



Gold Hill Mill Quarterly Water Sampling

1 message

Ben Langenfeld <benl@lewicki.biz>

Thu, Sep 29, 2022 at 4:08 PM

To: "Lennberg - DNR, Patrick" <patrick.lennberg@state.co.us>

Cc: "jerryjergensen@aol.com" <jerryjergensen@aol.com>

Patrick

See the attached water report for Gold Hill Mill. I have tweaked the graph colors a bit to make the different sample sources contrast better, which I hope you found helpful.

Ben Langenfeld, P.E.

Lewicki & Associates

benl@lewicki.biz

Office: (720) 842-5321

Cell: (303) 960-5613



Q3 2022 Water Sampling Report.pdf

2282K

September 30, 2022

Colorado Division of Reclamation, Mining, and Safety
1313 Sherman St, Rm 215
Denver, CO 80203

Delivered Via Email

RE: Q3 2022 Water Sampling Results
Gold Hill Mill, Permit No. M-1994-117

To Whom It May Concern

The third quarter, 2022 ("Q3/22") water sampling was conducted by Lewis Perkins, Colorado Milling Company, on September 7, 2022.

- **Trace Element & Related Data:** Five monitoring stations were sampled for arsenic, cadmium, manganese, zinc, total dissolved solids ("residue") and sulfate. Analyses were performed by Colorado Analytical Laboratories Inc., based in Denver. Copies of their original laboratory analytical reports are included in this submittal.
- **Other Data:** Water depth, temperature and pH data were gathered in the field during sampling and are included in this submittal.

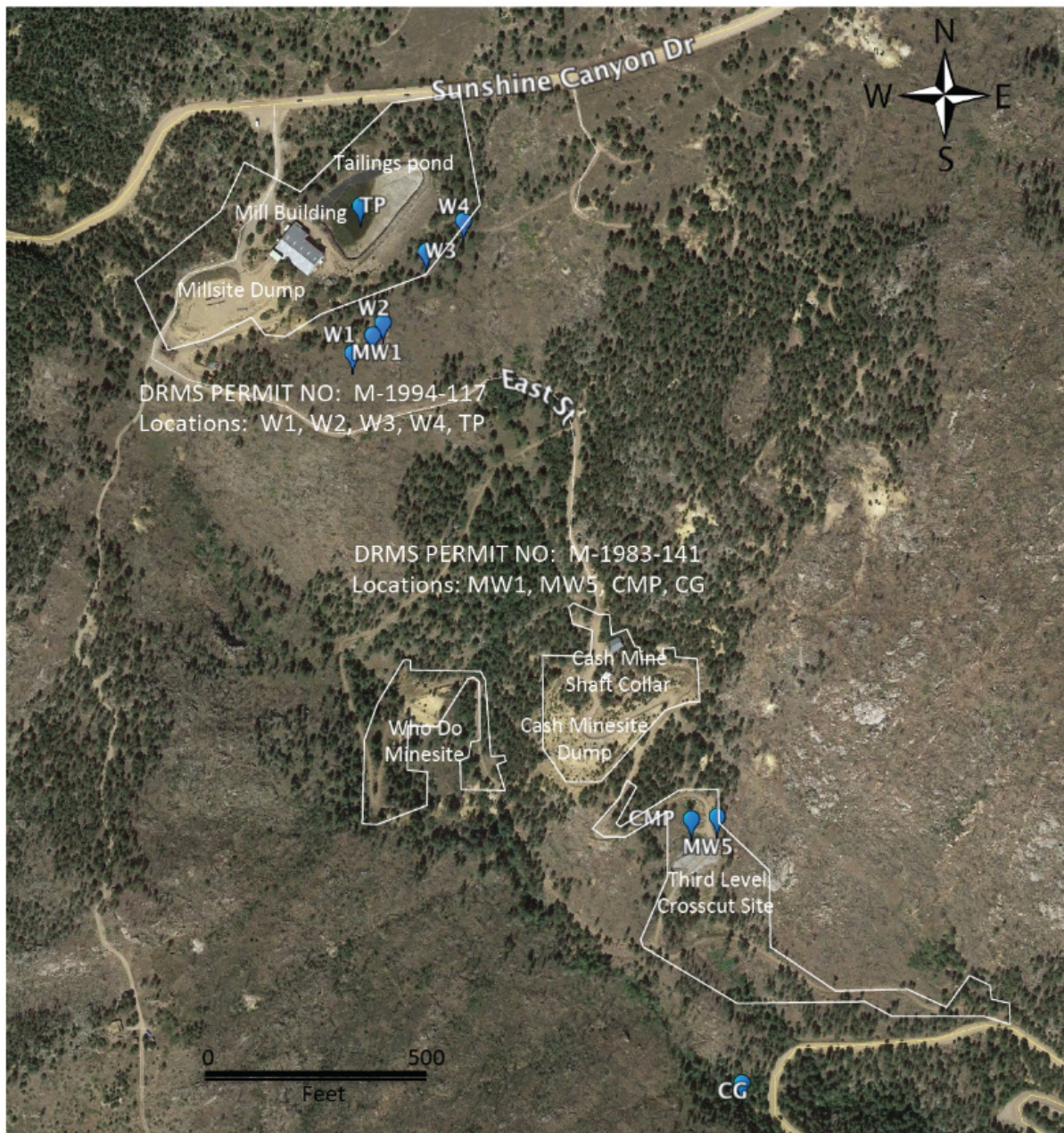
Note that zero values in the summary table represent "non-detect" results.

Please contact me with any questions.

Regards,



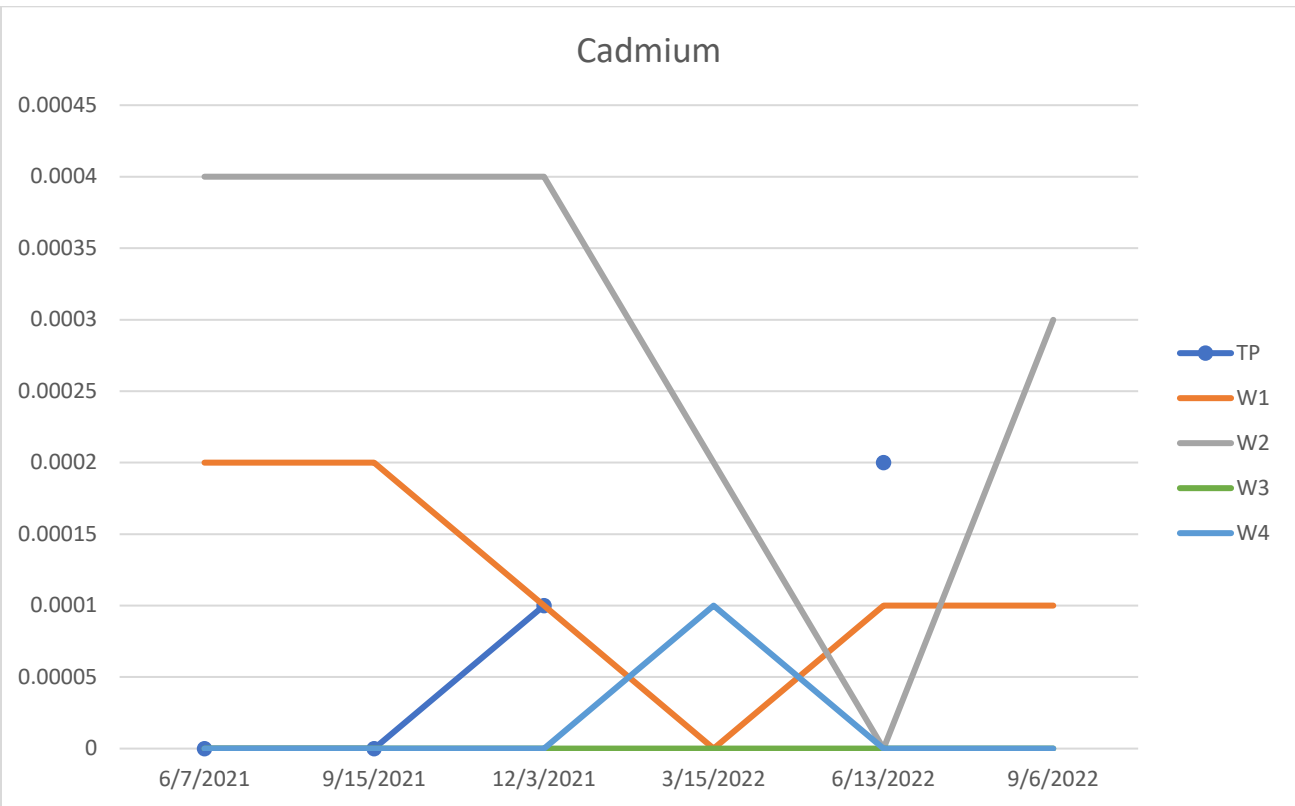
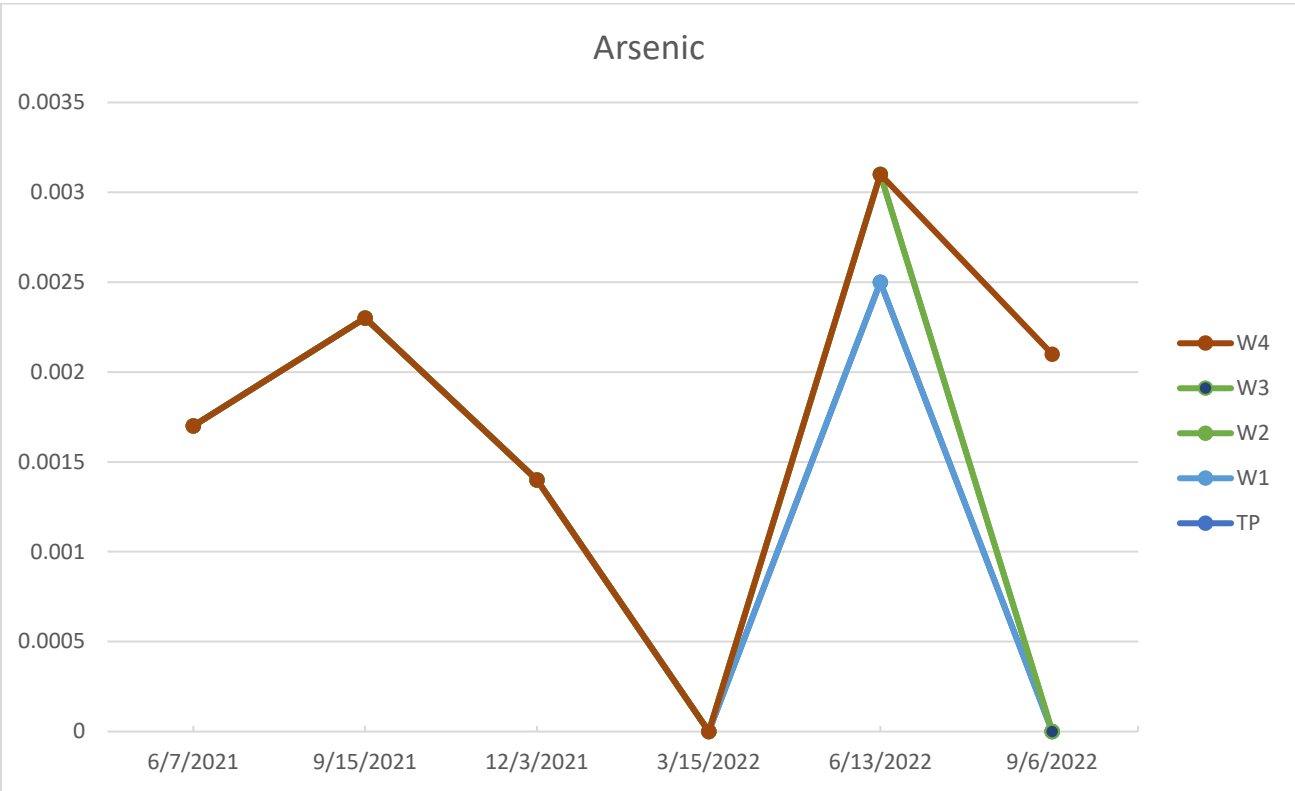
Ben Langenfeld, P.E.
Lewicki & Associates, PLLC
(720) 842-5321, ex. 1
benl@lewicki.biz

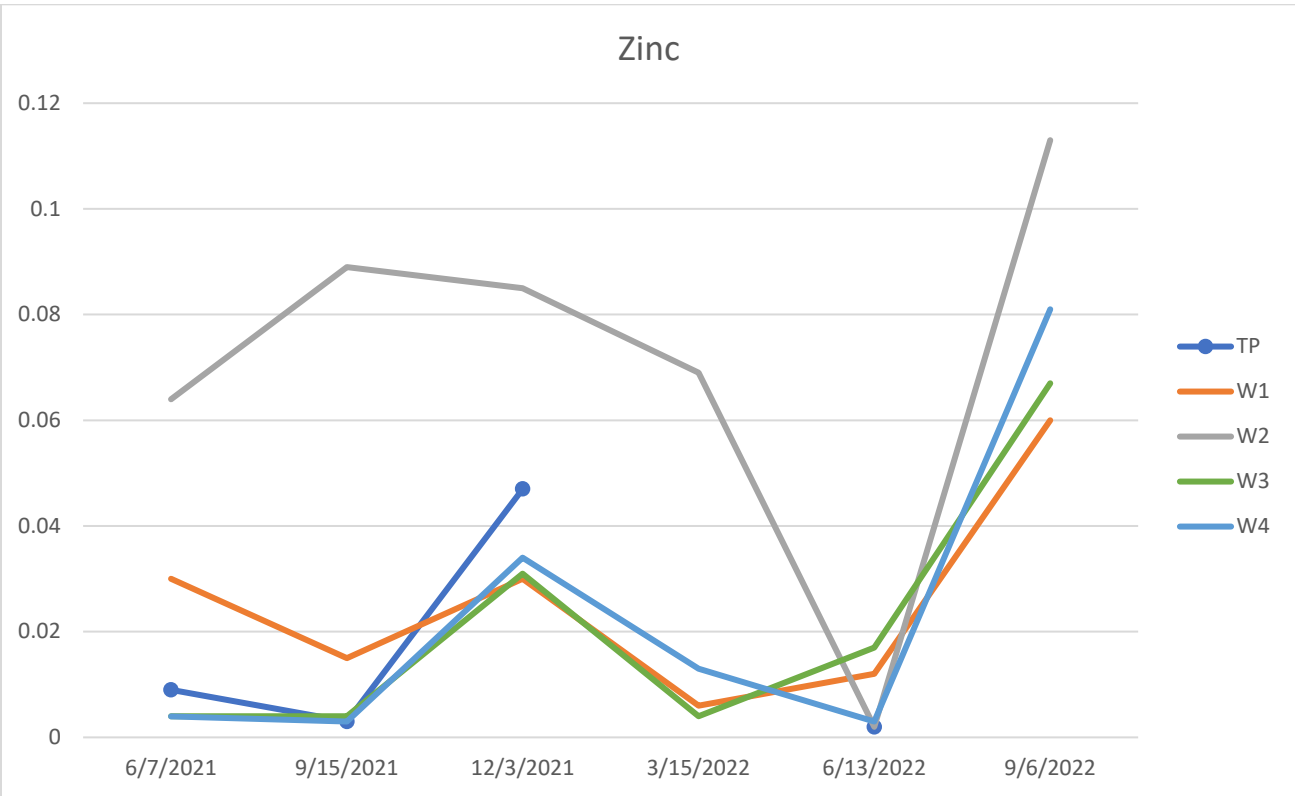
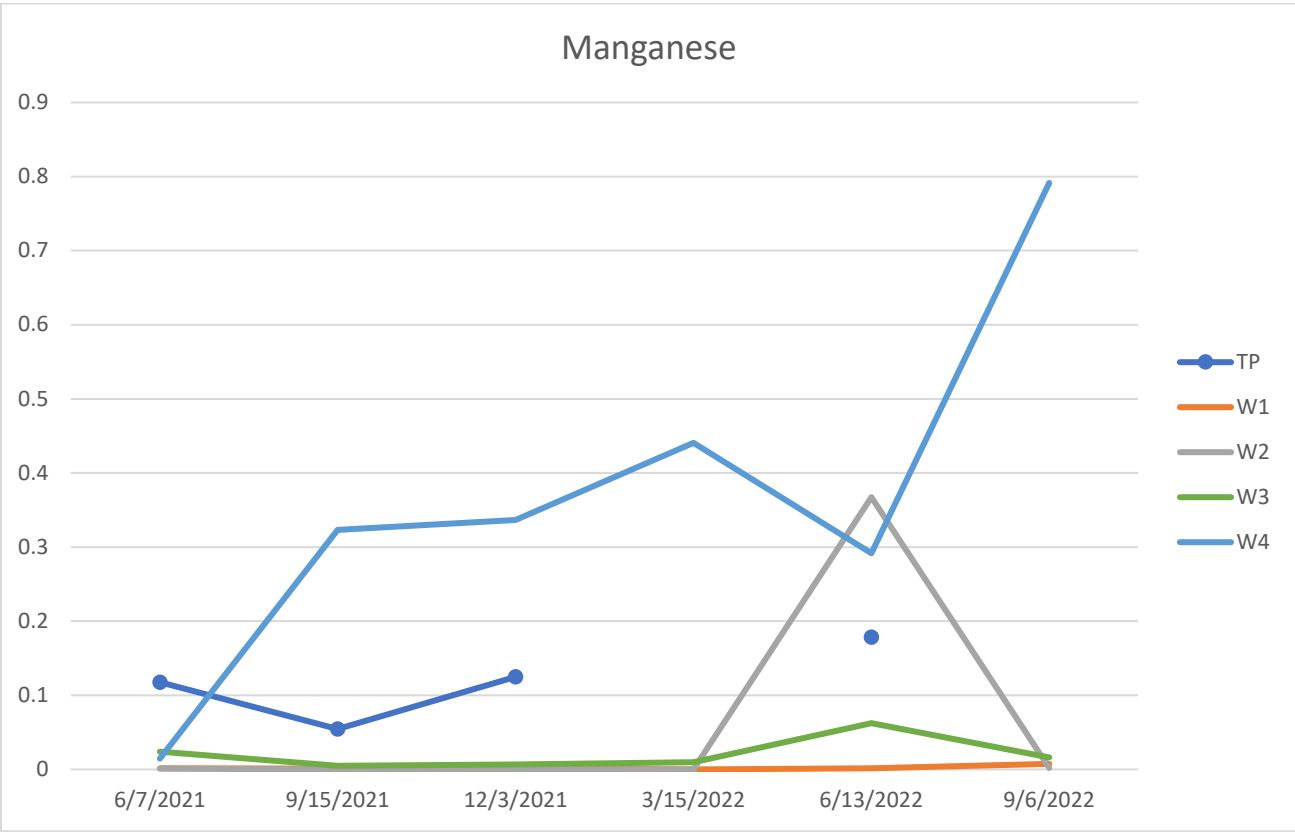


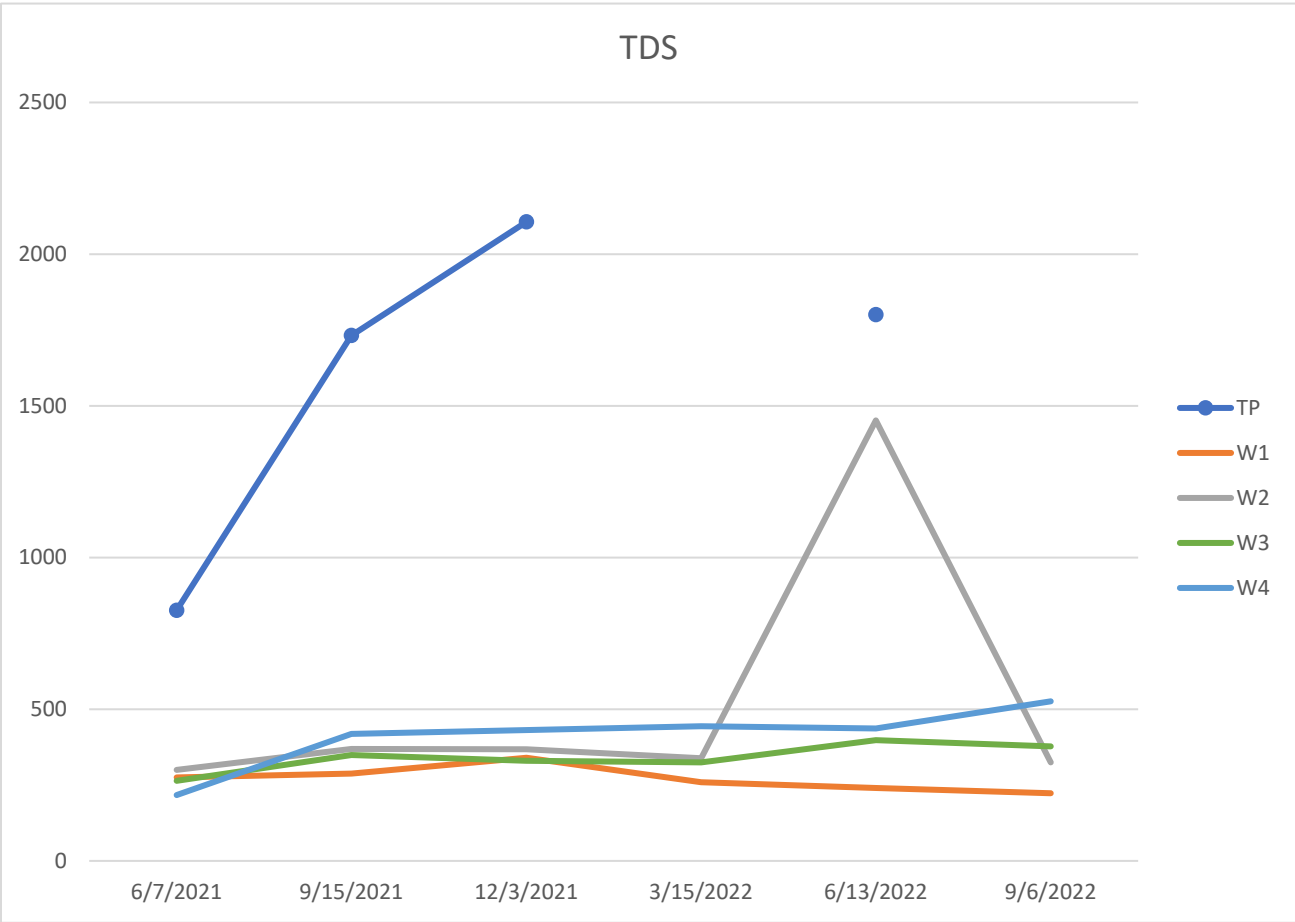
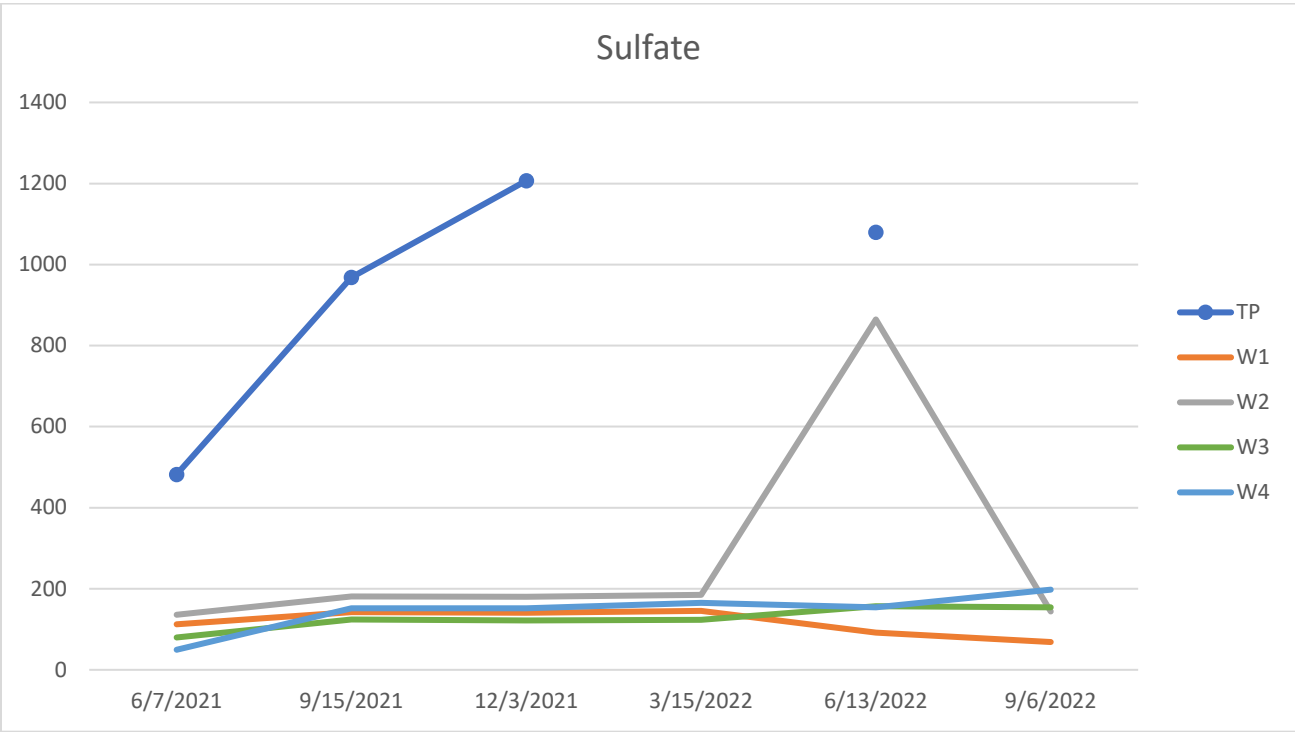
Map showing locations of water monitoring stations for permits M-1994-117 & M-1983-141

Locations		Well Measurements						Water Analyses (ppm/mg/L)						
Locations ID	Date	Time	Depth	pH	Temp (C)	Conductivity (uS/cm)	Sample ID	Date	As	Cd	Mn	Zn	Residue	Sulfate
Gold Hill Mill M-1994-117														
W-1	06/13/22	14:10	38.4	7.87	10.2	322	220907131	09/06/22	0	0.0001	0.0075	0.06	223	68.59
W-2	06/13/22	14:30	47.8	7.52	10.1	491	220907131	09/06/22	0	0.0003	0.0021	0.113	325	143.66
W-3	06/13/22	14:46	28	7.38	9.5	604	220907131	09/06/22	0	0	0.0162	0.067	377	154.28
W-4	06/13/22	15:04	32.5	7.21	8.9	832	220907131	09/06/22	0.0021	0	0.7914	0.081	526	197.79
TP	06/13/22	12:10	0	7.8	21.8	2.80	220907131	09/06/22	0.0024	0	0.1146	0.054	2466	1521.9
Cash Mine M-1983-141														
MW-1	06/13/22	13:50	63.8	6.62	12.1	1663	220907131	09/06/22	0	0.0001	0.3033	0.059	1473	911.75
MW-5	06/13/22	15:34	20.4	7.51	8.9	917	220907131	09/06/22	0.0013	0	0.2674	0.068	666	272.22
CG	06/13/22	16:05	0	8.25	17.1	507	220907131	09/06/22	0.0029	0.0014	0.2767	0.378	1221	764.7
CMP	06/13/22	15:41	0	8.87	14.1	1295	220907131	09/06/22	0.0012	0.0005	0.0755	0.262	352	183.08

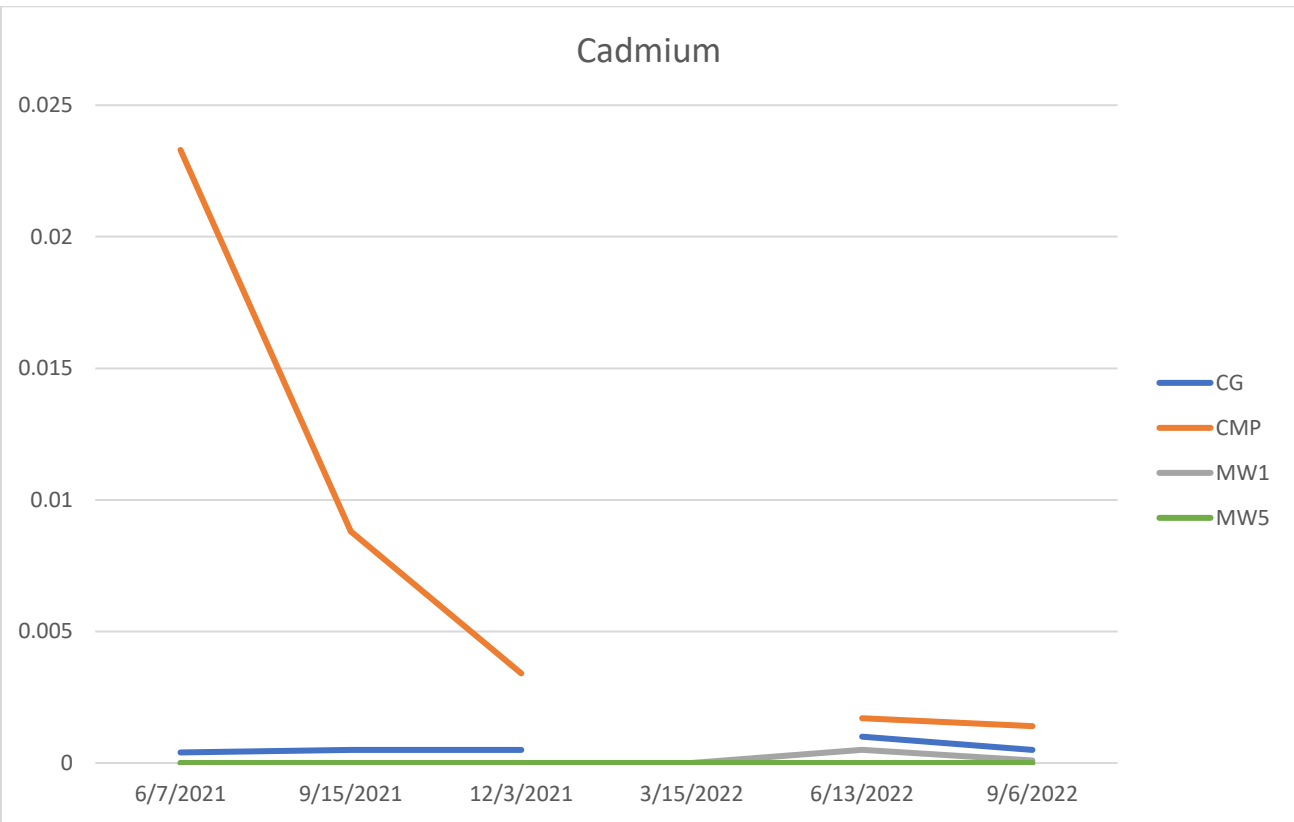
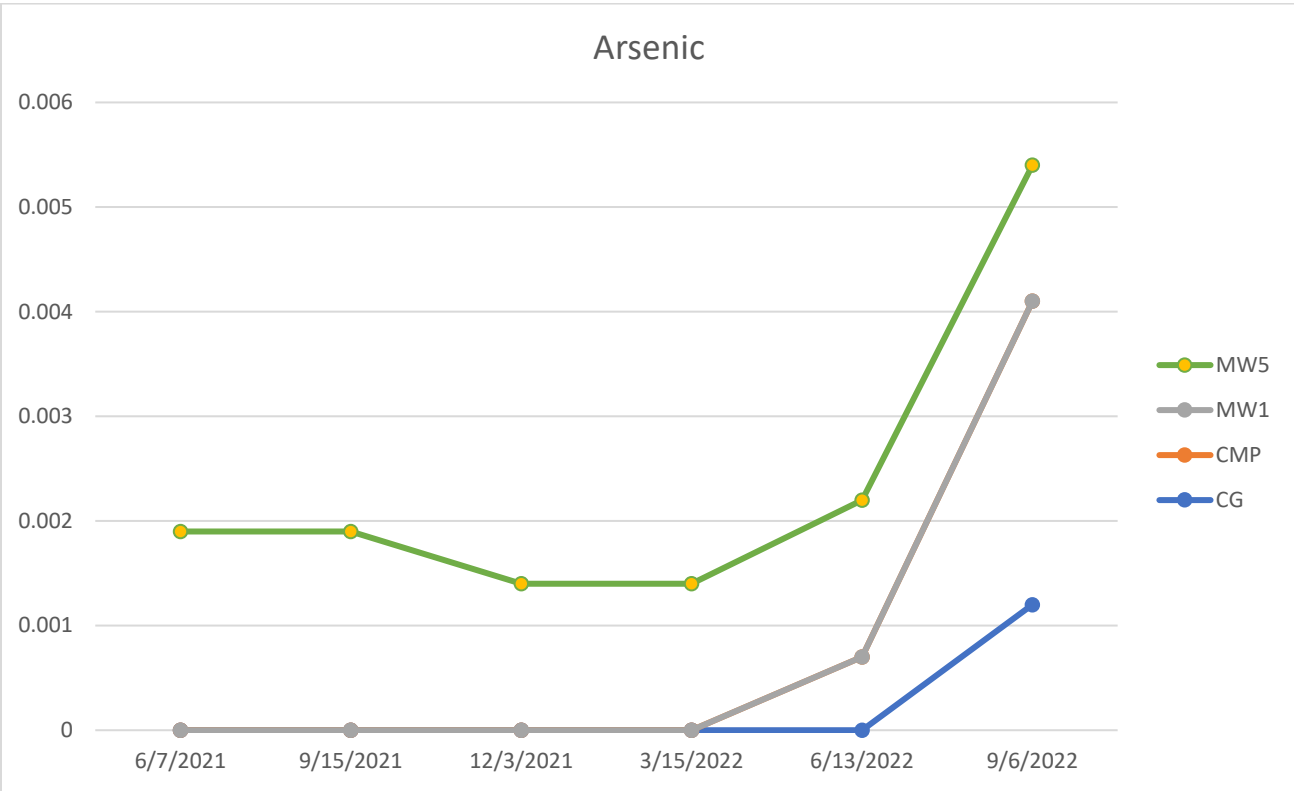
Gold Hill Mill Analyte Graphs for the Past Five Quarters

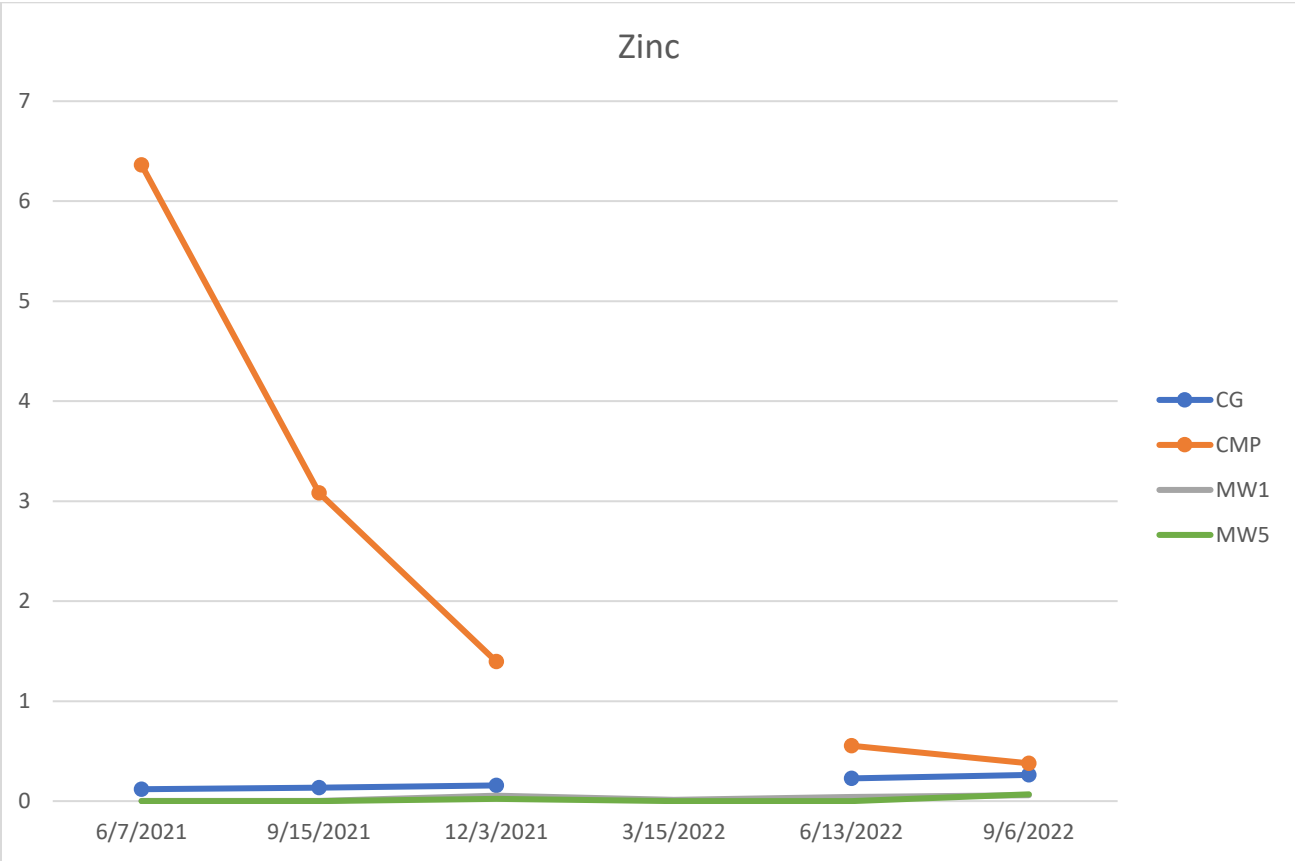
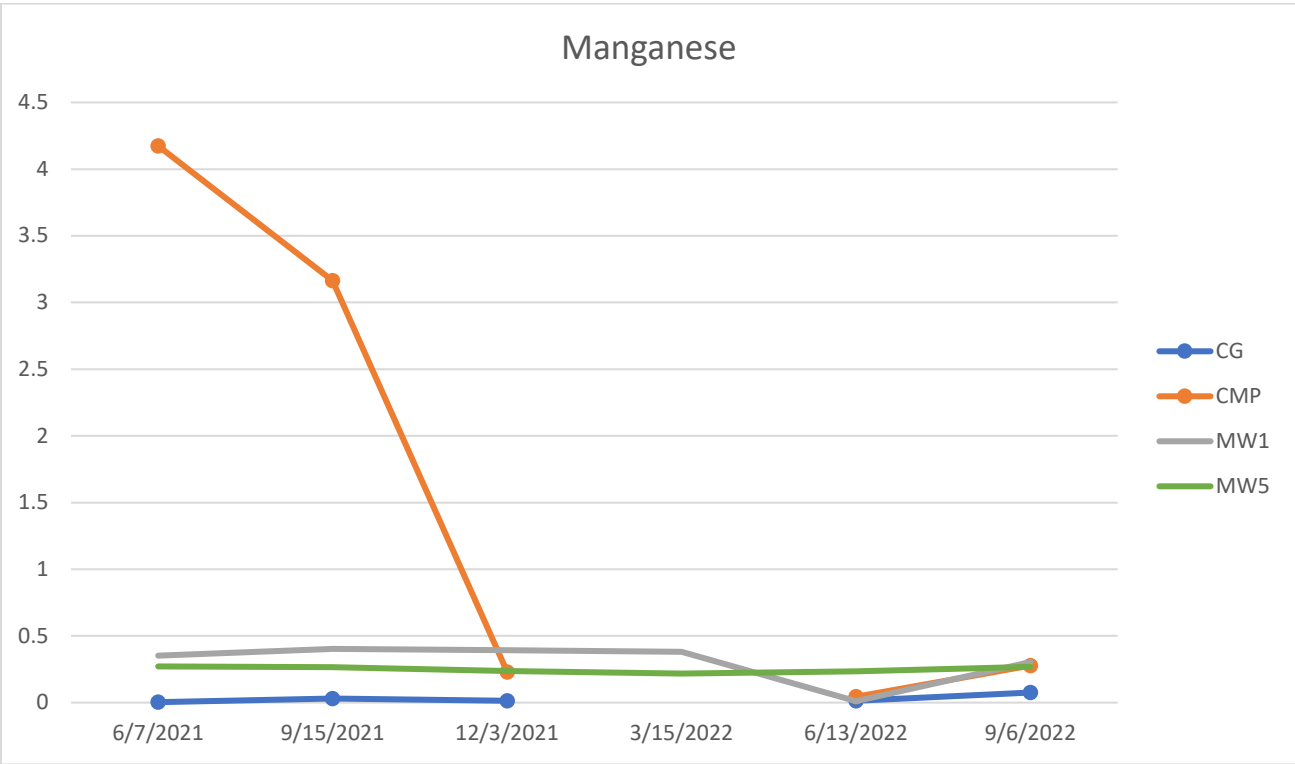


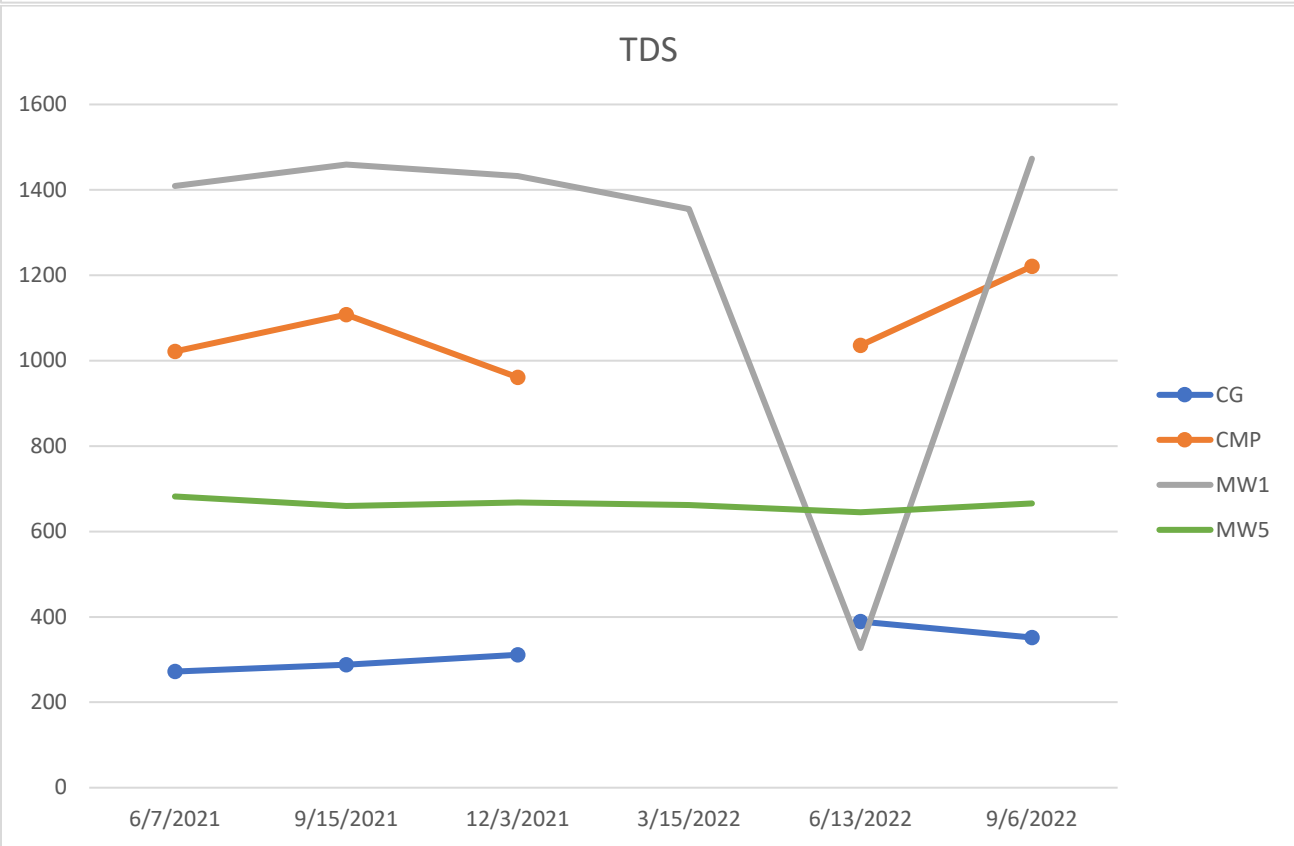
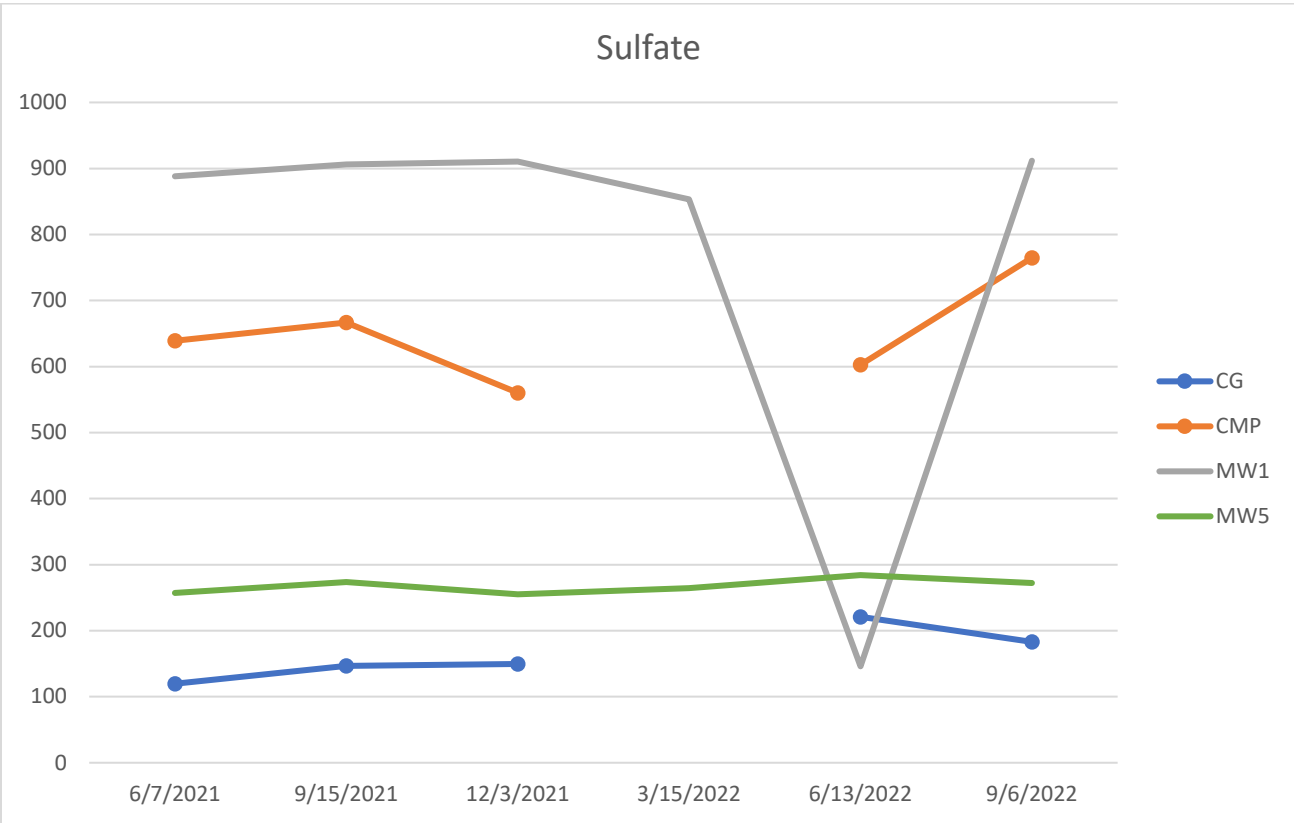




Cash Mine Analyte Graphs for the Past Five Quarters







Analytical Results

TASK NO: 220907131

Report To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Bill To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Task No.: 220907131

Client PO:

Client Project: Gold Hill

Date Received: 9/7/22

Date Reported: 9/14/22

Matrix: Water - Ground

Customer Sample ID Left Hand Creek

Sample Date/Time: 9/6/22 11:45 AM

Lab Number: 220907131-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Cyanide-Total	ND	EPA 335.4	0.005 mg/L	9/8/22	QC59502	DPL
Cyanide-Weak Acid Dissociable	ND	ASTM 2036-09C	0.005 mg/L	9/8/22	QC59501	DPL

Abbreviations/ References:

RL = Reporting Limit = Minimum Level

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) Spike amount low relative to the sample amount.

ND = Not Detected at Reporting Limit.

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

Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

Analytical Results

TASK NO: 220907131

Report To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Bill To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Task No.: 220907131
Client PO:
Client Project: Gold Hill

Date Received: 9/7/22
Date Reported: 9/14/22
Matrix: Water - Ground

Customer Sample ID Tailings Pond
Sample Date/Time: 9/6/22 12:10 PM
Lab Number: 220907131-02

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Sulfate	1521.90 mg/L	EPA 300.0	0.01 mg/L	9/8/22	QC59486	MLT
Total Dissolved Solids	2466 mg/L	SM 2540-C	5 mg/L	9/8/22	-	DEK
Total						
Arsenic	0.0024 mg/L	EPA 200.8	0.0006 mg/L	9/13/22	QC59564	MBN
Cadmium	ND	EPA 200.8	0.0001 mg/L	9/13/22	QC59564	MBN
Manganese	0.1146 mg/L	EPA 200.8	0.0008 mg/L	9/13/22	QC59564	MBN
Zinc	0.054 mg/L	EPA 200.8	0.001 mg/L	9/13/22	QC59564	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) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Analytical Results

TASK NO: 220907131

Report To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Bill To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Task No.: 220907131
Client PO:
Client Project: Gold Hill

Date Received: 9/7/22
Date Reported: 9/14/22
Matrix: Water - Ground

Customer Sample ID MW1

Sample Date/Time: 9/6/22 1:50 PM

Lab Number: 220907131-03

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Sulfate	911.75 mg/L	EPA 300.0	0.01 mg/L	9/8/22	QC59486	MLT
Total Dissolved Solids	1473 mg/L	SM 2540-C	5 mg/L	9/8/22	-	DEK
Total						
Arsenic	ND	EPA 200.8	0.0006 mg/L	9/13/22	QC59564	MBN
Cadmium	0.0001 mg/L	EPA 200.8	0.0001 mg/L	9/13/22	QC59564	MBN
Manganese	0.3033 mg/L	EPA 200.8	0.0008 mg/L	9/13/22	QC59564	MBN
Zinc	0.059 mg/L	EPA 200.8	0.001 mg/L	9/13/22	QC59564	MBN

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) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Analytical Results

TASK NO: 220907131

Report To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Bill To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Task No.: 220907131
Client PO:
Client Project: Gold Hill

Date Received: 9/7/22
Date Reported: 9/14/22
Matrix: Water - Ground

Customer Sample ID W1

Sample Date/Time: 9/6/22 2:10 PM

Lab Number: 220907131-04

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Sulfate	68.59 mg/L	EPA 300.0	0.01 mg/L	9/8/22	QC59486	MLT
Total Dissolved Solids	223 mg/L	SM 2540-C	5 mg/L	9/8/22	-	DEK
Total						
Arsenic	ND	EPA 200.8	0.0006 mg/L	9/13/22	QC59564	MBN
Cadmium	0.0001 mg/L	EPA 200.8	0.0001 mg/L	9/13/22	QC59564	MBN
Manganese	0.0075 mg/L	EPA 200.8	0.0008 mg/L	9/13/22	QC59564	MBN
Zinc	0.060 mg/L	EPA 200.8	0.001 mg/L	9/13/22	QC59564	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

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Analytical Results

TASK NO: 220907131

Report To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Bill To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Task No.: 220907131
Client PO:
Client Project: Gold Hill

Date Received: 9/7/22
Date Reported: 9/14/22
Matrix: Water - Ground

Customer Sample ID W2

Sample Date/Time: 9/6/22 2:30 PM

Lab Number: 220907131-05

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Sulfate	143.66 mg/L	EPA 300.0	0.01 mg/L	9/8/22	QC59486	MLT
Total Dissolved Solids	325 mg/L	SM 2540-C	5 mg/L	9/8/22	-	DEK
Total						
Arsenic	ND	EPA 200.8	0.0006 mg/L	9/13/22	QC59564	MBN
Cadmium	0.0003 mg/L	EPA 200.8	0.0001 mg/L	9/13/22	QC59564	MBN
Manganese	0.0021 mg/L	EPA 200.8	0.0008 mg/L	9/13/22	QC59564	MBN
Zinc	0.113 mg/L	EPA 200.8	0.001 mg/L	9/13/22	QC59564	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Analytical Results

TASK NO: 220907131

Report To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Bill To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Task No.: 220907131
Client PO:
Client Project: Gold Hill

Date Received: 9/7/22
Date Reported: 9/14/22
Matrix: Water - Ground

Customer Sample ID W3

Sample Date/Time: 9/6/22 2:46 PM

Lab Number: 220907131-06

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Sulfate	154.28 mg/L	EPA 300.0	0.01 mg/L	9/8/22	QC59486	MLT
Total Dissolved Solids	377 mg/L	SM 2540-C	5 mg/L	9/8/22	-	DEK
Total						
Arsenic	ND	EPA 200.8	0.0006 mg/L	9/13/22	QC59564	MBN
Cadmium	ND	EPA 200.8	0.0001 mg/L	9/13/22	QC59564	MBN
Manganese	0.0162 mg/L	EPA 200.8	0.0008 mg/L	9/13/22	QC59564	MBN
Zinc	0.067 mg/L	EPA 200.8	0.001 mg/L	9/13/22	QC59564	MBN

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) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Analytical Results

TASK NO: 220907131

Report To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Bill To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Task No.: 220907131
Client PO:
Client Project: Gold Hill

Date Received: 9/7/22
Date Reported: 9/14/22
Matrix: Water - Ground

Customer Sample ID W4

Sample Date/Time: 9/6/22 3:04 PM

Lab Number: 220907131-07

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Sulfate	197.79 mg/L	EPA 300.0	0.01 mg/L	9/8/22	QC59486	MLT
Total Dissolved Solids	526 mg/L	SM 2540-C	5 mg/L	9/12/22	QC59505	DEK
Total						
Arsenic	0.0021 mg/L	EPA 200.8	0.0006 mg/L	9/13/22	QC59564	MBN
Cadmium	ND	EPA 200.8	0.0001 mg/L	9/13/22	QC59564	MBN
Manganese	0.7914 mg/L	EPA 200.8	0.0008 mg/L	9/13/22	QC59564	MBN
Zinc	0.081 mg/L	EPA 200.8	0.001 mg/L	9/13/22	QC59564	MBN

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) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Analytical Results

TASK NO: 220907131

Report To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Bill To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Task No.: 220907131
Client PO:
Client Project: Gold Hill

Date Received: 9/7/22
Date Reported: 9/14/22
Matrix: Water - Ground

Customer Sample ID W5

Sample Date/Time: 9/6/22 3:34 PM

Lab Number: 220907131-08

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Sulfate	272.22 mg/L	EPA 300.0	0.01 mg/L	9/8/22	QC59486	MLT
Total Dissolved Solids	666 mg/L	SM 2540-C	5 mg/L	9/12/22	QC59505	DEK
Total						
Arsenic	0.0013 mg/L	EPA 200.8	0.0006 mg/L	9/13/22	QC59564	MBN
Cadmium	ND	EPA 200.8	0.0001 mg/L	9/13/22	QC59564	MBN
Manganese	0.2674 mg/L	EPA 200.8	0.0008 mg/L	9/13/22	QC59564	MBN
Zinc	0.068 mg/L	EPA 200.8	0.001 mg/L	9/13/22	QC59564	MBN

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Date Analyzed = Date Test Completed

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(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Analytical Results

TASK NO: 220907131

Report To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Bill To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Task No.: 220907131
Client PO:
Client Project: Gold Hill

Date Received: 9/7/22
Date Reported: 9/14/22
Matrix: Water - Ground

Customer Sample ID Cashmine Pond
Sample Date/Time: 9/6/22 3:41 PM
Lab Number: 220907131-09

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Sulfate	764.70 mg/L	EPA 300.0	0.01 mg/L	9/8/22	QC59486	MLT
Total Dissolved Solids	1221 mg/L	SM 2540-C	5 mg/L	9/12/22	QC59505	DEK
Total						
Arsenic	0.0029 mg/L	EPA 200.8	0.0006 mg/L	9/13/22	QC59564	MBN
Cadmium	0.0014 mg/L	EPA 200.8	0.0001 mg/L	9/13/22	QC59564	MBN
Manganese	0.2767 mg/L	EPA 200.8	0.0008 mg/L	9/13/22	QC59564	MBN
Zinc	0.378 mg/L	EPA 200.8	0.001 mg/L	9/13/22	QC59564	MBN

Abbreviations/ References:

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

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Analytical Results

TASK NO: 220907131

Report To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Bill To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Task No.: 220907131
Client PO:
Client Project: Gold Hill

Date Received: 9/7/22
Date Reported: 9/14/22
Matrix: Water - Ground

Customer Sample ID Cash Gulch
Sample Date/Time: 9/6/22 4:05 PM
Lab Number: 220907131-10

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Sulfate	183.08 mg/L	EPA 300.0	0.01 mg/L	9/8/22	QC59486	MLT
Total Dissolved Solids	352 mg/L	SM 2540-C	5 mg/L	9/12/22	QC59505	DEK
Total						
Arsenic	0.0012 mg/L	EPA 200.8	0.0006 mg/L	9/13/22	QC59564	MBN
Cadmium	0.0005 mg/L	EPA 200.8	0.0001 mg/L	9/13/22	QC59564	MBN
Manganese	0.0755 mg/L	EPA 200.8	0.0008 mg/L	9/13/22	QC59564	MBN
Zinc	0.262 mg/L	EPA 200.8	0.001 mg/L	9/13/22	QC59564	MBN

Abbreviations/ References:

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
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Analytical QC Summary

TASK NO: 220907131

Report To: Jerry Jergensen
Company: Colorado Milling CO

Receive Date: 9/7/22
Project Name: Gold Hill

Test	QC Batch ID	QC Type	Result	Method
Cyanide-Total	QC59502	Blank	ND	EPA 335.4
Cyanide-Weak Acid Dissociable	QC59501	Blank	ND	ASTM 2036-09C
Arsenic	QC59564	Method Blank	ND	EPA 200.8
Cadmium	QC59564	Method Blank	ND	EPA 200.8
Manganese	QC59564	Method Blank	ND	EPA 200.8
Zinc	QC59564	Method Blank	ND	EPA 200.8
Sulfate	QC59486	Blank	ND	EPA 300.0
Total Dissolved Solids	QC59505	Blank	ND	SM 2540-C

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Cyanide-Total	QC59502	Duplicate	0 - 20	-	0.0	EPA 335.4
		LCS	90 - 110	91.8	-	
		MS	75 - 125	89.5	-	
Cyanide-Weak Acid Dissociable	QC59501	Duplicate	0 - 20	-	0.0	ASTM 2036-09C
		LCS	90 - 110	91.8	-	
		MS	75 - 125	99.5	-	
Arsenic	QC59564	LCS	90 - 110	97.2	-	EPA 200.8
		MS	70 - 130	112.8	-	
		MSD	0 - 10	-	0.4	
Cadmium	QC59564	LCS	90 - 110	96.1	-	EPA 200.8
		MS	70 - 130	104.3	-	
		MSD	0 - 10	-	1.3	
Manganese	QC59564	LCS	90 - 110	102.7	-	EPA 200.8
		MS	70 - 130	101.5	-	
		MSD	0 - 10	-	1.1	
Zinc	QC59564	LCS	90 - 110	100.4	-	EPA 200.8
		MS	70 - 130	92.6	-	
		MSD	0 - 10	-	1.6	
Sulfate	QC59486	Duplicate	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	100.1	-	
		MS	75 - 125	98.9	-	
Total Dissolved Solids	QC59505	Duplicate	0 - 20	-	1.7	SM 2540-C
		LCS	85 - 115	97.2	-	

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.

Abbreviations/ References:

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(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.



DATA APPROVED FOR RELEASE BY

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Chain of Custody Form

Report To Information		Bill To Information (If different from report to)		Project Name / Number	
Company Name: <u>Cedarvale milking Co.</u>		Company Name: <u>Same</u>		<u>Gold Hill</u>	
Contact Name: <u>Gerald Tangensen</u>		Contact Name: _____		_____	
Address: <u>12915 Mt Curve Road</u>		Address: _____		Ta <u>CAL Task</u>	
City <u>Beach</u> State <u>Co</u> Zip <u>80106</u>		City _____ State _____ Zip _____		(L) <u>220907131</u>	
Phone: <u>719-330-4212</u>		Phone: _____		<u>JML</u>	
Email: <u>JerryTangensen@net.com</u>		Email: _____		_____	
Sample Collector: <u>David Parker</u>		PO No.: _____		_____	
Sample Collector Phone: <u>Jerry 719-330-4212</u>		_____		_____	

 **Colorado Analytical**
LABORATORIES, INC.

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
12860 W. Cedar Dr, Suite 100A
Lakewood CO 80228

Phone: 303-659-2313
www.coloradolab.com

Sample Matrix (Select One Only)				Tests Requested								
Waste Water ☐	Soil ☐	Drinking Water ☐										
Ground Water ☒	Sludge ☐											
Surface Water ☐												
Date	Time	Sample ID	1 container	No. of Containers	Grab or (Check One Only) Composite	AS	CD	MAN	24	Residue	TDS	Sulfate
9/6/22	11:45 AM	Left hand creek (see sheet to test sheet)		2	X							
"	12:10 PM	tailings Pond		2	X							
"	1:50 PM	mmu 1		2	X							
"	2:10 PM	mmu 1		2	X							
"	2:30 PM	mmu 2		2	X							
"	2:46 PM	mmu 3		2	X							
"	3:04 PM	mmu 4		2	X							
"	3:34 PM	mmu 5		2	X							
"	3:41 PM	cash mine pond		2	X							
"	4:05 PM	cash creek		2	X							
Instructions: <u>W-Hack can outside of HT per history. Unable to</u> <u>reach Jerry to confirm.</u>												
Relinquished By: <u>David Parker</u>		Date/Time: <u>9/7/2022</u>	Received By: <u>Adam</u>	Date/Time: <u>9/7/23</u>	Deliver Via: <u>HTD</u>	Relinquished By: <u>HTD</u>	C/S Charge ☐	Date/Time: _____	Temp. <u>5</u> °C/ice <u>Y</u>	Sample Pres. Yes ☒ No ☐	Date/Time: _____	

Analytical Results

TASK NO: 220908071

Report To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Bill To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Task No.: 220908071

Client PO:

Client Project: Gold Hill

Date Received: 9/8/22

Date Reported: 9/16/22

Matrix: Water - Ground

Customer Sample ID Left Hand Creek

Sample Date/Time: 9/7/22 10:30 PM

Lab Number: 220908071-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Total Alkalinity	15.4 mg/L as CaCO ₃	SM 2320-B	4.0 mg/L as CaCO ₃	9/12/22	QC59556	TAB
Bicarbonate	15.4 mg/L as CaCO ₃	SM 2320-B	0.2 mg/L as CaCO ₃	9/12/22	-	TAB
Carbonate	ND	SM 2320-B	0.2 mg/L as CaCO ₃	9/12/22	-	TAB
Hydroxide	ND	SM 2320-B	0.2 mg/L as CaCO ₃	9/12/22	-	TAB
Chloride	2.29 mg/L	EPA 300.0	0.01 mg/L	9/8/22	QC59516	MLT
Fluoride	ND	EPA 300.0	0.10 mg/L	9/8/22	QC59517	MLT
Nitrate Nitrogen	ND	EPA 300.0	0.05 mg/L	9/8/22	QC59518	MLT
Nitrate/ Nitrite Nitrogen	ND	Calculation	0.05 mg/L	9/9/22	-	AMJ
Nitrite Nitrogen	ND	EPA 300.0	0.03 mg/L	9/8/22	QC59519	MLT
Specific Conductance	54 umhos/cm @ 25c	EPA 120.1	5 umhos/cm @ 25c	9/8/22	-	AKF
Total Dissolved Solids	39 mg/L	SM 2540-C	5 mg/L	9/14/22	QC59560	DEK

Dissolved

Chromium - Hexavalent	ND	SM 3500-Cr B	0.01 mg/L	9/15/22	QC59652	MAT
Mercury	ND	EPA 245.7	0.0002 mg/L	9/13/22	QC59559	MLT
Aluminum	0.063 mg/L	EPA 200.8	0.001 mg/L	9/14/22	QC59607	MBN
Antimony	ND	EPA 200.8	0.0012 mg/L	9/14/22	QC59607	MBN
Arsenic	ND	EPA 200.8	0.0006 mg/L	9/14/22	QC59607	MBN
Barium	0.0160 mg/L	EPA 200.8	0.0007 mg/L	9/14/22	QC59607	MBN
Beryllium	ND	EPA 200.8	0.0001 mg/L	9/14/22	QC59607	MBN
Cadmium	ND	EPA 200.8	0.0001 mg/L	9/14/22	QC59607	MBN
Copper	0.0080 mg/L	EPA 200.8	0.0008 mg/L	9/14/22	QC59607	MBN
Lead	0.0005 mg/L	EPA 200.8	0.0001 mg/L	9/14/22	QC59607	MBN
Manganese	0.0037 mg/L	EPA 200.8	0.0008 mg/L	9/14/22	QC59607	MBN

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Analytical Results

TASK NO: 220908071

Report To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Bill To: Jerry Jergensen

Company: Colorado Milling CO
P.O. Box 99
Moab UT 84532

Task No.: 220908071
Client PO:
Client Project: Gold Hill

Date Received: 9/8/22
Date Reported: 9/16/22
Matrix: Water - Ground

Customer Sample ID Left Hand Creek
Sample Date/Time: 9/7/22 10:30 PM
Lab Number: 220908071-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
<u>Dissolved</u>						
Molybdenum	0.0006 mg/L	EPA 200.8	0.0005 mg/L	9/14/22	QC59607	MBN
Nickel	ND	EPA 200.8	0.0009 mg/L	9/14/22	QC59607	MBN
Boron	ND	EPA 200.7	0.01 mg/L	9/12/22	QC59548	MAT
Calcium	4.5 mg/L	EPA 200.7	0.1 mg/L	9/12/22	QC59548	MAT
Iron	0.179 mg/L	EPA 200.7	0.005 mg/L	9/12/22	QC59548	MAT
Magnesium	1.31 mg/L	EPA 200.7	0.02 mg/L	9/12/22	QC59548	MAT
<u>Total</u>						
Chromium - Trivalent	ND	Calculation	0.01 mg/L	9/16/22	-	MBN
Total Hardness	17.0 mg/L as CaCO3	SM 2340-B	0.1 mg/L as CaCO3	9/12/22	-	MAT
Mercury	ND	EPA 245.7	0.0002 mg/L	9/13/22	QC59559	MLT
Aluminum	0.275 mg/L	EPA 200.8	0.001 mg/L	9/14/22	QC59607	MBN
Arsenic	ND	EPA 200.8	0.0006 mg/L	9/14/22	QC59607	MBN
Cadmium	0.0001 mg/L	EPA 200.8	0.0001 mg/L	9/14/22	QC59607	MBN
Chromium	ND	EPA 200.8	0.0015 mg/L	9/14/22	QC59607	MBN
Copper	0.0158 mg/L	EPA 200.8	0.0008 mg/L	9/14/22	QC59607	MBN
Lead	0.0038 mg/L	EPA 200.8	0.0001 mg/L	9/14/22	QC59607	MBN
Manganese	0.1270 mg/L	EPA 200.8	0.0008 mg/L	9/14/22	QC59607	MBN
Molybdenum	0.0008 mg/L	EPA 200.8	0.0005 mg/L	9/14/22	QC59607	MBN
Zinc	0.060 mg/L	EPA 200.8	0.001 mg/L	9/14/22	QC59607	MBN
Calcium	4.6 mg/L	EPA 200.7	0.1 mg/L	9/12/22	QC59548	MAT
Iron	0.723 mg/L	EPA 200.7	0.005 mg/L	9/12/22	QC59548	MAT
Magnesium	1.33 mg/L	EPA 200.7	0.02 mg/L	9/12/22	QC59548	MAT

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

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Analytical QC Summary

TASK NO: 220908071

Report To: Jerry Jergensen
Company: Colorado Milling CO

Receive Date: 9/8/22
Project Name: Gold Hill

Test	QC Batch ID	QC Type	Result	Method
Total Alkalinity	QC59556	Blank	ND	SM 2320-B
Chloride	QC59516	Blank	ND	EPA 300.0
Chromium - Hexavalent	QC59652	Blank	ND	SM 3500-Cr B
Fluoride	QC59517	Blank	ND	EPA 300.0
Mercury	QC59559	Method Blank	ND	EPA 245.7
Aluminum	QC59607	Method Blank	ND	EPA 200.8
Antimony	QC59607	Method Blank	ND	EPA 200.8
Arsenic	QC59607	Method Blank	ND	EPA 200.8
Barium	QC59607	Method Blank	ND	EPA 200.8
Beryllium	QC59607	Method Blank	ND	EPA 200.8
Cadmium	QC59607	Method Blank	ND	EPA 200.8
Chromium	QC59607	Method Blank	ND	EPA 200.8
Copper	QC59607	Method Blank	ND	EPA 200.8
Lead	QC59607	Method Blank	ND	EPA 200.8
Manganese	QC59607	Method Blank	ND	EPA 200.8
Molybdenum	QC59607	Method Blank	ND	EPA 200.8
Nickel	QC59607	Method Blank	ND	EPA 200.8
Zinc	QC59607	Method Blank	ND	EPA 200.8
Boron	QC59548	Method Blank	ND	EPA 200.7
Calcium	QC59548	Method Blank	ND	EPA 200.7
Iron	QC59548	Method Blank	ND	EPA 200.7
Magnesium	QC59548	Method Blank	ND	EPA 200.7
Nitrate Nitrogen	QC59518	Blank	ND	EPA 300.0
Nitrite Nitrogen	QC59519	Blank	ND	EPA 300.0
Total Dissolved Solids	QC59560	Blank	ND	SM 2540-C

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Alkalinity	QC59556	Duplicate	0 - 20	-	2.8	SM 2320-B
		LCS	90 - 110	106.2	-	
Chloride	QC59516	Duplicate	0 - 20	-	2.0	EPA 300.0
		LCS	90 - 110	101.2	-	
		MS	75 - 125	100.2	-	
Chromium - Hexavalent	QC59652	Duplicate	0 - 20	-	0.0	SM 3500-Cr B
		LCS	90 - 110	101.9	-	
Fluoride	QC59517	Duplicate	0 - 20	-	1.0	EPA 300.0
		LCS	90 - 110	97.1	-	
		MS	75 - 125	98.7	-	
Mercury	QC59559	Duplicate	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	104.4	-	
		MS	80 - 120	94.0	-	
Aluminum	QC59607	LCS	90 - 110	100.0	-	EPA 200.8
		MS	70 - 130	117.9	-	

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Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MSD	0 - 10	-	8.7	
Antimony	QC59607	LCS	90 - 110	99.3	-	EPA 200.8
		MS	70 - 130	99.3	-	
		MSD	0 - 10	-	2.7	
Arsenic	QC59607	LCS	90 - 110	97.9	-	EPA 200.8
		MS	70 - 130	102.3	-	
		MSD	0 - 10	-	3.1	
Barium	QC59607	LCS	90 - 110	94.5	-	EPA 200.8
		MS	70 - 130	91.3	-	
		MSD	0 - 10	-	2.6	
Beryllium	QC59607	LCS	90 - 110	94.2	-	EPA 200.8
		MS	70 - 130	106.5	-	
		MSD	0 - 10	-	1.1	
Cadmium	QC59607	LCS	90 - 110	96.0	-	EPA 200.8
		MS	70 - 130	102.5	-	
		MSD	0 - 10	-	1.8	
Chromium	QC59607	LCS	90 - 110	99.6	-	EPA 200.8
		MS	70 - 130	106.1	-	
		MSD	0 - 10	-	1.4	
Copper	QC59607	LCS	90 - 110	96.8	-	EPA 200.8
		MS	70 - 130	103.7	-	
		MSD	0 - 10	-	0.7	
Lead	QC59607	LCS	90 - 110	99.4	-	EPA 200.8
		MS	70 - 130	82.0	-	
		MSD	0 - 10	-	0.9	
Manganese	QC59607	LCS	90 - 110	99.2	-	EPA 200.8
		MS	70 - 130	112.9	-	
		MSD	0 - 10	-	0.5	
Molybdenum	QC59607	LCS	90 - 110	96.0	-	EPA 200.8
		MS	70 - 130	106.6	-	
		MSD	0 - 10	-	0.6	
Nickel	QC59607	LCS	90 - 110	100.2	-	EPA 200.8
		MS	70 - 130	105.6	-	
		MSD	0 - 10	-	1.8	
Zinc	QC59607	LCS	90 - 110	97.9	-	EPA 200.8
		MS	70 - 130	97.1	-	
		MSD	0 - 10	-	0.6	
Boron	QC59548	Duplicate	0 - 20	-	9.6	EPA 200.7
		LCS	90 - 110	101.2	-	
		MS	75 - 125	112.1	-	
Calcium	QC59548	Duplicate	0 - 20	-	0.1	EPA 200.7
		LCS	90 - 110	106.9	-	
		MS	75 - 125	111.9	-	
Iron	QC59548	Duplicate	0 - 20	-	12.5	EPA 200.7
		LCS	90 - 110	105.2	-	
		MS	75 - 125	112.3	-	
Magnesium	QC59548	Duplicate	0 - 20	-	2.1	EPA 200.7
		LCS	90 - 110	104.9	-	
		MS	75 - 125	114.6	-	
Nitrate Nitrogen	QC59518	Duplicate	0 - 20	-	6.7	EPA 300.0
		LCS	90 - 110	94.8	-	

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Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS	75 - 125	95.0	-	
Nitrite Nitrogen	QC59519	Duplicate	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	97.1	-	
		MS	75 - 125	84.6	-	
Total Dissolved Solids	QC59560	Duplicate	0 - 20	-	2.5	SM 2540-C
		LCS	85 - 115	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.



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