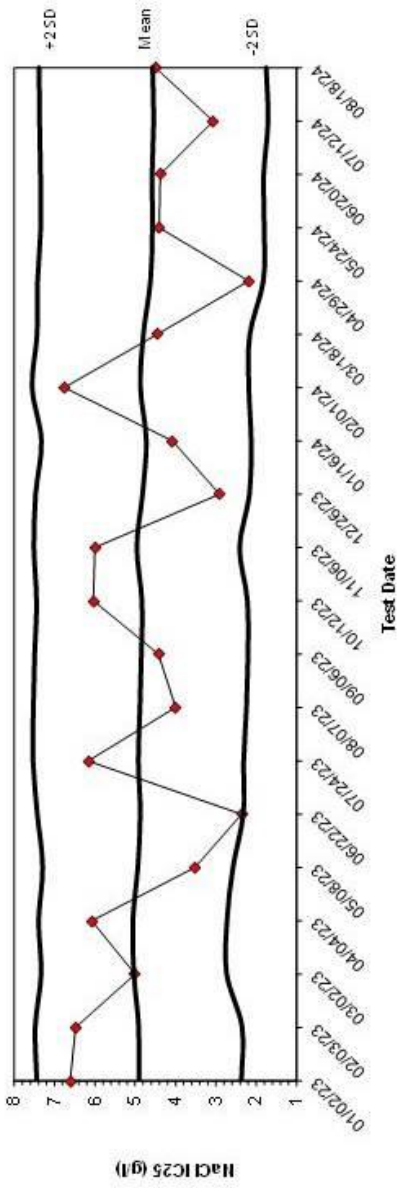


Date	IC25	Mean	-2 SD	+2 SD
01/02/23	2.3330	2.1075	1.3622	2.8527
02/04/23	1.7860	2.0869	1.3307	2.8430
03/01/23	2.4480	2.0844	1.3336	2.8352
04/19/23	2.1300	2.1144	1.4129	2.8158
05/08/23	2.1250	2.1045	1.4102	2.7988
06/19/23	2.3330	2.0965	1.4176	2.7755
07/03/23	2.3780	2.0907	1.4243	2.7571
08/07/23	1.4375	2.0580	1.3336	2.7824
09/07/23	1.5000	2.0104	1.2766	2.7441
10/16/23	2.4480	2.0158	1.2703	2.7613
11/20/23	2.5000	2.0476	1.2784	2.8168
12/11/23	2.5000	2.0655	1.2717	2.8592
01/02/24	2.1720	2.0518	1.2767	2.8269
02/01/24	2.3330	2.0617	1.2774	2.8460
03/11/24	1.7500	2.0578	1.2678	2.8477
04/15/24	2.5000	2.0995	1.3131	2.8858
05/13/24	2.5000	2.1471	1.3927	2.9014
06/21/24	2.2500	2.1378	1.3941	2.8816
07/12/24	1.6500	2.1444	1.4215	2.8672
8/25/2024	2.5000	2.1860	1.4885	2.8836



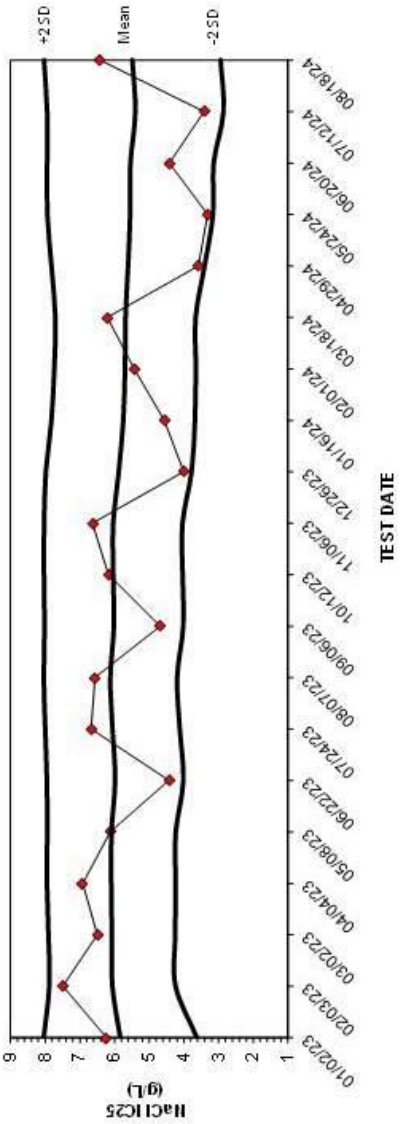
Date	IC25	Mean	-2 SD	+2 SD
01/02/23	0.8910	1.0085	0.6912	1.3258
2/4/2023	0.6458	0.98411255	0.634012766	1.334212334
03/01/23	0.7151	0.9621	0.6021	1.3221
04/19/23	0.6371	0.9431	0.5562	1.3300
05/08/23	0.7547	0.9267	0.5369	1.3165
06/19/23	0.9387	0.9105	0.5540	1.2670
07/03/23	0.6689	0.8843	0.5384	1.2302
08/07/23	0.6094	0.8575	0.5136	1.2014
09/07/23	0.6595	0.8290	0.5226	1.1353
10/16/23	0.8875	0.8164	0.5450	1.0878
11/20/23	0.9757	0.8150	0.5474	1.0826
12/11/23	0.7500	0.8049	0.5440	1.0658
01/02/24	0.9119	0.8019	0.5477	1.0560
02/01/24	0.8302	0.7888	0.5736	1.0040
03/11/24	0.7944	0.7848	0.5734	0.9962
04/15/24	0.9781	0.7923	0.5644	1.0202
05/13/24	0.5970	0.7824	0.5384	1.0265
06/21/24	0.6995	0.7784	0.5315	1.0252
07/12/24	0.7430	0.7741	0.5279	1.0202
08/25/24	1.0180	0.7853	0.5160	1.0545

FHM SURVIVAL LC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
01/02/23	6.6150	4.9051	2.3687	7.4415
02/03/23	6.4800	4.9171	2.3524	7.4818
03/02/23	5.0000	5.0364	2.7367	7.3361
04/04/23	6.0800	5.0628	2.7278	7.3978
05/08/23	3.5230	4.9385	2.5790	7.2979
06/22/23	2.3600	4.8775	2.3230	7.4321
07/24/23	6.1696	4.9250	2.3130	7.5370
08/07/23	4.0000	4.8853	2.2436	7.5269
09/06/23	4.4240	4.8500	2.2052	7.4948
10/12/23	6.0360	4.8354	2.2221	7.4487
11/06/23	6.0000	4.9627	2.4111	7.5142
12/26/23	2.9120	4.8223	2.1721	7.4725
01/16/24	4.0800	4.7287	2.1284	7.3289
02/01/24	6.7670	4.8732	2.1868	7.5596
03/18/24	4.4550	4.7999	2.1625	7.4374
04/29/24	2.1900	4.6245	1.8268	7.4222
05/24/24	4.4090	4.5749	1.8037	7.3461
06/20/24	4.3800	4.5839	1.8168	7.3510
07/12/24	3.0670	4.5415	1.7090	7.3739
08/18/24	4.5000	4.5714	1.7560	7.3867

FHM GROWTH IC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
01/02/23	6.2350	5.8373	3.6291	8.0455
02/03/23	7.4870	6.0624	4.2424	7.8824
03/02/23	6.5000	6.0758	4.2468	7.9047
04/04/23	6.9180	6.0931	4.2384	7.9479
05/08/23	6.1200	6.0879	4.2341	7.9416
06/22/23	4.4340	5.9816	4.0146	7.9487
07/24/23	6.6760	6.0591	4.1185	7.9998
08/07/23	6.5670	6.1170	4.1925	8.0415
09/06/23	4.6810	6.0194	4.0192	8.0196
10/12/23	6.1750	6.0363	4.0372	8.0354
11/06/23	6.6360	6.0352	4.0375	8.0330
12/26/23	4.0036	5.8797	3.7796	7.9799
01/16/24	4.5690	5.7497	3.6808	7.8186
02/01/24	5.4310	5.6958	3.6572	7.7345
03/18/24	6.2100	5.6820	3.6624	7.7017
04/29/24	3.5807	5.6121	3.4072	7.8170
05/24/24	3.3150	5.5507	3.1637	7.9377
06/20/24	4.4150	5.5436	3.1435	7.9437
07/12/24	3.4180	5.4037	2.8641	7.9433
08/18/24	6.4180	5.4925	2.9474	8.0376

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

December 20, 2024

CJ Dickerson
Thorin Resources
6208 County Road 26
Ouray, CO 81427

Dear CJ:

Enclosed is the report for chronic biomonitoring tests performed for Thorin Resources on effluent from the Wastewater Treatment Plant 002A outfall. There was no statistically significant toxicity to either test species at any effluent concentration. The effluent passes WET (Whole Effluent Toxicity) testing requirements for this sampling period.

If you have any questions or concerns, please do not hesitate to contact me at (303) 661-9324.

Best regards,

Haley West

Haley West
Senior Laboratory Manager

REPORT OF CHRONIC BIOMONITORING TESTS CONDUCTED FOR THORIN RESOURCES ON EFFLUENT FROM THE WWTP 002A OUTFALL

Prepared for:

CJ Dickerson
Thorin Resources
6208 County Road 26
Ouray, CO 81427

Prepared by:

Haley West
SeaCrest Group
500 S Arthur Ave. Suite 450
Louisville, Colorado 80027-3065
(303) 661-9324

December 20, 2024

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Chronic Toxicity Test Summary

Test:	7-day static renewal using *Ceriodaphnia dubia* 7-day static renewal using fathead minnow *(Pimephales promelas)*
Client:	Thorin Resources
Test Procedure Followed:	*Ceriodaphnia dubia*: EPA/821/R-02-013. Method 1002.0 (2002) fathead minnow: EPA/821/R-02-013. Method 1000.0 (2002)
Sample Number:	524575.B
Dilution Water:	moderately hard laboratory reconstituted water
Test Organism Source:	SeaCrest Group
Reference Toxicant:	Sodium Chloride

Sample	Time of Collection	Date of Collection	Time of Receipt	Date of Receipt
Effluent 1	1100	12-10-2024	0920	12-11-2024
Effluent 2	1030	12-11-2024	1000	12-12-2024
Effluent 3	1300	12-12-2024	0935	12-13-2024

	Ceriodaphnia dubia	fathead minnow
Test Initiation Time	1330	1100
Test Initiation Date	12-11-2024	12-11-2024
Test Completion Time	1340	1130
Test Completion Date	12-17-2024	12-18-2024

Abstract with Results

Test Concentrations:	Control (0%), 23%, 45%, 89%, 95%, 100%
Number of Organisms/Concentration:	10 for *Ceriodaphnia dubia* 40 for fathead minnow
Replicates at each Concentration:	10 for *Ceriodaphnia dubia* 4 for fathead minnow

	Ceriodaphnia dubia	**fathead minnow**
Test vessel size/Exposure volume	30ml/15ml	500ml/200ml
Sub-lethal NOEL/IC25	100%/>100%	100%/>100%
Pass/Fail Status	**PASS**	**PASS**
Temperature Range (°C)	24.1 – 25.3	24.1 – 24.9
Dissolved Oxygen Range (mg/L)	6.8 – 8.9	3.8 – 8.8
pH Range	7.6 – 8.1	7.3 – 8.1

	Control (*Cerio*/FHM)	**Effluent Sample**
Hardness (mg/L as $CaCO_3$)	82/90	178/181/136
Alkalinity (mg/L as $CaCO_3$)	59/57	65/69/68
Total residual chlorine (mg/L)	<0.01	<0.01
Total ammonia (mg/L as NH_3)	<0.03	<0.03

INTRODUCTION

Biomonitoring provides an effective means by which the toxicity of discharges from municipal, industrial, and mining operations can be tested. Among the advantages of biomonitoring is the ability to test complex effluents containing a broad range of contaminants. Biomonitoring, when used in conjunction with chemical analyses, can generate data capable of identifying a much wider range of contaminants.

The Colorado Water Quality Control Division requires certain NPDES permittees to perform acute and/or chronic biomonitoring tests. The chronic test measures significant differences in lethality and in reproduction (*Ceriodaphnia dubia*) or growth (fathead minnow – *Pimephales promelas*) between control and effluent-exposed organisms.

The present report discusses the results of chronic biomonitoring tests conducted on effluent from the Thorin Resources WWTP 002A discharge. These tests were conducted in accordance with EPA and State of Colorado procedures in December 2024.

MATERIALS AND METHODS

Sample Collection

Two or three gallons of the effluent were collected on three separate dates as specified in Permit CO-0000003. Samples were delivered chilled to the SeaCrest lab where they were held at 0-6◦C. Chain of custody forms showing sample collection and laboratory arrival times are included (Appendix 1).

Dilution Water

Laboratory reconstituted water was used as both the dilution water source and the control for the tests. Reconstituted water for the *Ceriodaphnia dubia* test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, potassium chloride, and sodium selenate to deionized water. Reconstituted water for the fathead minnow test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, and potassium chloride to deionized water.

Test Organisms

The biomonitoring test used *Ceriodaphnia dubia,* cultured in the SeaCrest laboratory. The organisms are cultured in brood culture boards from which individual females are monitored for survival and reproduction for periods of up to two weeks. Neonates less than 24-hours old, released from third or subsequent broods of eight or more within an 8-hour period, are collected from the brood chambers and used in tests. The animals are fed daily with a mixture of Yeast, Cereal Leaves, and Trout Chow (YCT), produced in-house. This is supplemented with cultured green algae *(Selenastrum capricornutum)* provided by Aquatic Biosystems.

Less than one-day-old fathead minnow, cultured in the laboratory, were also used in the test. Adult fish are maintained in 10-gallon aquaria where females deposit their eggs on the under-surface of split PVC pipe sections. The eggs are collected daily and transferred to aerated containers where they hatch after three to four days. The larval fish are fed newly hatched brine shrimp *(Artemia* sp.) at least twice per day.

In-house organisms are tested monthly in a reference toxicant test using sodium chloride to monitor overall health and test reproducibility (Appendix 4).

Test Procedures

Upon receipt at the lab, samples were analyzed for alkalinity, ammonia, chlorine, conductivity, dissolved oxygen, hardness, and pH.

Methods used in chemical analysis

Alkalinity	EPA 310.2	Hach 8203	I-2030-85.2
Ammonia	SM4500-NH_3, C-E1997	ASTM D1426-08	
Chlorine	SM4500-Cl D	Hach 10026	
Conductivity	SM2510		
Dissolved Oxygen	SM4500-O	Electrode: G-2001	Winkler (QC): B-F-2001
Hardness	SM2340 B or C	Hach 8213	
pH	SM4500-H+ B-2000		

The test followed procedures in EPA[3] and CDPHE[4] guidelines. Exposure concentrations included control (0%), 23%, 45%, 89%, 95%, and 100% mixtures, diluted with moderately hard laboratory reconstituted water.

Individual *Ceriodaphnia dubia* were placed in 30ml plastic containers containing approximately 15ml of exposure medium. Ten replicates at each concentration were used. The animals were fed daily with the YCT mixture and an equal volume of the green algae *(Selenastrum capricornutum)*. The exposure medium was changed daily in each container and the number of young released overnight were counted and recorded. Young were removed from the containers daily and discarded. Routine measurements were made each day of temperature, dissolved oxygen, and pH before and after the water changes.

Fathead minnow were exposed in 500ml plastic cups to which 250ml of media was replaced daily. Four replicates were used at each concentration. Ten fish, less than 24-hours old, were placed in each cup. The fish were monitored daily for survival and fed live brine shrimp at least twice per day. After seven days, the fish were removed from the cups, euthanized with isopropyl alcohol, and then placed in aluminum pans and dried in an oven for a minimum of six hours at 100ºC. The pans were then weighed on a five-place analytical balance to determine the average dry weight of the fish from each replicate.

Data Analysis

Data from the tests were analyzed on a personal computer using the CETIS program (developed by Tidepool Scientific Software). Statistical tests used in the analyses are shown in Table 1. Test acceptability was determined using control survival and reproduction/growth criteria, concentration-response relationships, and percent minimum significant differences (USEPA [5,6]).

Table 1. Statistical methods used in testing for significant differences in test parameters.

Variance	Distribution
Bartlett Equality of Variance Test	Shapiro-Wilk W Normality Test

Statistical Difference				
Species	Survival	Growth	Reproduction	IC_{25}
Ceriodaphnia dubia	Fisher Exact/Bonferroni-Holm Test	N/A	Steel Many-One Rank Sum Test	ICp
fathead minnow	Steel Many-One Rank Sum Test	Dunnett Multiple Comparison Test	N/A	ICp

RESULTS

Ceriodaphnia dubia Test Results

Test results for the *Ceriodaphnia dubia* are summarized in Table 2 and provided on the data sheets located in Appendix 2. Survival was 90% in the 100% effluent and was 100% in the remaining effluent concentrations. Control survival was 80%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL (No Observed Effect Level) for lethality was 100% and the LC_{25} (Lethal Concentration 25) for lethality was >100%.

Average number of neonates was 20.3 in the 100% effluent concentration and ranged from 21.3 – 22.6 in the remaining effluent concentrations. The average number of neonates in the control was 18.4 for statistical analyses and test acceptability criteria. No statistically significant differences in the number of neonates were found between the control and any effluent concentration. The NOEL for reproduction was 100% and the IC_{25} (Inhibition Concentration 25) for reproduction was >100%.

Table 2. Summary of *Ceriodaphnia dubia* test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Mean Neonates	Min.	Max.	Significant Difference	
					Lethality	Reprod.
Control (0%)	80	18.4	4	27		
23%	100	21.3	17	25		
45%	100	22.2	14	31		
89%	100	22.5	11	30		
95%	100	22.6	12	31		
100%	90	20.3	4	26		

Fathead Minnow Test Results

Fathead minnow results are summarized in Table 3 and are provided on data sheets in Appendix 3. Survival was 95% in the 100% effluent concentration and ranged from 95% - 100% in the remaining effluent concentrations. Control survival was 100%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL for lethality was 100% and the LC_{25} for lethality was >100%.

Average weight in the 100% effluent concentration was 0.547mg and ranged from 0.465mg - 0.530mg per individual in the remaining effluent concentrations. The average weight for the control fish was 0.521mg for statistical analyses and test acceptability criteria. No statistically significant differences for growth were measured in any effluent concentration when compared to the control. The NOEL for growth was 100% and the IC_{25} for growth was >100%.

Table 3. Summary of fathead minnow test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Average Weight (mg)	Min.	Max.	Significant Difference	
					Lethality	Growth
Control (0%)	100	0.521	0.463	0.605		
23%	100	0.465	0.394	0.531		
45%	100	0.502	0.414	0.582		
89%	95	0.530	0.509	0.543		
95%	100	0.511	0.435	0.579		
100%	95	0.547	0.493	0.587		

Test Acceptability

Acceptable control survival (80%) was achieved in both tests. Similarly, *Ceriodaphnia dubia* reproduction (average 15 neonates/organism) and fathead minnow growth (average 0.250mg/test container) in control organisms met required levels. PMSD was within the required limits for an acceptable test (Table 4).

Table 4. PMSD for chronic test parameters.

	fathead minnow growth		***C. dubia* reproduction**	
	Lower bound	Upper bound	Lower bound	Upper bound
PMSD	12	30	13	47
(% Minimum significant difference)	18.4		31.8	

DISCUSSION

A failed test for this discharge occurs when there is an NOEL or IC_{25} less than the IWC (Instream Waste Concentration) of 89%. The NOEL represents the highest effluent concentration at which no statistically significant effect is observed. The IC_{25} represents an estimate of the effluent concentration that would cause a 25 percent reduction of a non-quantal biological measurement. A violation for this discharge occurs when both the NOEL and the IC_{25} are less than the IWC. Since neither test species demonstrated statistically significant differences meeting these criteria, the discharge passes WET testing requirements for this sampling period.

REFERENCES

1. **Hach Chemical Company.** 2008. *Hach's Water Analysis Handbook*. Fifth Edition. Hach Chemical Company, Loveland, Colorado**.** Digital Medium.
2. **APHA/AWWA/WEF.** 1998. *Standard Methods for the Examination of Water and Wastewater*. 20th Edition. American Public Health Association, Washington, D.C.
3. **USEPA.** 2002. *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms.* EPA-821-R-02-013. 335 pp.
4. **CDPHE (Colorado Department of Public Health and Environment).** 1998. *Laboratory Guidelines for Conducting Whole Effluent Toxicity Tests.* Water Quality Control Division.
5. **USEPA.** 2000. *Method of Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 CFR Part 136). EPA/821/B-00/004.
6. **USEPA**. 2000. *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications under the National Pollutant Discharge Elimination System Program*. EPA/833/R-00/003.

Appendix 1 – Chain of Custody with Sample Receipt Forms

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: Thorin Resources
P. O./Project Number:
Contact: CJ Dickerson
Address: 1900 Main St Unit 1
Phone # (602) 793-1321 E-Mail: cjdickerson@thorinresources.com
Fax # Sampler:
Report By: ☐ Mail ☒ PDF ☐ FAX

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)			Number of Containers	Total Volume
OF0602A	12/12/10	11:00	G	524575.8#1		X														2	29

Analysis (Check all applicable)

Turnaround Requirements (Analytical Testing Only)
Standard (10 days) ____ 6-9 Day
____ 3-5 Day ____ 1-2 Day
Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Ceriodaphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
CJ Dickerson	12/10 4:55P						12/14 0920

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2024

Project # 524575.B Sample #: 1
Date: 12/12/24 Initials: EW

Samples Were:

1. FedEx (UPS) Courier Hand Delivery (circle one)
   Notes:

2. Chilled to Ship Ambient (Chilled)

3. Cooler Received Broken or Leaking Y (N) NA
   Notes:

4. Sample Received Broken or Leaking Y (N)
   Notes:

5. Received Within 36hr Holding Time (Y) N
   Notes:

6. Aeration necessary Y (N)

7. pH adjustment necessary Y (N)

8. Sample Received at Temperature between 0-6° C . (Y) N NA
   Notes:

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: light, large P.M.
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
575.B	1.7	7.7	7.8	432

Custody Seals:

1. Present on Outer Package Y (N)
2. Unbroken on Outer Package Y N (NA)
3. Present on Sample Y (N)
4. Unbroken on Sample Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample (Y) N

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: Thorin Resources
P. O./Project Number:
Contact: CJ Dickerson
Address: 1900 Main St Unit 1
Phone #: (602) 793-1321 E-Mail: cjdickerson@thorinresources.com
Fax #: Sampler:
Report By: ☐ Mail ☐ PDF ☐ FAX

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Analysis (Check all applicable)										Number of Containers	Total Volume
										Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)				
OF002A	9/11/24	10:30	G	524575-BH2		X														2	3gal
12 PM																					

Turnaround Requirements (Analytical Testing Only)
Standard (10 days) ____ 6-9 Day
____ 3-5 Day ____ 1-2 Day
Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
	9/11 4:35P	UPS		UPS			12122 4 1000

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2024

Project # 524575.B Sample #: 2
Date: 12/12/24 Initials: EW

Samples Were:

1. FedEx (UPS) Courier Hand Delivery (circle one)
   Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — (Y) N NA
   Notes:

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: Moderate PM
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
575#2	2.2	8.8	7.6	460

Custody Seals:

1. Present on Outer Package — Y (N)
2. Unbroken on Outer Package — Y N (NA)
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — (Y) N

HW

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

CHAIN OF CUSTODY

Client/Project Name: Thorin Resources
P. O./Project Number:
Contact: CJ Dickerson
Address: 1900 Main St Unit 1
Phone # 602 793-1321 E-Mail: cjdickerson@thorinresources.com
Fax # Sampler:
Report By: ☐ Mail ☒ PDF ☐ FAX

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Analysis (Check all applicable) Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)			Number of Containers	Total Volume
OF002A	12/12	13:00	G	524575.3#3		X														3	3gal

Turnaround Requirements (Analytical Testing Only)
Standard (10 days) _____ 6-9 Day
_____ 3-5 Day _____ 1-2 Day
Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

Relinquished By (1)	Received By (1)	Relinquished By (2)	Received By (2)
Signature	Signature	Signature	Signature
Date/Time 12/12 4:15p	Date/Time	Date/Time	Date/Time 12 13 24 0935

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2024

Project # 524575.B Sample #: 3
Date: 121324 Initials: JT

Samples Were:

1. FedEx (UPS) Courier Hand Delivery (circle one)
   Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — (Y) N NA
   Notes:

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: clear, light pink
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
575B#3	2.9	8.9	7.7	450

Custody Seals:

1. Present on Outer Package — Y (N)
2. Unbroken on Outer Package — Y N (NA)
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — (Y) N

HN

Appendix 2 – Data Sheets for the *Ceriodaphnia dubia* Test

WET TEST REPORT FORM – CHRONIC

Permittee: Thorin Resources
Permit No.: CO-0000003
Outfall: 002A – IWC: 89%
Test Type: Routine ☒ Accelerated ☐ Screen ☐
Test Species: *Ceriodaphnia dubia*

Test Start Time	Test Start Date	Test End Time	Test End Date
1330	12-11-2024	1340	12-17-2024

Test Results	Lethality/TCP3B	Reproduction/TKP3B
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	23%	45%	89%	95%	100%
Exposed organisms	10	10	10	10	10	10
Survival for day 1	10	10	10	10	10	10
Survival for day 2	10	10	10	10	10	10
Survival for day 3	10	10	10	10	10	10
Survival for day 4	9	10	10	10	10	9
Survival for day 5	9	10	10	10	10	9
Survival for day 6	8	10	10	10	10	9
Mean 3 Brood Total	18.4	21.3	22.2	22.5	22.6	20.3

Hardness (mg/L) – Receiving Water: N/A Effluent: 178/181/136 Recon Water: 82
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 65/69/68 Recon Water: 59
Chlorine (mg/L) – Effluent: <0.01 pH (initial/final) – Control: 7.9/7.8 100%: 7.8/7.8
Total Ammonia as NH_3 (mg/L) - Effluent: <0.03

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Ethan White, Daniela Thornton, and Hannah Tiede

Signature Haley West *Date* December 20, 2024

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: March 2023

Permittee: Thorin Resources **Lab #:** 524575.B **Site:** 001A
IWC %: 89 **Template #:** 5 **Dilution Water:** MH24-025 **Sample Date:** 121024
Age & Source: 121124 - 2183 **Test Start:** 121124 - 1330 **Test End:** 121724 1340
Test Conditions:

	0	1	2	3	4	5	6	7	Total	
(C)	0	0	0	0	6	11	10		27	
	0	0	0	5	4	0	8		17	
	0	0	0	6	8	0	12		26	
	0	0	0	5	10	0	7		22	
	0	0	0	5	7	0	10		22	
0	0	0	0	0	5	10	8		23	
	0	0	0	0	4	8	0		12	
	0	0	0	0	4	9	4		17	
	0	0	0	7	7	0	0D		14	D
	0	0	0	0	D 4				4	D
DO	7.0	7.6 | 6.8	7.1	7.2	8.1 | 7.0	8.1 | 7.4	8.4 | 7.5	7.9		18.4
Temp	24.1	24.6 | 24.1	24.4	24.1	24.6 | 24.1	25.3 | 24.1	24.5 | 24.1	25.0		
pH	7.9	7.9 | 8.0	7.8	8.0	8.0 | 8.1	8.0 | 7.9	7.9 | 7.9	7.8		
Cond	347	337	346	343	319	311				
(1)	0	0	0	0	5	9	7		21	
	0	0	0	6	3	0	8		17	
	0	0	0	5	9	0	11		25	
	0	0	0	5	0	9	10		24	
	0	0	0	6	3	0	13		22	
23	0	0	0	0	5	13	0		18	
	0	0	0	0	5	10	6		21	
	0	0	0	0	7	12	0		19	
	0	0	0	6	8	0	11		~~24~~ 25	
	0	0	0	0	6	15	0		21	
DO	7.2	7.6 | 7.0	7.1	7.4	8.1 | 7.4	8.1 | 7.6	8.4 | 7.7	7.9		21.3
Temp	24.1	24.6 | 24.1	24.4	24.3	24.6 | 24.1	25.3 | 24.1	24.5 | 24.1	25.0		
pH	7.9	7.9 | 7.9	7.8	7.9	8.0 | 8.0	8.0 | 7.8	7.9 | 7.8	7.8		
Cond	360	359	368	363	345	338				
(2)	0	0	0	0	6	6	12		24	
	0	0	0	4	0	10	11		25	
	0	0	0	7	9	0	15		31	
	0	0	0	4	5	0	5		14	
45	0	0	0	6	6	0	13		25	
	0	0	0	0	7	~~7~~	6		20	
	0	0	0	0	7	5	7		19	
	0	0	0	0	4	11	6		21	
	0	0	0	6	9	0	10		25	
	0	0	0	0	8	10	0		18	
DO	7.3	7.6 | 7.2	7.1	7.9	8.2 | 7.8	8.1 | 7.7	8.4 | 7.9	7.9		22.2
Temp	24.1	24.6 | 24.1	24.4	24.5	24.6 | 24.2	25.3 | 24.1	24.5 | 24.1	25.0		
pH	7.8	7.9 | 7.8	7.8	7.8	7.9 | 7.9	8.0 | 7.8	7.9 | 7.7	7.8		
Cond	381	380	394	385	378	361				
(3)	0	0	0	0	4	10	12		26	
	0	0	0	5	7	0	14		26	
	0	0	0	6	8	0	16		30	
	0	0	0	4	6	0	13		23	
89	0	0	0	5	4	0	11		22	
	0	0	0	0	7	8	9		24	
	0	0	0	0	6	5	0		11	
	0	0	0	0	5	11	8		24	
	0	0	0	6	8	0	12		26	
	0	0	0	0	5	8	0		13	
DO	7.4	7.7 | 7.3	7.2	8.6	8.2 | 8.1	8.2 | 7.8	8.4 | 8.1	8.0		22.5
Temp	24.1	24.6 | 24.1	24.4	25.0	24.7 | 24.2	25.3 | 24.1	24.5 | 24.1	25.0		
pH	7.8	7.8 | 7.8	7.9	7.7	7.9 | 7.8	7.9 | 7.7	7.9 | 7.7	7.8		
Cond	416	421	443	431	420	410				

HW

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: March 2023

	0	1	2	3	4	5	6	7	Total
(4)	0	0	0	0	6	8	11		25
	0	0	0	6	9	0	13		28
	0	0	0	7	8	0	14		29
	0	0	0	4	6	0	15		25
95	0	0	0	5	11	0	15		31
	0	0	0	0	5	7	0		12
	0	0	0	0	4	10	6		20
	0	0	0	0	5	8	7		20
	0	0	0	6	6	0	9		21
	0	0	0	0	9	6	0		15
DO	7.5	7.7 / 7.5	7.2	8.7	8.3 / 8.5	8.2 / 7.9	8.4 / 8.3	8.0	
Temp	24.1	24.6 / 24.1	24.4	25.1	24.7 / 24.3	25.3 / 24.1	24.5 / 24.1	25.0	22.6
pH	7.8	7.8 / 7.8	7.9	7.6	7.8 / 7.8	7.9 / 7.7	7.9 / 7.6	7.8	
Cond	425	431	451	441	433	417			
(5)	0	0	0	0	7	10	9		26
	0	0	0	4	4	0	11		19
	0	0	0	6	4	0	14		24
	0	0	0	4	6	0	12		22
100	0	0	0	4	8	0	13		25
	0	0	0	0	7	6	9		22
	0	0	0	0	7	5	6		18
	0	0	0	0	6	7	5		18
	0	0	0	7	6	0	12		25
	0	0	0	0	D 4				4 D
DO	7.7	7.7 / 7.7	7.2	8.8	8.3 / 8.9	8.2 / 8.1	8.4 / 8.5	8.0	
Temp	24.1	24.6 / 24.1	24.4	25.2	24.7 / 24.3	25.3 / 24.1	24.5 / 24.1	25.0	20.3
pH	7.8	7.8 / 7.7	7.9	7.6	7.8 / 7.7	7.9 / 7.7	7.9 / 7.6	7.8	
Cond	432	441	460	450	440	425			
Algae	ABS	ABS	ABS	ABS	ABS	ABS			
YCT	2409	2409	2409	2409	2409	2409			
H_2O	1	1	2	3	2	3			
Initials	EW	EW	JT	EW	HT	HT	HT		

	Eff #1	Eff #2	Eff #3	Recon
Hardness	178	181	136	82
Alkalinity	65	69	68	39
Chlorine	<0.01	<0.01	<0.01	<0.01
Ammonia	<0.03	<0.03	<0.03	<0.03

Exposure Chamber:
Total Capacity: 30mL
Total Solution Volume: 15mL

Feeding Schedule:
Fed daily
Food used: YCT, Algae

Units:
DO: mg/L
Temp: °C
pH: N/A
Cond: µS/cm^3
Hardness: mg/L
Alkalinity: mg/L
Chlorine: mg/L
Ammonia: mg/L

Comments:

x:y:z = board #:row:column

1	2	3	4	5	6	7	8	9	10
A8	A9	B2	B5	B6	B9	C2	C5	C8	C10

HW

CETIS Analytical Report

Report Date: 18 Dec-24 11:33 (p 1 of 1)
Test Code/ID: 524575CD / 14-3629-3788

Ceriodaphnia 7-d Survival and Reproduction Test **SeaCrest Group**

Analysis ID:	03-9628-7235	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETIS v2.1.5
Analyzed:	18 Dec-24 11:33	**Analysis:**	STP 2xK Contingency Tables	**Status Level:**	1
Edit Date:	18 Dec-24 0:00	**MD5 Hash:**	77EE0E3A2EA0C94673272DC47EE9C2EB	**Editor ID:**	008-269-892-1
Sample ID:	10-0979-7762	**Code:**	524575.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Dec-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	11 Dec-24	**CAS (PC):**		**Station:**	001A
Sample Age:	24h	**Client:**	Thorin Resources		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units
Untransformed	C > T	100	>100	---	1

Fisher Exact/Bonferroni-Holm Test

Control	vs	Conc-%	Test Stat	P-Type	P-Value	Decision(α:5%)
Dilution Water		23	1.0000	Exact	1.0000	Non-Significant Effect
		45	1.0000	Exact	1.0000	Non-Significant Effect
		89	1.0000	Exact	1.0000	Non-Significant Effect
		95	1.0000	Exact	1.0000	Non-Significant Effect
		100	0.8947	Exact	1.0000	Non-Significant Effect

Test Acceptability Criteria

		TAC Limits			
Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	0.8	0.8	>>	Yes	Passes Criteria

7d Survival Rate Frequencies

Conc-%	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
0	D	8	2	10	0.8000	0.2000	0.00%
23		10	0	10	1.0000	0.0000	-25.00%
45		10	0	10	1.0000	0.0000	-25.00%
89		10	0	10	1.0000	0.0000	-25.00%
95		10	0	10	1.0000	0.0000	-25.00%
100		9	1	10	0.9000	0.1000	-12.50%

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	0.8000	0.4984	1.0000	1.0000	0.0000	1.0000	0.1333	52.70%	0.00%
23		10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-25.00%
45		10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-25.00%
89		10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-25.00%
95		10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-25.00%
100		10	0.9000	0.6738	1.0000	1.0000	0.0000	1.0000	0.1000	35.14%	-12.50%

Convergent Rounding (4 sf) CETIS™ v2.1.5.6 x64 (008-269-892-1) Analyst: HW QA: DT

CETIS Analytical Report

Report Date: 18 Dec-24 11:33 (p 1 of 2)
Test Code/ID: 524575CD / 14-3629-3788

Ceriodaphnia 7-d Survival and Reproduction Test **SeaCrest Group**

Analysis ID:	01-5790-4326	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETIS v2.1.5
Analyzed:	18 Dec-24 11:33	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	18 Dec-24 0:00	**MD5 Hash:**	77EE0E3A2EA0C94673272DC47EE9C2EB	**Editor ID:**	008-269-892-1
Sample ID:	10-0979-7762	**Code:**	524575.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Dec-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	11 Dec-24	**CAS (PC):**		**Station:**	001A
Sample Age:	24h	**Client:**	Thorin Resources		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	94189	1000	Yes	Two-Point Interpolation

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
Control Resp	0.8	0.8	>>	Yes	Passes Criteria

Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
LC15	>100	---	---	<1	---	---
LC20	>100	---	---	<1	---	---
LC25	>100	---	---	<1	---	---
LC40	>100	---	---	<1	---	---
LC50	>100	---	---	<1	---	---

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**ΣA/ΣB**	**Mean**	**%Effect**
0	D	10	0.8000	1.0000	0.0000	1.0000	52.70%	0.00%	8/10	0.9600	0.00%
23		10	1.0000	1.0000	1.0000	1.0000	0.00%	-25.00%	10/10	0.9600	0.00%
45		10	1.0000	1.0000	1.0000	1.0000	0.00%	-25.00%	10/10	0.9600	0.00%
89		10	1.0000	1.0000	1.0000	1.0000	0.00%	-25.00%	10/10	0.9600	0.00%
95		10	1.0000	1.0000	1.0000	1.0000	0.00%	-25.00%	10/10	0.9600	0.00%
100		10	0.9000	1.0000	0.0000	1.0000	35.14%	-12.50%	9/10	0.9000	6.25%

Convergent Rounding (4 sf) CETIS™ v2.1.5.6 x64 (008-269-892-1) Analyst: HW QA: DT

CETIS Analytical Report

Report Date: 18 Dec-24 11:33 (p 1 of 1)
Test Code/ID: 524575CD / 14-3629-3788

Ceriodaphnia 7-d Survival and Reproduction Test **SeaCrest Group**

Analysis ID:	06-2888-9663	**Endpoint:**	Reproduction	**CETIS Version:**	CETIS v2.1.5
Analyzed:	18 Dec-24 11:33	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	18 Dec-24 0:00	**MD5 Hash:**	5DC86008FBC730BB19429EBC897D1DE6	**Editor ID:**	008-269-892-1
Sample ID:	10-0979-7762	**Code:**	524575.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Dec-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	11 Dec-24	**CAS (PC):**		**Station:**	001A
Sample Age:	24h	**Client:**	Thorin Resources		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Untransformed	C > T	100	>100	---	1	5.843	31.76%

Steel Many-One Rank Sum Test

Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Dilution Water		23	18	114	75	2	CDF	0.9629	Non-Significant Effect
		45	18	119.5	75	1	CDF	0.9889	Non-Significant Effect
		89	18	123	75	3	CDF	0.9955	Non-Significant Effect
		95	18	120.5	75	1	CDF	0.9913	Non-Significant Effect
		100	18	115	75	3	CDF	0.9697	Non-Significant Effect

Test Acceptability Criteria

		TAC Limits			
Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	18.4	15	>>	Yes	Passes Criteria
PMSD	0.3176	0.13	0.47	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	133.083	26.6167	5	0.8171	0.5428	Non-Significant Effect
Error	1759.1	32.5759	54			
Total	1892.18		59			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	7.593	15.09	0.1801	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9432	0.9459	0.0075	Non-Normal Distribution

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	18.4	13.34	23.46	19.5	4	27	2.237	38.45%	0.00%
23		10	21.3	19.3	23.3	21	17	25	0.8825	13.10%	-15.76%
45		10	22.2	18.78	25.62	22.5	14	31	1.511	21.53%	-20.65%
89		10	22.5	18.23	26.77	24	11	30	1.887	26.52%	-22.28%
95		10	22.6	18.21	26.99	23	12	31	1.939	27.13%	-22.83%
100		10	20.3	15.69	24.91	22	4	26	2.039	31.76%	-10.33%

Convergent Rounding (4 sf) CETIS™ v2.1.5.6 x64 (008-269-892-1) Analyst: HN QA: DT

CETIS Analytical Report

Report Date: 18 Dec-24 11:33 (p 2 of 2)
Test Code/ID: 524575CD / 14-3629-3788

Ceriodaphnia 7-d Survival and Reproduction Test **SeaCrest Group**

Analysis ID:	21-0013-8729	**Endpoint:**	Reproduction	**CETIS Version:**	CETIS v2.1.5
Analyzed:	18 Dec-24 11:33	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	18 Dec-24 0:00	**MD5 Hash:**	5DC86008FBC730BB19429EBC897D1DE6	**Editor ID:**	008-269-892-1
Sample ID:	10-0979-7762	**Code:**	524575.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Dec-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	11 Dec-24	**CAS (PC):**		**Station:**	001A
Sample Age:	24h	**Client:**	Thorin Resources		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	459592	1000	Yes	Two-Point Interpolation

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
Control Resp	18.4	15	>>	Yes	Passes Criteria

Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
IC15	>100	---	---	<1	---	---
IC20	>100	---	---	<1	---	---
IC25	>100	---	---	<1	---	---
IC40	>100	---	---	<1	---	---
IC50	>100	---	---	<1	---	---

Reproduction Summary

			Calculated Variate						Isotonic Variate	
Conc-%	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**Mean**	**%Effect**
0	D	10	18.4	19.5	4	27	38.45%	0.00%	21.4	0.00%
23		10	21.3	21	17	25	13.10%	-15.76%	21.4	0.00%
45		10	22.2	22.5	14	31	21.53%	-20.65%	21.4	0.00%
89		10	22.5	24	11	30	26.52%	-22.28%	21.4	0.00%
95		10	22.6	23	12	31	27.13%	-22.83%	21.4	0.00%
100		10	20.3	22	4	26	31.76%	-10.33%	20.3	5.14%

Convergent Rounding (4 sf) CETIS™ v2.1.5.6 x64 (008-269-892-1) Analyst: HW QA: DT

Appendix 3 – Data Sheets for the Fathead Minnow Test

WET TEST REPORT FORM – CHRONIC

Permittee: Thorin Resources
Permit No.: CO-0000003
Outfall: 002A – IWC: 89%
Test Type: Routine ☒ Accelerated ☐ Screen ☐
Test Species: fathead minnow

Test Start Time	Test Start Date	Test End Time	Test End Date
1100	12-11-2024	1130	12-18-2024

Test Results	Lethality/TCP6C	Growth/TKP6C
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

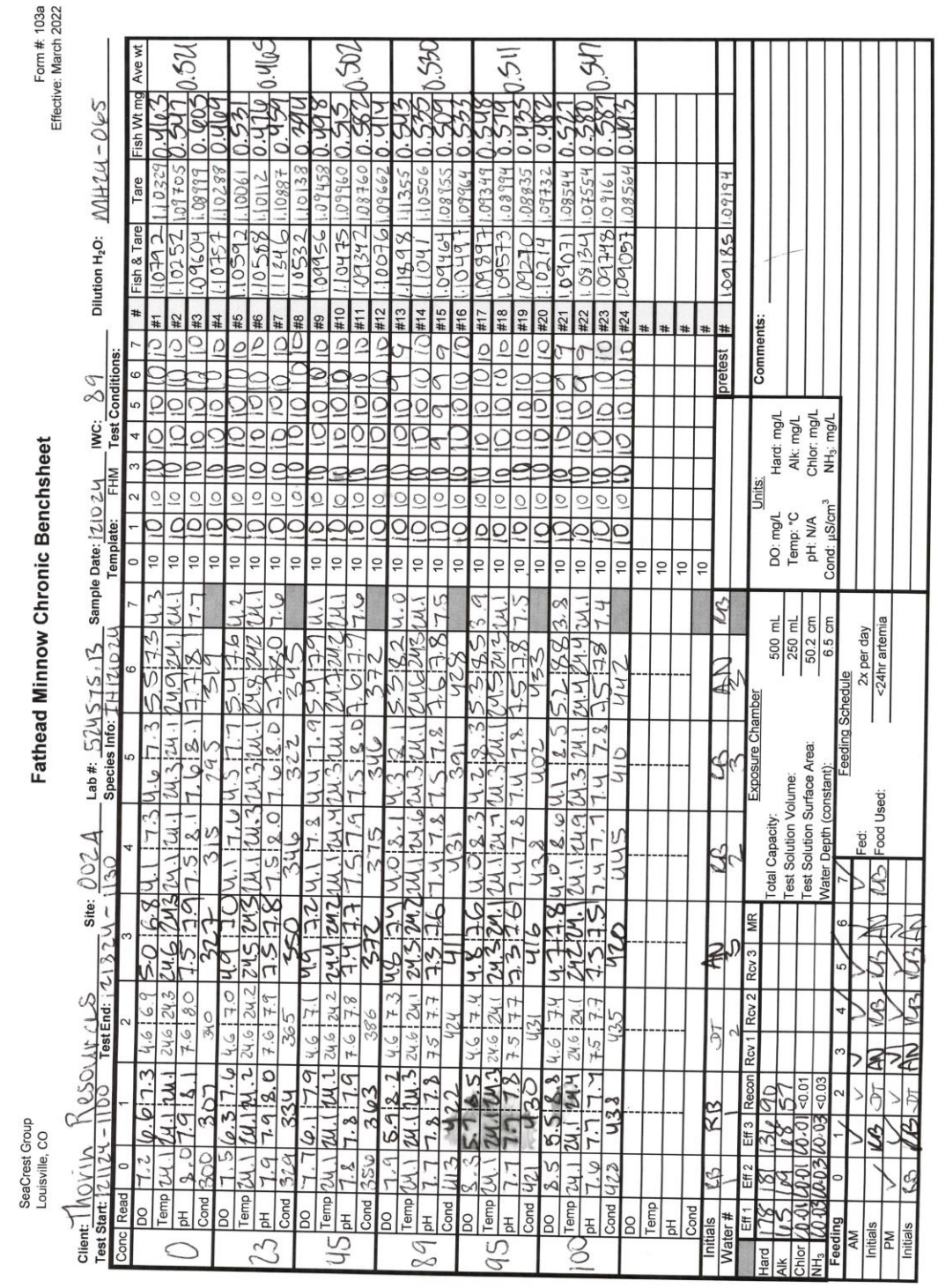
Test Summary

Measurements	Control (0%)	23%	45%	89%	95%	100%
Exposed organisms	40	40	40	40	40	40
Survival for day 1	40	40	40	40	40	40
Survival for day 2	40	40	40	40	40	40
Survival for day 3	40	40	40	40	40	40
Survival for day 4	40	40	40	39	40	40
Survival for day 5	40	40	40	39	40	40
Survival for day 6	40	40	40	38	40	38
Survival for day 7	40	40	40	38	40	38
Mean Dry Wt. (mg)	0.521	0.465	0.502	0.530	0.511	0.547

Hardness (mg/L) – Receiving Water: N/A Effluent: 178/181/136 Recon Water: 90
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 65/69/68 Recon Water: 57
Chlorine (mg/L) – Effluent: <0.01 pH (initial/final) – Control: 8.0/7.7 100%: 7.6/7.4
Total Ammonia as NH_3 (mg/L) - Effluent: <0.03

Were all Test Conditions in Conformance with Division Guidelines? YES ☐ NO ☒
If **NO**, list deviations from test specifications: Dissolved oxygen fell below 4.0mg/L in effluent test chambers overnight.
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Ryan Belmont, Daniela Thornton, and Aurora Nelson

Signature Haley West *Date* December 20, 2024


Fathead Minnow Chronic Benchsheet
Form #: 103a
Effective: March 2022
SeaCrest Group
Louisville, CO
Client: Thorin Resources
Site: 002A
Lab #: 524575.13
Sample Date: 12/10/24
IWC: 89
Test Start: 12/12/24 1100
Test End: 12/19/24 1130
Species Info: TH12D24
Template: FHM
Test Conditions:
Dilution H2O: MHRW-065
Exposure Chamber
Total Capacity: 500 mL
Test Solution Volume: 250 mL
Test Solution Surface Area: 50.2 cm
Water Depth (constant): 6.5 cm
Feeding Schedule
Fed: 2x per day
Food Used: <24hr artemia
Units:
DO: mg/L
Temp: °C
pH: N/A
Cond: µS/cm3
Hard: mg/L
Alk: mg/L
Chlor: mg/L
NH3: mg/L
Comments:

CETIS Analytical Report

Report Date: 19 Dec-24 11:57 (p 1 of 3)
Test Code/ID: 524575FHM / 06-2598-7278

Fathead Minnow 7-d Larval Survival and Growth Test **SeaCrest Group**

Analysis ID:	11-5491-9743	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETIS v2.1.5
Analyzed:	19 Dec-24 11:57	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	19 Dec-24 0:00	**MD5 Hash:**	2AD87E95DA9DCD0AD45C8CE393141FF	**Editor ID:**	008-269-892-1
Sample ID:	04-7318-0134	**Code:**	524575.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Dec-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	11 Dec-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	100	>100	---	1	0.06181	6.18%

Steel Many-One Rank Sum Test

Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Dilution Water		23	6	18	10	1	CDF	0.8333	Non-Significant Effect
		45	6	18	10	1	CDF	0.8333	Non-Significant Effect
		89	6	14	10	1	CDF	0.3451	Non-Significant Effect
		95	6	18	10	1	CDF	0.8333	Non-Significant Effect
		100	6	14	10	1	CDF	0.3451	Non-Significant Effect

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
Control Resp	1	0.8	>>	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0354124	0.0070825	5	2.4	0.0780	Non-Significant Effect
Error	0.0531187	0.0029510	18			
Total	0.0885311		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.7563	0.884	6.2E-05	Non-Normal Distribution

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
23		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
45		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
89		4	0.9500	0.8581	1.0000	0.9500	0.9000	1.0000	0.0289	6.08%	5.00%
95		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
100		4	0.9500	0.8581	1.0000	0.9500	0.9000	1.0000	0.0289	6.08%	5.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%
23		4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%
45		4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%
89		4	1.3310	1.1810	1.4800	1.3310	1.2490	1.4120	0.0471	7.07%	5.77%
95		4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%
100		4	1.3310	1.1810	1.4800	1.3310	1.2490	1.4120	0.0471	7.07%	5.77%

Convergent Rounding (4 sf) CETIS™ v2.1.5.6 x64 (008-269-892-1) Analyst: HW QA: DT

CETIS Analytical Report

Report Date: 19 Dec-24 11:57 (p 1 of 2)
Test Code/ID: 524575FHM / 06-2598-7278

Fathead Minnow 7-d Larval Survival and Growth Test **SeaCrest Group**

Analysis ID:	05-0230-2205	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETIS v2.1.5
Analyzed:	19 Dec-24 11:57	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	19 Dec-24 0:00	**MD5 Hash:**	2AD87E95DA9DCD0AD45C8CE393141FF	**Editor ID:**	008-269-892-1
Sample ID:	04-7318-0134	**Code:**	524575.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Dec-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	11 Dec-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1238688	1000	Yes	Two-Point Interpolation

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
Control Resp	1	0.8	>>	Yes	Passes Criteria

Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
LC15	>100	---	---	<1	---	---
LC20	>100	---	---	<1	---	---
LC25	>100	---	---	<1	---	---
LC40	>100	---	---	<1	---	---
LC50	>100	---	---	<1	---	---

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**ΣA/ΣB**	**Mean**	**%Effect**
0	D	4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	1.0000	0.00%
23		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	1.0000	0.00%
45		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	1.0000	0.00%
89		4	0.9500	0.9500	0.9000	1.0000	6.08%	5.00%	38/40	0.9750	2.50%
95		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	0.9750	2.50%
100		4	0.9500	0.9500	0.9000	1.0000	6.08%	5.00%	38/40	0.9500	5.00%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
23		1.0000	1.0000	1.0000	1.0000
45		1.0000	1.0000	1.0000	1.0000
89		0.9000	1.0000	0.9000	1.0000
95		1.0000	1.0000	1.0000	1.0000
100		0.9000	0.9000	1.0000	1.0000

Convergent Rounding (4 sf) CETIS™ v2.1.5.6 x64 (008-269-892-1) Analyst: HW QA: DT

CETIS Analytical Report

Report Date: 19 Dec-24 11:57 (p 3 of 3)
Test Code/ID: 524575FHM / 06-2598-7278

Fathead Minnow 7-d Larval Survival and Growth Test — SeaCrest Group

Analysis ID:	19-3620-5213	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETIS v2.1.5
Analyzed:	19 Dec-24 11:57	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	19 Dec-24 0:00	**MD5 Hash:**	DC8BE5DC78D94F0E8B071A710B3EBF1	**Editor ID:**	008-269-892-1
Sample ID:	04-7318-0134	**Code:**	524575.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Dec-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	11 Dec-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Untransformed	C > T	100	>100	---	1	0.09574	18.38%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Dilution Water		23	6	1.408	2.407	0.09574	CDF	0.2587	Non-Significant Effect
		45	6	0.4713	2.407	0.09574	CDF	0.6599	Non-Significant Effect
		89	6	-0.2262	2.407	0.09574	CDF	0.8913	Non-Significant Effect
		95	6	0.2514	2.407	0.09574	CDF	0.7488	Non-Significant Effect
		100	6	-0.6474	2.407	0.09574	CDF	0.9573	Non-Significant Effect

Test Acceptability Criteria

		TAC Limits			
Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	0.521	0.25	>>	Yes	Passes Criteria
PMSD	0.1838	0.12	0.3	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0156581	0.0031316	5	0.9899	0.4512	Non-Significant Effect
Error	0.0569456	0.0031636	18			
Total	0.0726037		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	5.5	15.09	0.3580	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9678	0.884	0.6122	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.521	0.4131	0.6289	0.508	0.463	0.605	0.03391	13.02%	0.00%
23		4	0.465	0.3752	0.5548	0.4675	0.394	0.531	0.02822	12.14%	10.75%
45		4	0.5023	0.3923	0.6122	0.5065	0.414	0.582	0.03456	13.76%	3.60%
89		4	0.53	0.5067	0.5533	0.534	0.509	0.543	0.007325	2.76%	-1.73%
95		4	0.511	0.4078	0.6142	0.515	0.435	0.579	0.03242	12.69%	1.92%
100		4	0.5467	0.4756	0.6179	0.5535	0.493	0.587	0.02237	8.18%	-4.94%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.463	0.547	0.605	0.469
23		0.531	0.476	0.459	0.394
45		0.498	0.515	0.582	0.414
89		0.543	0.535	0.509	0.533
95		0.548	0.579	0.435	0.482
100		0.527	0.58	0.587	0.493

Convergent Rounding (4 sf) CETIS™ v2.1.5.6 x64 (008-269-892-1) Analyst: HN QA: DT

CETIS Analytical Report

Report Date: 19 Dec-24 11:57 (p 2 of 2)
Test Code/ID: 524575FHM / 06-2598-7278

Fathead Minnow 7-d Larval Survival and Growth Test **SeaCrest Group**

Analysis ID:	04-1873-3433	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETIS v2.1.5
Analyzed:	19 Dec-24 11:57	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	19 Dec-24 0:00	**MD5 Hash:**	DC8BE5DC78D94F0E8B071A710B3EBF1	**Editor ID:**	008-269-892-1
Sample ID:	04-7318-0134	**Code:**	524575.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Dec-24	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	11 Dec-24	**CAS (PC):**		**Station:**	002A
Sample Age:	24h	**Client:**	Thorin Resources		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	328082	1000	Yes	Two-Point Interpolation

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
Control Resp	0.521	0.25	>>	Yes	Passes Criteria

Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
IC15	>100	---	---	<1	---	---
IC20	>100	---	---	<1	---	---
IC25	>100	---	---	<1	---	---
IC40	>100	---	---	<1	---	---
IC50	>100	---	---	<1	---	---

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-%	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**Mean**	**%Effect**
0	D	4	0.521	0.508	0.463	0.605	13.02%	0.00%	0.521	0.00%
23		4	0.465	0.4675	0.394	0.531	12.14%	10.75%	0.511	1.92%
45		4	0.5023	0.5065	0.414	0.582	13.76%	3.60%	0.511	1.92%
89		4	0.53	0.534	0.509	0.543	2.76%	-1.73%	0.511	1.92%
95		4	0.511	0.515	0.435	0.579	12.69%	1.92%	0.511	1.92%
100		4	0.5467	0.5535	0.493	0.587	8.18%	-4.94%	0.511	1.92%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.463	0.547	0.605	0.469
23		0.531	0.476	0.459	0.394
45		0.498	0.515	0.582	0.414
89		0.543	0.535	0.509	0.533
95		0.548	0.579	0.435	0.482
100		0.527	0.58	0.587	0.493

Convergent Rounding (4 sf) CETIS™ v2.1.5.6 x64 (008-269-892-1) Analyst: HN QA: DT

Appendix 4 – QA/QC and Reference Toxicant Test Chart

Quality Assurance Check List – Chronic Whole Effluent Toxicity Test

Client:	Thorin Resources
SeaCrest Sample No:	524575.B
Species Tested:	*Ceriodaphnia dubia* and fathead minnow

Sample Dates	**Start Date of Test (*Ceriodaphnia dubia)***	**Start Date of Test (fathead minnow)**
12-10-2024		
12-11-2024		
12-12-2024	12-11-2024	12-11-2024

Sample received in lab properly preserved (0-6°C)?	**Y**
Sample received at laboratory within 36 hours of collection?	**Y**
Sample delivered on ice or equivalent?	**Y**
Test initiated within 36-hours of collection?	**Y**
Test protocol conforms to CDPHE guidelines (*Ceriodaphnia dubia)*?	**Y**
Test protocol conforms to CDPHE guidelines (fathead minnow)?	**Y**
Average test temp. ±1°C (*Ceriodaphnia dubia*)?	**Y**
Average test temp. ±1°C (fathead minnow)?	**Y**
DO level ≥4.0mg/L; no super-saturation (*Ceriodaphnia dubia*)?	**Y**
DO level ≥4.0mg/L; no super-saturation (fathead minnow)?	**Y**
Survival in control ≥80% (*Ceriodaphnia dubia*)?	**Y**
Survival in control ≥80% (fathead minnow)?	**Y**
Ceriodaphnia dubia neonates <24-hours old?	**Y**
Fathead minnow larvae <24-hours old?	**Y**
Appropriate reference toxicity test conducted?	**Y**
Reference toxicity test results within the confidence limits for the lab?	**Y**

Author Haley West *Date* December 20, 2024
Position: Senior Laboratory Manager

Quality Control D. Thornton *Date* December 20, 2024

SEACREST GROUP
ENVIRONMENTAL SERVICES LABORATORY

METHOD QC

Method	Analyte	Date	LCS (rec)	%REC	%RPD	QC LIMITS
2320 B	Alkalinity - Total	11/7/2024	99.20%	102.52%	1.96%	± 5.00%
2320 B	Alkalinity - Total	11/15/2024	96.00%	102.73%	1.40%	± 5.00%
2320 B	Alkalinity - Total	11/22/2024	103.50%	104.50%	1.20%	± 5.00%
2320 B	Alkalinity - Total	11/27/2024	99.20%	101.20%	0.00%	± 5.00%
4500 NH_3 D	Ammonia	11/8/2024	96.40%	95.09%	-1.44%	± 10.00%
4500 NH_3 D	Ammonia	11/15/2024	96.40%	100.18%	-4.37%	± 10.00%
4500 NH_3 D	Ammonia	11/22/2024	95.80%	102.00%	-4.26%	± 10.00%
4500 NH_3 D	Ammonia	10/30/2024	95.40%	96.43%	-4.29%	± 10.00%
4500 Cl D	Chlorine	11/27/2024	103.77%	103.03%	0.00%	± 5.00, ± 20.00%
2340 B	Hardness - Total	11/7/2024	103.51%	101.19%	-0.73%	± 5.00%
2340 B	Hardness - Total	11/14/2024	100.00%	96.30%	0.00%	± 5.00%
2340 B	Hardness - Total	11/22/2024	95.00%	102.00%	0.00%	± 5.00%
2340 B	Hardness - Total	11/26/2024	98.60%	100.35%	0.55%	± 5.00%

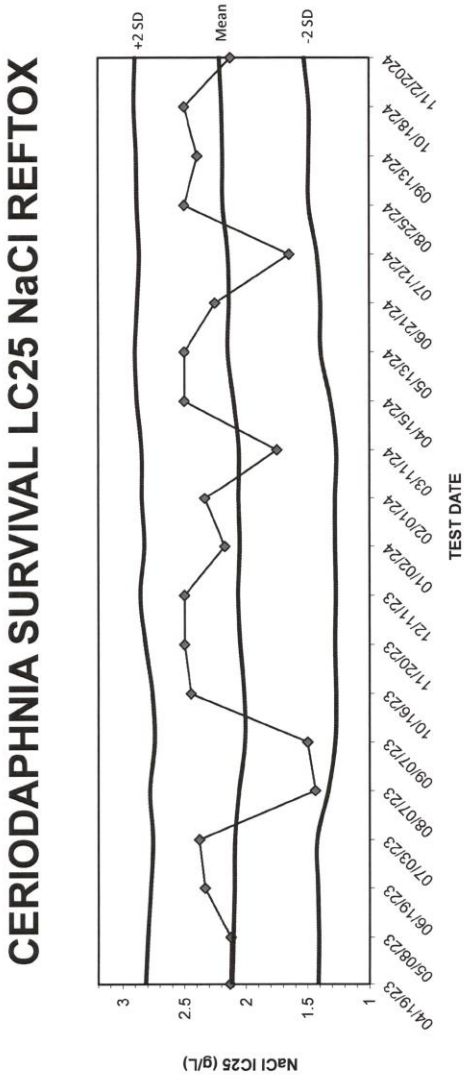
Method	Analyte	Date	LCS (rec)	%REC M1	%REC M2	%RPD	QC Limits
4500 O	DO - Winkler	11/9/2024	N/A	98.61%	100.00%		± 5.00%
4500 O	DO - Winkler	11/15/2024	N/A	95.77%	95.77%		± 5.00%
4500 O	DO - Winkler	11/22/2024	N/A	98.55%	101.49%		± 5.00%
4500 O	DO - Winkler	11/27/2024	N/A	98.57%	98.57%		± 5.00%

Method	Analyte	Date	Blank	%REC MR S	%RPD	QC Limits
2540 D	Suspended Solids (TTL)	11/20/2024	100.00%	97.20%	0.00%	± 15%
2540 C	Dissolved Solids (TTL)	11/27/2024	100.00%	114.00%	0.00%	± 15%

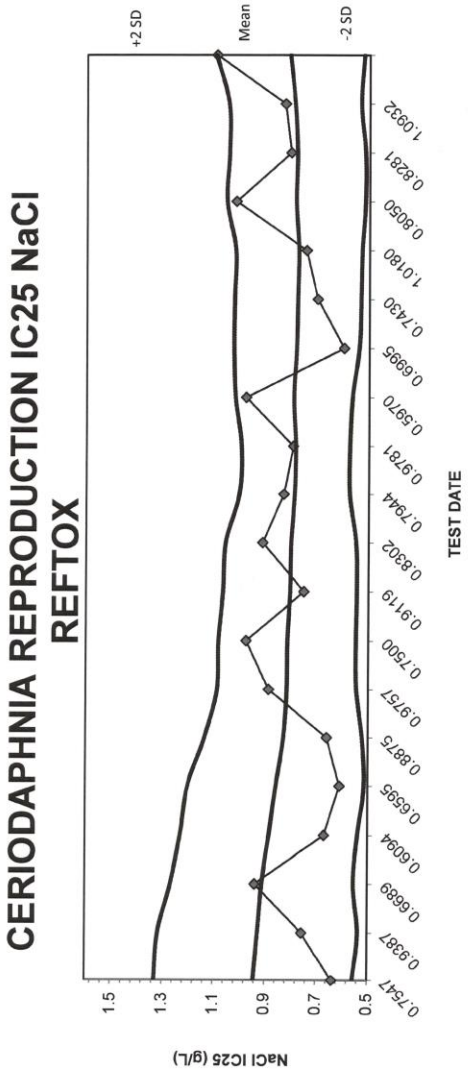
Signature: Cat Mey Ld ***Signature:*** Hallie Ullit

Date: December 3, 2024 ***Date:*** December 3, 2024

SeaCrest Group 500 S Arthur Ave. Suite 450 Louisville, CO 80027 (303) 661.9324 FAX (303) 661.9325

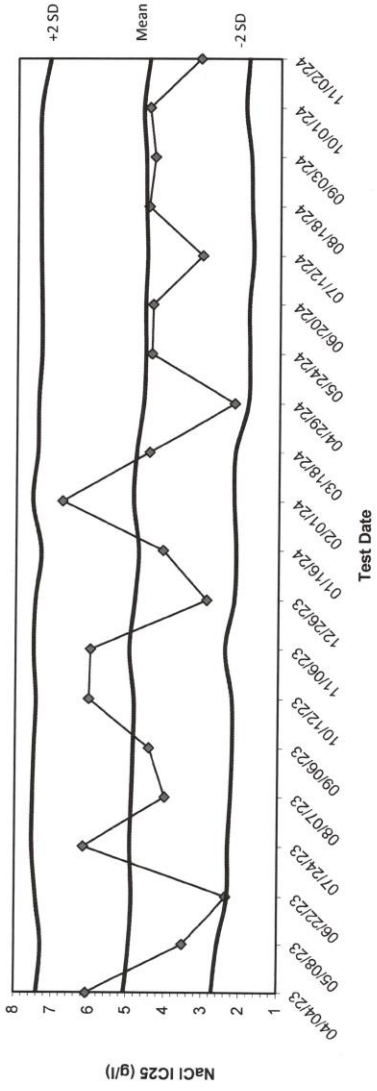


Date	LC25	Mean	-2 SD	+2 SD
04/19/23	2.1300	2.1144	1.4129	2.8158
05/08/23	2.1250	2.1045	1.4102	2.7988
06/19/23	2.3330	2.0965	1.4176	2.7755
07/03/23	2.3780	2.0907	1.4243	2.7571
08/07/23	1.4375	2.0580	1.3336	2.7824
09/07/23	1.5000	2.0104	1.2766	2.7441
10/16/23	2.4480	2.0158	1.2703	2.7613
11/20/23	2.5000	2.0476	1.2784	2.8168
12/11/23	2.5000	2.0655	1.2717	2.8592
01/02/24	2.1720	2.0518	1.2767	2.8269
02/01/24	2.3330	2.0617	1.2774	2.8460
03/11/24	1.7500	2.0578	1.2678	2.8477
04/15/24	2.5000	2.0995	1.3131	2.8858
05/13/24	2.5000	2.1471	1.3927	2.9014
06/21/24	2.2500	2.1378	1.3941	2.8816
07/12/24	1.6500	2.1444	1.4215	2.8672
08/25/24	2.5000	2.1860	1.4885	2.8836
09/13/24	2.3930	2.1889	1.4883	2.8895
10/18/24	2.5000	2.1968	1.4857	2.9080
11/2/2024	2.1250	2.2130	1.5260	2.8999



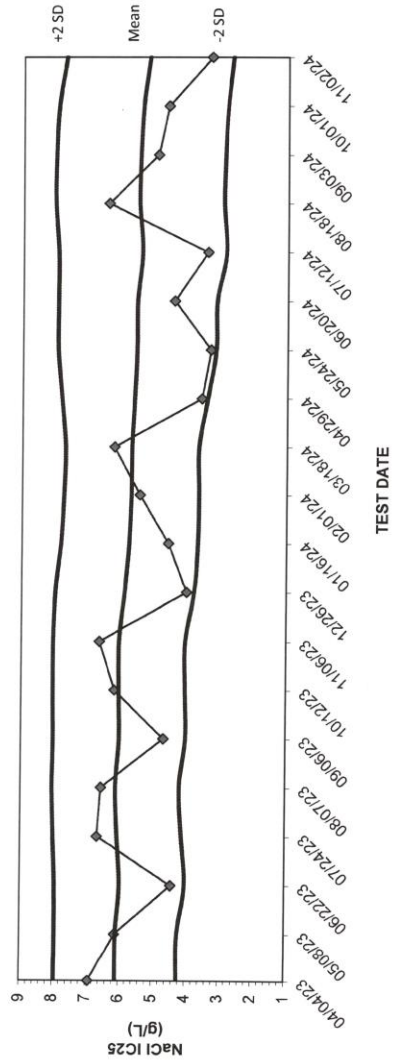
Date	IC25	Mean	-2 SD	+2 SD
04/19/23	0.6371	0.9431	0.5562	1.3300
5/8/2023	0.7547	0.92670755	0.536894398	1.316520702
06/19/23	0.9387	0.9105	0.5540	1.2670
07/03/23	0.6689	0.8843	0.5384	1.2302
08/07/23	0.6094	0.8575	0.5136	1.2014
09/07/23	0.6595	0.8290	0.5226	1.1353
10/16/23	0.8875	0.8164	0.5450	1.0878
11/20/23	0.9757	0.8150	0.5474	1.0826
12/11/23	0.7500	0.8049	0.5440	1.0658
01/02/24	0.9119	0.8019	0.5477	1.0560
02/01/24	0.8302	0.7888	0.5736	1.0040
03/11/24	0.7944	0.7848	0.5734	0.9962
04/15/24	0.9781	0.7923	0.5644	1.0202
05/13/24	0.5970	0.7824	0.5384	1.0265
06/21/24	0.6995	0.7784	0.5315	1.0252
07/12/24	0.7430	0.7741	0.5279	1.0202
08/25/24	1.0180	0.7853	0.5160	1.0545
09/13/24	0.8050	0.7810	0.5161	1.0458
10/18/24	0.8281	0.7901	0.5324	1.0478
11/02/24	1.0932	0.8090	0.5208	1.0972

FHM SURVIVAL LC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
04/04/23	6.0800	5.0628	2.7278	7.3978
05/08/23	3.5230	4.9385	2.5790	7.2979
06/22/23	2.3600	4.8775	2.3230	7.4321
07/24/23	6.1696	4.9250	2.3130	7.5370
08/07/23	4.0000	4.8853	2.2436	7.5269
09/06/23	4.4240	4.8500	2.2052	7.4948
10/12/23	6.0360	4.8354	2.2221	7.4487
11/06/23	6.0000	4.9627	2.4111	7.5142
12/26/23	2.9120	4.8223	2.1721	7.4725
01/16/24	4.0800	4.7287	2.1284	7.3289
02/01/24	6.7670	4.8732	2.1868	7.5596
03/18/24	4.4550	4.7999	2.1625	7.4374
04/29/24	2.1900	4.6245	1.8268	7.4222
05/24/24	4.4090	4.5749	1.8037	7.3461
06/20/24	4.3800	4.5839	1.8168	7.3510
07/12/24	3.0670	4.5415	1.7090	7.3739
08/18/24	4.5000	4.5714	1.7560	7.3867
09/03/24	4.3333	4.5865	1.7805	7.3926
10/01/24	4.4760	4.6480	1.9181	7.3779
11/02/24	3.1230	4.4893	1.8336	7.1450

FHM GROWTH IC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
04/04/23	6.9180	6.0931	4.2384	7.9479
05/08/23	6.1200	6.0879	4.2341	7.9416
06/22/23	4.4340	5.9816	4.0146	7.9487
07/24/23	6.6760	6.0591	4.1185	7.9998
08/07/23	6.5670	6.1170	4.1925	8.0415
09/06/23	4.6810	6.0194	4.0192	8.0196
10/12/23	6.1750	6.0363	4.0372	8.0354
11/06/23	6.6360	6.0352	4.0375	8.0330
12/26/23	4.0036	5.8797	3.7796	7.9799
01/16/24	4.5690	5.7497	3.6808	7.8186
02/01/24	5.4310	5.6958	3.6572	7.7345
03/18/24	6.2100	5.6820	3.6624	7.7017
04/29/24	3.5807	5.6121	3.4072	7.8170
05/24/24	3.3150	5.5507	3.1637	7.9377
06/20/24	4.4150	5.5436	3.1435	7.9437
07/12/24	3.4180	5.4037	2.8641	7.9433
08/18/24	6.4180	5.4925	2.9474	8.0376
09/03/24	4.9290	5.4628	2.9061	8.0194
10/01/24	4.6060	5.3852	2.8281	7.9423
11/02/24	3.3070	5.1862	2.6657	7.7066