STATE OF COLORADO

Eschberger - DNR, Amy <amy.eschberger@state.co.us>

Gold Hill Mill, Permit No. M-1994-117 Water Monitoring Plan Quarterly Reporting

1 message

Avrom Howard <aeh@nebuconsulting.com> Tue, Dec 31, 2019 at 12:56 PM
To: amy.eschberger@state.co.us
Cc: Mike Bynum <Mike@bzrez.com>, Mark Steen <goldhillbooks@yahoo.com>

Ms. Eschberger,

Please see the letter and related attachment, below.

Thanks.

Avrom E. Howard, MSc, PGeo
Project Manager, Gold Hill Project

2 attachments

19-12-31 M-1994-117 letter.pdf
100K

19-12 GHM M-1994-117 water data.xlsx
53K

COLORADO MILLING COMPANY, LLC

P.O. BOX 327,
MOAB, UT 84532

December 31, 2019

Amy Eschberger, Environmental Protection Specialist
COLORADO DIVISION OF MINING, RECLAMATION AND SAFETY
1313 Sherman Street, Room 215
Denver, CO 80203

Sent via email, to: amy.eschberger@state.co.us

Re: Gold Hill Mill, Permit No. M-1994-117 Water Monitoring Plan Quarterly Reporting

Ms. Eschberger:

Mr. Bynum forwarded me a copy of your letter dated December 16, 2019, pertaining to water monitoring data for the Gold Hill Mill permit. I understand that he replied to you by email, as well, assuring you that this oversight in water quality reporting would be promptly addressed. We have all of the measurements and analyses and are pleased to submit them to you at this time.

All of the ACZ laboratory data were submitted to you in an email sent to you immediately before this one so I have not attached them to the email that this letter was attached to. However, I have attached a master EXCEL spreadsheet containing all of the well measurements as well as the analytical data. Please note that even though your letter does not specify a requirement for measurments from the tailings pond there are data from this location, in the rows identified as "TP".

I will continue to update this spreadsheet on a quarterly basis and submit it to you, and once I obtain UTM coordinates for the various locations will create a GIS project so that all the data can be better displayed, tracked and analyzed both spatially and temporally. Results are pending for the most recent samples taken on December 16, 2019. When these results are obtained I will forward them to you and update the spreadsheet.

I trust you will find all of this information to your satisfaction and would look forward to receiving your confirmation in this regard. Meantime, should you have any questions or concerns please do not hesitate to contact me. My mobile number is 970-234-9757 and my email address is aeh@nebuconsulting.com.

Kind regards,

Avrom E. Howard, MSc, PGeo
Project Manager, Gold Hill Project

LOCATIONS			WELL MEASUREMENTS			
LOCATION ID	NORTHING	EASTING	DATE	TIME	DEPTH (ft)	pH
W1			12/15/16	9:20	39.58	7.94
W2			12/15/16	9:35	50.42	7.63
W3			12/15/16	9:45	26.08	7.48
W4			12/15/16	10:00	30.42	7.46
TP			12/15/16	-	-	-
W1			03/20/17	10:22	41.50	7.93
W2			03/20/17	10:37	57.33	7.72
W3			03/20/17	10:47	28.17	7.50
W4			03/20/17	10:54	32.67	7.57
TP			03/20/17	11:50	-	7.80
W1			06/21/17	11:00	33.70	7.84
W2			06/21/17	11:08	31.60	7.25
W3			06/21/17	11:20	20.10	7.25
W4			06/21/17	11:25	26.80	7.10
TP			06/21/17	12:12	-	7.36
W1			09/20/17	10:55	37.90	8.00
W2			09/20/17	11:10	41.60	7.53
W3			09/20/17	11:20	25.00	7.42
W4			09/20/17	11:26	30.30	7.10
TP			09/20/17	12:20	-	7.68
W1			12/19/17	10:30	38.70	7.81
W2			12/19/17	10:41	43.30	7.84
W3			12/19/17	10:56	41.80	6.76
W4			12/19/17	11:09	31.30	7.39
TP			12/19/17	10:00	-	-
W1			03/13/18	10:55	41.30	7.85
W2			03/13/18	11:10	52.30	7.75
W3			03/13/18	11:20	28.20	7.32
W4			03/13/18	11:30	33.20	8.00
TP			03/13/18	-	-	-
W1			06/14/18	10:15	33.50	7.87
W2			06/14/18	10:20	33.33	7.74
W3			06/14/18	10:27	21.08	7.46
W4			06/14/18	10:40	27.08	7.40
TP			06/14/18	9:30	-	7.65
W1			09/18/18	10:20	38.10	8.18
W2			09/18/18	10:35	43.40	7.45
W3			09/18/18	10:40	27.10	7.75

W4			09/18/18	19:50	31.50	7.40
TP			09/18/18	12:56	-	7.25
W1			12/10/18	9:20	40.08	8.02
W2			12/10/18	9:35	51.33	7.59
W3			12/10/18	9:50	28.42	7.47
W4			12/10/18	10:00	30.58	7.43
TP			12/10/18	-	-	-
W1			03/24/19	10:41	38.08	8.12
W2			03/24/19	10:55	56.58	7.71
W3			03/24/19	11:10	30.33	7.31
W4			03/24/19	11:25	35.75	7.40
TP			03/24/19	-	-	-
W1			06/24/19	8:15	29.50	8.10
W2			06/24/19	8:26	29.08	7.74
W3			06/24/19	8:35	20.25	7.35
W4			06/24/19	8:45	26.75	7.26
TP			06/24/19	10:30	-	7.40
W1			09/23/19	9:35	38.17	8.28
W2			09/23/19	9:45	41.17	7.56
W3			09/23/19	9:55	26.42	7.63
W4			09/23/19	10:00	30.42	7.21
TP			09/23/19	9:10	-	8.06
W1			12/16/19	11:25	42.50	7.95
W2			12/16/19	12:35	50.20	7.59
W3			12/16/19	12:50	27.80	7.65
W4			12/16/19	13:15	31.70	7.36
TP			12/16/19	-	-	-

				WATER ANALYSES (ppm)		
TEMP (°C)	CONDUCTIVITY (uS/cm)	SAMPLE ID	DATE	As	Cd	Mn
7.9	602	0161215 W1	12/16/16	-	-	0.006
7.7	754	0161215 W2	12/16/16	-	-	<0.02
8.0	721	0161215 W3	12/16/16	-	-	<0.02
7.8	675	0161215 W4	12/16/16	-	-	0.237
-	-	-	-	-	-	-
9.3	632	0170320 W1	03/21/17	-	-	0.008
9.3	778	0170320 W2	03/21/17	-	-	<0.02
8.8	746	0170320 W3	03/21/17	-	-	<0.02
8.4	695	0170320 W4	03/21/17	-	-	0.075
8.1	637	0170320 T.P.	03/21/17	0.0013	<0.0001	1.410
10.4	414	0170621 W1	06/22/17	-	-	<0.02
10.0	558	0170621 W2	06/22/17	-	-	<0.02
9.5	649	0170621 W3	06/22/17	-	-	0.130
10.1	399	0170621 W4	06/22/17	-	-	0.009
21.6	246	0170621 TP	06/22/17	0.0015	<0.0001	0.270
9.3	430	0170920-W1	09/21/17	-	-	<0.02
9.4	642	0170920-W2	09/21/17	-	-	<0.02
8.8	586	0170920-W3	09/21/17	-	-	<0.02
8.3	472	0170920-W4	09/21/17	-	-	<0.02
14.0	324	0170920-TP	09/21/17	0.0019	<0.0001	0.060
9.1	575	7/012/19 W1	12/21/17	-	-	<0.02
8.6	715	7/012/19 W2	12/21/17	-	-	<0.02
8.1	622	7/012/19 W3	12/21/17	-	-	<0.02
7.9	625	7/012/19 W4	12/21/17	-	-	0.009
-	-	17/012/19 TP	12/21/17	0.0017	0.0002	<0.02
9.0	566	18-03-13 W1	03/14/18	0.0003	0.0001	<0.02
8.4	727	18-03-13 W2	03/14/18	-	-	<0.02
8.1	655	18-03-13 W3	03/14/18	-	-	<0.02
7.9	746	18-03-13 W4	03/14/18	-	-	0.357
-	-	-	-	-	-	-
10.0	403	18-12-10-W1	12/11/18	<0.0004	0.00014	<0.02
9.7	533	18-12-10-W2	12/11/18	-	-	<0.02
9.2	672	18-12-10-W3	12/11/18	-	-	<0.02
9.3	704	18-12-10-W4	12/11/18	-	-	0.122
19.6	1,800	-	-	-	-	-
10.5	411	18-03-13 W1	10/02/18	<0.0004	0.0002	<0.02
10.3	627	18-03-13 W2	10/02/18	-	-	<0.02
19.3	662	18-03-13 W3	10/02/18	-	-	<0.02

9.5	747	18-03-31 W4	10/02/18	-	-	0.087
7.6	1,524	018-03-BTP	10/02/18	0.0009	<0.0001	<0.02
8.2	443	18-12-10-W1	12/11/18	<0.0004	0.00014	<0.02
7.6	642	18-12-10-W2	12/11/18	-	-	<0.02
7.6	636	18-12-10-W3	12/11/18	-	-	<0.02
7.2	694	18-12-10-W4	12/11/18	-	-	0.122
-	-	-	-	-	-	-
9.1	321	0190325 W1	03/26/19	0.0003	0.00013	<0.02
8.7	580	0190325 W2	03/26/19	-	-	<0.02
8.1	646	0190325 W3	03/26/19	-	-	<0.02
7.8	651	0190325 W4	03/26/19	-	-	0.023
-	-	-	-	-	-	-
8.1	452	0190624-W-1	06/25/19	<0.0004	0.00025	<0.02
7.7	523	0190624-W-2	06/25/19	-	-	<0.02
7.4	638	0190624-W-3	06/25/19	-	-	<0.02
7.4	409	0190624-W-4	06/25/19	-	-	<0.02
8.7	1,655	0190624-TP	06/25/19	0.0007	0.00018	0.140
9.2	531	0190923 W1	10/09/19	<0.0004	0.00021	<0.02
9.1	567	0190923 W2	10/09/19	-	-	<0.02
8.6	571	0190923 W3	10/09/19	-	-	<0.02
8.3	522	0190923 W4	10/09/19	-	-	0.010
11.2	1,999	0190923 TP	10/09/19	0.0007	<0.0001	<0.02
8.5	523					
7.9	590					
7.9	569					
6.7	586					
-	-					

Zn	Residue	Sulfate
0.01	380	191
0.39	512	275
<0.02	452	168
<0.02	422	150
-	-	-
0.01	408	213
0.45	552	285
0.02	464	164
<0.02	436	155
<0.02	2,040	1,330
0.13	236	102
0.14	350	195
<0.02	388	159
0.06	226	58
<0.02	2,120	1,380
0.01	226	110
0.20	394	226
0.02	330	138
<0.02	286	98
<0.02	2,800	1,890
0.02	334	159
0.32	476	241
<0.02	390	153
<0.02	380	121
0.04	3,380	1,970
0.01	364	165
0.31	506	246
0.02	414	153
<0.02	476	167
-	-	-
0.01	254	115
0.18	434	211
0.01	394	155
<0.02	430	164
-	-	-
<0.02	252	110
0.17	416	207
0.02	404	181

<0.02	472	172
<0.02	3,470	2,540
0.01	254	115
0.18	434	211
0.01	394	155
<0.02	430	164
-	-	-
<0.02	232	77
0.02	432	151
0.13	436	197
<0.02	424	140
-	-	-
0.02	262	120
0.08	350	155
<0.02	414	159
<0.02	230	43
0.02	1,610	943
0.02	328	158
0.14	374	180
<0.02	342	129
<0.02	316	91
0.45	2,020	1,220

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

Analytical Report

January 04, 2017

Report to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

cc: Gordon E. Sweeney

Bill to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

Project ID:
ACZ Project ID: L34668

Mark Steen:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 16, 2016. This project has been assigned to ACZ's project number, L34668. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L34668. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after February 03, 2017. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

Sue Webber has reviewed and approved this report.

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0161215 MW1

ACZ Sample ID: ***L34668-01***
Date Sampled: *12/15/16 09:02*
Date Received: *12/16/16*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0006	B		mg/L	0.0002	0.001	12/21/16 20:17	msh
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0005	12/20/16 20:38	msh
Manganese, dissolved	M200.7 ICP	1	0.257			mg/L	0.005	0.03	12/19/16 19:38	aeb
Zinc, dissolved	M200.7 ICP	1	0.04	B		mg/L	0.01	0.05	12/19/16 19:38	aeb

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/17/16 11:59	sck
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							12/16/16 16:00	gss
Residue, Filterable (TDS) @180C	SM2540C	1	1520			mg/L	10	20	12/17/16 10:47	sck
Sulfate	D516-02/-07 - Turbidimetric	100	849		*	mg/L	100	500	01/03/17 17:26	bsu

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0161215 W1

ACZ Sample ID: ***L34668-02***
Date Sampled: *12/15/16 09:20*
Date Received: *12/16/16*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1	0.006	B		mg/L	0.005	0.03	12/19/16 19:41	aeb
Zinc, dissolved	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	12/19/16 19:41	aeb

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/17/16 12:03	sck
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							12/16/16 16:00	gss
Residue, Filterable (TDS) @180C	SM2540C	1	380			mg/L	10	20	12/17/16 10:49	sck
Sulfate	D516-02/-07 - Turbidimetric	20	191		*	mg/L	20	100	01/03/17 17:42	bsu

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0161215 W2

ACZ Sample ID: ***L34668-03***
Date Sampled: *12/15/16 09:35*
Date Received: *12/16/16*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	12/19/16 19:50	aeb
Zinc, dissolved	M200.7 ICP	1	0.39			mg/L	0.01	0.05	12/19/16 19:50	aeb

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/17/16 12:06	sck
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							12/16/16 16:00	gss
Residue, Filterable (TDS) @180C	SM2540C	1	512			mg/L	10	20	12/17/16 10:52	sck
Sulfate	D516-02/-07 - Turbidimetric	20	275		*	mg/L	20	100	01/03/17 17:42	bsu

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0161215 W3

ACZ Sample ID: ***L34668-04***
Date Sampled: *12/15/16 09:45*
Date Received: *12/16/16*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	12/19/16 19:53	aeb
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/19/16 19:53	aeb

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/17/16 12:10	sck
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							12/16/16 16:00	gss
Residue, Filterable (TDS) @180C	SM2540C	1	452			mg/L	10	20	12/17/16 10:54	sck
Sulfate	D516-02/-07 - Turbidimetric	5	168		*	mg/L	5	25	01/03/17 17:25	bsu

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0161215 W4

ACZ Sample ID: ***L34668-05***
Date Sampled: *12/15/16 10:00*
Date Received: *12/16/16*
Sample Matrix: *Surface Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1	0.237			mg/L	0.005	0.03	12/19/16 19:57	aeb
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/19/16 19:57	aeb

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/17/16 12:14	sck
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							12/16/16 16:00	gss
Residue, Filterable (TDS) @180C	SM2540C	1	422			mg/L	10	20	12/19/16 16:34	emk
Sulfate	D516-02/-07 - Turbidimetric	5	150		*	mg/L	5	25	12/27/16 15:27	krh

Colorado Milling Company, LLC
Project ID:
Sample ID: 0161215 MW5

ACZ Sample ID: ***L34668-06***
Date Sampled: *12/15/16 10:20*
Date Received: *12/16/16*
Sample Matrix: *Surface Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0035			mg/L	0.0002	0.001	12/21/16 20:26	msh
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	12/20/16 20:44	msh
Manganese, dissolved	M200.7 ICP	1	0.073			mg/L	0.005	0.03	12/19/16 20:00	aeb
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/19/16 20:00	aeb

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/17/16 12:18	sck
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							12/16/16 16:00	gss
Residue, Filterable (TDS) @180C	SM2540C	1	660			mg/L	10	20	12/19/16 16:36	emk
Sulfate	D516-02/-07 - Turbidimetric	20	331		*	mg/L	20	100	12/27/16 16:11	krh

Colorado Milling Company, LLC
Project ID:
Sample ID: 0161215 CG

ACZ Sample ID: ***L34668-07***
Date Sampled: *12/15/16 10:50*
Date Received: *12/16/16*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0002	0.001	12/21/16 20:28	msh
Cadmium, dissolved	M200.8 ICP-MS	1	0.0008			mg/L	0.0001	0.0005	12/20/16 20:46	msh
Manganese, dissolved	M200.7 ICP	1	0.033			mg/L	0.005	0.03	12/19/16 20:03	aeb
Zinc, dissolved	M200.7 ICP	1	0.24			mg/L	0.01	0.05	12/19/16 20:03	aeb

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/17/16 12:22	sck
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							12/16/16 16:00	gss
Residue, Filterable (TDS) @180C	SM2540C	1	250			mg/L	10	20	12/17/16 10:57	sck
Sulfate	D516-02/-07 - Turbidimetric	5	145		*	mg/L	5	25	01/03/17 17:25	bsu

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Colorado Milling Company, LLC

ACZ Project ID: ***L34668***

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG415166													
WG415166ICV	ICV	12/21/16 19:40	MS161128-3	.05		.04956	mg/L	99	90	110			
WG415166ICB	ICB	12/21/16 19:42				U	mg/L		-0.0006	0.0006			
WG415166LFB	LFB	12/21/16 19:44	MS161201-3	.0501		.04775	mg/L	95	85	115			
L34668-01AS	AS	12/21/16 20:19	MS161201-3	.0501	.0006	.0504	mg/L	99	70	130			
L34668-01ASD	ASD	12/21/16 20:21	MS161201-3	.0501	.0006	.05093	mg/L	100	70	130	1	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG415093													
WG415093ICV	ICV	12/20/16 19:57	MS161128-3	.05		.05028	mg/L	101	90	110			
WG415093ICB	ICB	12/20/16 19:59				U	mg/L		-0.0003	0.0003			
WG415093LFB	LFB	12/20/16 20:01	MS161201-3	.05005		.04947	mg/L	99	85	115			
L34667-03AS	AS	12/20/16 20:34	MS161201-3	.05005	U	.04689	mg/L	94	70	130			
L34667-03ASD	ASD	12/20/16 20:36	MS161201-3	.05005	U	.04698	mg/L	94	70	130	0	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG415005													
WG415005ICV	ICV	12/19/16 18:15	II161209-1	2		1.9072	mg/L	95	95	105			
WG415005ICB	ICB	12/19/16 18:21				U	mg/L		-0.015	0.015			
WG415005LFB	LFB	12/19/16 18:34	II161130-2	.5		.5306	mg/L	106	85	115			
L34667-03AS	AS	12/19/16 19:31	II161130-2	.5	.076	.5952	mg/L	104	85	115			
L34667-03ASD	ASD	12/19/16 19:34	II161130-2	.5	.076	.5997	mg/L	105	85	115	1	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414956													
WG414956PBW	PBW	12/17/16 10:00				U	mg/L		-20	20			
WG414956LCSW	LCSW	12/17/16 10:02	PCN52083	260		250	mg/L	96	80	120			
L34668-07DUP	DUP	12/17/16 11:00			250	252	mg/L				1	10	
WG415023													
WG415023PBW	PBW	12/19/16 16:30				U	mg/L		-20	20			
WG415023LCSW	LCSW	12/19/16 16:31	PCN52083	260		264	mg/L	102	80	120			
L34687-01DUP	DUP	12/19/16 16:49			3170	3180	mg/L				0	10	

Colorado Milling Company, LLC

ACZ Project ID: ***L34668***

Sulfate D516-02/-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG415250													
WG415250ICB	ICB	12/27/16 14:34				U	mg/L		-3	3			
WG415250ICV	ICV	12/27/16 14:34	WI161227-2	20		21	mg/L	105	90	110			
WG415250LFB	LFB	12/27/16 15:19	WI160815-8	10		10.2	mg/L	102	90	110			
L34771-01AS	AS	12/27/16 16:00	SO4TURB	10	1040	1040	mg/L	0	90	110			M3
L34668-06DUP	DUP	12/27/16 16:11			331	331	mg/L				0	20	
WG415603													
WG415603ICB	ICB	01/03/17 9:50				U	mg/L		-3	3			
WG415603ICV	ICV	01/03/17 9:50	WI161227-2	20		20.8	mg/L	104	90	110			
WG415603LFB	LFB	01/03/17 17:17	WI160815-8	10		9.9	mg/L	99	90	110			
L34356-05DUP	DUP	01/03/17 17:17			U	U	mg/L				0	20	RA
L34356-06AS	AS	01/03/17 17:39	WI160815-8	10	U	13.1	mg/L	131	90	110			M1
L34684-01DUP	DUP	01/03/17 17:39			U	U	mg/L				0	20	RA
L34684-02AS	AS	01/03/17 17:58	SO4TURB50X	10	741	785	mg/L	440	90	110			M3

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG415005													
WG415005ICV	ICV	12/19/16 18:15	II161209-1	2		1.943	mg/L	97	95	105			
WG415005ICB	ICB	12/19/16 18:21				U	mg/L		-0.03	0.03			
WG415005LFB	LFB	12/19/16 18:34	II161130-2	.4942		.515	mg/L	104	85	115			
L34667-03AS	AS	12/19/16 19:31	II161130-2	.4942	.02	.533	mg/L	104	85	115			
L34667-03ASD	ASD	12/19/16 19:34	II161130-2	.4942	.02	.54	mg/L	105	85	115	1	20	

Colorado Milling Company, LLC ACZ Project ID: ***L34668***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L34668-01	WG415603	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L34668-02	WG415603	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L34668-03	WG415603	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L34668-04	WG415603	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L34668-05	WG415250	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L34668-06	WG415250	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L34668-07	WG415603	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Certification Qualifiers

Colorado Milling Company, LLC ACZ Project ID: ***L34668***

No certification qualifiers associated with this analysis

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID: L34668
Date Received: 12/16/2016 10:54
Received By:
Date Printed: 12/16/2016

Receipt Verification

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

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
4130	3.9	<=6.0	14	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID:	L34668
Date Received:	12/16/2016 10:54
Received By:	
Date Printed:	12/16/2016

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

ACZ Laboratories, Inc. L34668

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Mark. A. Steen	Address: P.O. Box 1523 Longmont, Colo.
Company: Colorado milling company	
E-mail: goldtontine@gmail.com	Telephone:

Copy of Report to:

Name: Gordon sweeney	E-mail: gordon.sweeney@gmail.com
Company: CMC LLC	Telephone: 303-440-0633

Invoice to:

Name: Mark. A. Steen	Address: P.O. Box 1523 Longmont Colo
Company: Colo milling Co. LLC	
E-mail: goldtontine@Gmail.com	Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☐ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☐

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: LEWIS PERKINS **Sampler's Site Information** **State** Colo **Zip code** 80302 **Time Zone** MDT

***Sampler's Signature:** Lewis Perkins

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:

PO#:

Reporting state for compliance testing: Colorado

Check box if samples include NRC licensed material? ☐

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers
01612 15 MW 1	12/15/16 9:02 AM	GW	
01612 15 W 1	12/15/16 9:20 AM	GW	
01612 15 W 2	12/15/16 9:35 AM	GW	
01612 15 W 3	12/15/16 9:45 AM	GW	
01612 15 W 4	12/15/16 10:00 AM	SW	
01612 15 MW 5	12/15/16 10:20 AM	SW	
01612 15 C G	12/15/16 10:50 AM	GW	
Case more	Frezen	NO Samples	
tailingspond	Frezen	" "	

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Call Gordon Sweeney @ 303-442-1062 For The metals to Be analyzed for. allsamples are Raw, Filter as needed

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
L. Perkins	12/15/16	UPS 3795 Front Desk	3:45
		Board	12/15/16

FRMAD050-06-14-14 White - Return with sample. Yellow - Retain for your records.

L34668-1701041053

AL 12-16-16 9:54

L34668 Chain of Custody

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

Analytical Report

March 31, 2017

Report to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

cc: Gordon E. Sweeney

Bill to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

Project ID:
ACZ Project ID: L36113

Mark Steen:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on March 21, 2017. This project has been assigned to ACZ's project number, L36113. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L36113. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after April 30, 2017. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

Sue Webber has reviewed and approved this report.

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170320 MW1

ACZ Sample ID: ***L36113-01***
Date Sampled: *03/20/17 10:08*
Date Received: *03/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0009	B		mg/L	0.0002	0.001	03/30/17 13:23	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0006			mg/L	0.0001	0.0005	03/30/17 13:23	mfm
Manganese, dissolved	M200.7 ICP	1	0.084			mg/L	0.005	0.03	03/27/17 19:56	gss
Zinc, dissolved	M200.7 ICP	1	0.06			mg/L	0.01	0.05	03/27/17 19:56	gss

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/23/17 12:34	emk
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/22/17 15:05	enb
Residue, Filterable (TDS) @180C	SM2540C	1	1550			mg/L	10	20	03/22/17 16:26	keh
Sulfate	D516-02/-07 - Turbidimetric	50	930		*	mg/L	50	250	03/29/17 14:14	bce

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170320 W1

ACZ Sample ID: ***L36113-02***
Date Sampled: *03/20/17 10:22*
Date Received: *03/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1	0.008	B		mg/L	0.005	0.03	03/27/17 19:59	gss
Zinc, dissolved	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	03/27/17 19:59	gss

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/23/17 12:37	emk
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/22/17 15:07	enb
Residue, Filterable (TDS) @180C	SM2540C	1	408			mg/L	10	20	03/22/17 16:28	keh
Sulfate	D516-02/-07 - Turbidimetric	10	213		*	mg/L	10	50	03/29/17 14:13	bce

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170320 W2

ACZ Sample ID: ***L36113-03***
Date Sampled: *03/20/17 10:37*
Date Received: *03/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	03/27/17 20:14	gss
Zinc, dissolved	M200.7 ICP	1	0.45			mg/L	0.01	0.05	03/27/17 20:14	gss

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/23/17 12:41	emk
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/22/17 15:10	enb
Residue, Filterable (TDS) @180C	SM2540C	1	552			mg/L	10	20	03/22/17 16:31	keh
Sulfate	D516-02/-07 - Turbidimetric	10	285		*	mg/L	10	50	03/29/17 14:13	bce

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170320 W3

ACZ Sample ID: ***L36113-04***
Date Sampled: *03/20/17 10:47*
Date Received: *03/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	03/27/17 20:18	gss
Zinc, dissolved	M200.7 ICP	1	0.02	B		mg/L	0.01	0.05	03/27/17 20:18	gss

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/23/17 12:44	emk
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/22/17 15:13	enb
Residue, Filterable (TDS) @180C	SM2540C	1	464			mg/L	10	20	03/22/17 16:33	keh
Sulfate	D516-02/-07 - Turbidimetric	5	164		*	mg/L	5	25	03/29/17 14:00	bce

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170320 W4

ACZ Sample ID: ***L36113-05***
Date Sampled: *03/20/17 10:54*
Date Received: *03/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1	0.075			mg/L	0.005	0.03	03/27/17 20:21	gss
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	03/27/17 20:21	gss

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/23/17 12:48	emk
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/22/17 15:16	enb
Residue, Filterable (TDS) @180C	SM2540C	1	436			mg/L	10	20	03/22/17 16:36	keh
Sulfate	D516-02/-07 - Turbidimetric	5	155		*	mg/L	5	25	03/29/17 13:56	bce

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170320 MW5

ACZ Sample ID: ***L36113-06***
Date Sampled: *03/20/17 11:10*
Date Received: *03/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.004			mg/L	0.0002	0.001	03/30/17 13:26	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0001	0.0005	03/30/17 13:26	mfm
Manganese, dissolved	M200.7 ICP	1	0.032			mg/L	0.005	0.03	03/27/17 20:24	gss
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	03/27/17 20:24	gss

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/23/17 12:51	emk
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/22/17 15:18	enb
Residue, Filterable (TDS) @180C	SM2540C	1	664			mg/L	10	20	03/22/17 16:39	keh
Sulfate	D516-02/-07 - Turbidimetric	10	324		*	mg/L	10	50	03/29/17 14:13	bce

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170320 CM

ACZ Sample ID: ***L36113-07***
Date Sampled: *03/20/17 11:22*
Date Received: *03/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0002	0.001	03/30/17 13:35	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0016			mg/L	0.0001	0.0005	03/30/17 13:35	mfm
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	03/27/17 20:27	gss
Zinc, dissolved	M200.7 ICP	1	0.51			mg/L	0.01	0.05	03/27/17 20:27	gss

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/23/17 12:55	emk
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/22/17 15:21	enb
Residue, Filterable (TDS) @180C	SM2540C	1	826			mg/L	10	20	03/22/17 16:41	keh
Sulfate	D516-02/-07 - Turbidimetric	20	456		*	mg/L	20	100	03/29/17 13:59	bce

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170320 CG

ACZ Sample ID: ***L36113-08***
Date Sampled: *03/20/17 11:34*
Date Received: *03/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	03/30/17 13:44	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0011			mg/L	0.0001	0.0005	03/30/17 13:44	mfm
Manganese, dissolved	M200.7 ICP	1	0.019	B		mg/L	0.005	0.03	03/27/17 20:30	gss
Zinc, dissolved	M200.7 ICP	1	0.35			mg/L	0.01	0.05	03/27/17 20:30	gss

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/23/17 12:58	emk
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/22/17 15:24	enb
Residue, Filterable (TDS) @180C	SM2540C	1	348			mg/L	10	20	03/22/17 16:44	keh
Sulfate	D516-02/-07 - Turbidimetric	5	196		*	mg/L	5	25	03/29/17 13:56	bce

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170320 T.P.

ACZ Sample ID: ***L36113-09***
Date Sampled: *03/20/17 11:50*
Date Received: *03/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	2	0.0013	B		mg/L	0.0004	0.002	03/30/17 13:48	mfm
Cadmium, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0002	0.001	03/30/17 13:48	mfm
Manganese, dissolved	M200.7 ICP	2	1.41			mg/L	0.01	0.05	03/27/17 20:33	gss
Zinc, dissolved	M200.7 ICP	2		U		mg/L	0.02	0.1	03/27/17 20:33	gss

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/23/17 13:02	emk
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/22/17 15:27	enb
Residue, Filterable (TDS) @180C	SM2540C	2	2040			mg/L	20	40	03/22/17 16:46	keh
Sulfate	D516-02/-07 - Turbidimetric	50	1330		*	mg/L	50	250	03/29/17 14:13	bce

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Colorado Milling Company, LLC

ACZ Project ID: ***L36113***

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG420339													
WG420339ICV	ICV	03/30/17 12:23	MS170301-3	.05		.05157	mg/L	103	90	110			
WG420339ICB	ICB	03/30/17 12:27				U	mg/L		-0.0006	0.0006			
WG420339LFB	LFB	03/30/17 12:30	MS170321-3	.0501		.05332	mg/L	106	85	115			
L36113-06AS	AS	03/30/17 13:29	MS170321-3	.0501	.004	.05731	mg/L	106	70	130			
L36113-06ASD	ASD	03/30/17 13:32	MS170321-3	.0501	.004	.05426	mg/L	100	70	130	5	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG420339													
WG420339ICV	ICV	03/30/17 12:23	MS170301-3	.05		.05518	mg/L	110	90	110			
WG420339ICB	ICB	03/30/17 12:27				U	mg/L		-0.0003	0.0003			
WG420339LFB	LFB	03/30/17 12:30	MS170321-3	.05005		.0505	mg/L	101	85	115			
L36113-06AS	AS	03/30/17 13:29	MS170321-3	.05005	.0003	.05019	mg/L	100	70	130			
L36113-06ASD	ASD	03/30/17 13:32	MS170321-3	.05005	.0003	.04794	mg/L	95	70	130	5	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG420090													
WG420090ICV	ICV	03/27/17 19:18	II170316-1	2		1.935	mg/L	97	95	105			
WG420090ICB	ICB	03/27/17 19:24				U	mg/L		-0.015	0.015			
WG420090LFB	LFB	03/27/17 19:36	II170317-5	.5		.4998	mg/L	100	85	115			
L36113-02AS	AS	03/27/17 20:02	II170317-5	.5	.008	.5095	mg/L	100	85	115			
L36113-02ASD	ASD	03/27/17 20:05	II170317-5	.5	.008	.509	mg/L	100	85	115	0	20	
L36116-02AS	AS	03/27/17 20:43	II170317-5	.5	U	.4914	mg/L	98	85	115			
L36116-02ASD	ASD	03/27/17 20:52	II170317-5	.5	U	.4898	mg/L	98	85	115	0	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG419871													
WG419871PBW	PBW	03/22/17 15:52				U	mg/L		-20	20			
WG419871LCSW	LCSW	03/22/17 15:54	PCN52651	260		264	mg/L	102	80	120			
L36124-16DUP	DUP	03/22/17 16:52			216	218	mg/L				1	10	

Sulfate D516-02/-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG420241													
WG420241ICB	ICB	03/29/17 9:26				U	mg/L		-3	3			
WG420241ICV	ICV	03/29/17 9:26	WI170321-2	20		19.4	mg/L	97	90	110			
WG420241LFB	LFB	03/29/17 13:47	WI170131-8	9.99		10	mg/L	100	90	110			
L36063-01DUP	DUP	03/29/17 13:47			3.8	3.7	mg/L				3	20	RA
L36063-02AS	AS	03/29/17 13:47	WI170131-8	9.99	13	24.3	mg/L	113	90	110			M1
L36116-03DUP	DUP	03/29/17 13:51			13.9	13.8	mg/L				1	20	
L36116-04AS	AS	03/29/17 13:51	WI170131-8	9.99	14.1	26.1	mg/L	120	90	110			M1

Colorado Milling Company, LLC

ACZ Project ID: ***L36113***

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG420090													
WG420090ICV	ICV	03/27/17 19:18	II170316-1	2		1.976	mg/L	99	95	105			
WG420090ICB	ICB	03/27/17 19:24				U	mg/L		-0.03	0.03			
WG420090LFB	LFB	03/27/17 19:36	II170317-5	.4942		.517	mg/L	105	85	115			
L36113-02AS	AS	03/27/17 20:02	II170317-5	.4942	.01	.529	mg/L	105	85	115			
L36113-02ASD	ASD	03/27/17 20:05	II170317-5	.4942	.01	.52	mg/L	103	85	115	2	20	
L36116-02AS	AS	03/27/17 20:43	II170317-5	.4942	U	.512	mg/L	104	85	115			
L36116-02ASD	ASD	03/27/17 20:52	II170317-5	.4942	U	.505	mg/L	102	85	115	1	20	

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Inorganic Extended Qualifier Report

Colorado Milling Company, LLC ACZ Project ID: ***L36113***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L36113-01	WG420241	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L36113-02	WG420241	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L36113-03	WG420241	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L36113-04	WG420241	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L36113-05	WG420241	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L36113-06	WG420241	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L36113-07	WG420241	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L36113-08	WG420241	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L36113-09	WG420241	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

Certification Qualifiers

Colorado Milling Company, LLC

ACZ Project ID: ***L36113***

No certification qualifiers associated with this analysis

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID: L36113
Date Received: 03/21/2017 09:51
Received By:
Date Printed: 3/21/2017

Receipt Verification

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

A change was made in the Sample I.D. Line 1-4 6-9 section prior to ACZ custody.

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
4682	5.3	<=6.0	13	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID:	L36113
Date Received:	03/21/2017 09:51
Received By:	
Date Printed:	3/21/2017

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

ACZ Laboratories, Inc. C36113

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Mark Steen
Company: colorado milling company
E-mail: goldtontine@gmail.com
Address: P.O.Box 1523 Longmont, Colo
Telephone:

Copy of Report to:

Name: Golden Sweeney
Company: CMC LLC
E-mail: goldensweeney@gmail.com
Telephone: 303-440-0633

Invoice to:

Name: Mark Steen
Company: Colo milling Co LLC
E-mail: goldtontine@gmail.com
Address: P.O. Box 1523 Longmont, Colo
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES [X] NO [ ]

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes [ ] No [X]

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: L. Perkins Sampler's Site Information State Co Zip code 80302 Time Zone MDT

*Sampler's Signature: L. Perkins

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:
PO#:
Reporting state for compliance testing: Colorado
Check box if samples include NRC licensed material? [ ]

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	As, Cd, Zn, Zn	Fe, Zn	SW 3/21/17	TDS SULFATE				
017 03 20 MW1	3/20/17 10:08 AM	3		X			X				
017 03 20 W1	3/20/17 10:22 AM	3			X		X				
017 03 20 W2	3/20/17 10:37 AM	3			X		X				
017 03 20 W3	3/20/17 10:47 AM	3			X		X				
017 03 20 W4	3/20/17 10:54 AM	3			X		X				
017 03 20 MW5	3/20/17 11:10 AM	3		X			X				
017 03 20 CM	3/20/17 11:22 AM	3		X			X				
017 03 20 CG	3/20/17 11:34 AM	3		X			X				
017 03 20 TP	3/20/17 11:50 AM	3		X			X				

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Call Golden Sweeney @ 303-442-1062 for the metals to be analized for
all samples are raw, Filter as needed

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Lewis Perkins	3/20/17	U.P.S FLATS 3795 Frontier Ar Boulder Co 80301	03/20/17 3H 31 PM

L36113 Chain of Custody

L36113-1703314582

White - Return with sample. Yellow - Retain for your records.

VDP 3/21/17 0951

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

Analytical Report

July 17, 2017

Report to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

cc: Gordon E. Sweeney

Bill to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

Project ID:
ACZ Project ID: L38018

Mark Steen:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 22, 2017. This project has been assigned to ACZ's project number, L38018. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L38018. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after August 16, 2017. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

Sue Webber has reviewed and approved this report.

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170621 TP

ACZ Sample ID: ***L38018-01***
Date Sampled: *06/21/17 12:12*
Date Received: *06/22/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	2	0.0015	B		mg/L	0.0004	0.002	07/03/17 18:18	enb
Cadmium, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0002	0.001	07/03/17 18:18	enb
Manganese, dissolved	M200.7 ICP	2	0.27		*	mg/L	0.01	0.05	07/05/17 17:51	aeh
Zinc, dissolved	M200.7 ICP	2		U	*	mg/L	0.02	0.1	07/05/17 17:51	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							07/03/17 11:31	che
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							06/27/17 9:40	sck
Residue, Filterable (TDS) @180C	SM2540C	1	2120			mg/L	10	20	06/26/17 15:33	che
Sulfate	D516-02/-07 - Turbidimetric	50	1380		*	mg/L	50	250	07/12/17 14:39	bce

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Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170621 MW1

ACZ Sample ID: ***L38018-02***
Date Sampled: *06/21/17 10:45*
Date Received: *06/22/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0007	B		mg/L	0.0002	0.001	07/03/17 18:27	enb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	07/03/17 18:27	enb
Manganese, dissolved	M200.7 ICP	1	0.220		*	mg/L	0.005	0.03	07/05/17 17:54	aeh
Zinc, dissolved	M200.7 ICP	1	0.08		*	mg/L	0.01	0.05	07/05/17 17:54	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							07/03/17 11:33	che
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							06/27/17 9:40	sck
Residue, Filterable (TDS) @180C	SM2540C	1	1480			mg/L	10	20	06/26/17 15:35	che
Sulfate	D516-02/-07 - Turbidimetric	50	935		*	mg/L	50	250	07/12/17 14:39	bce

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Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170621 W1

ACZ Sample ID: ***L38018-03***
Date Sampled: *06/21/17 11:00*
Date Received: *06/22/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	07/05/17 17:57	aeh
Zinc, dissolved	M200.7 ICP	1	0.13			mg/L	0.01	0.05	07/05/17 17:57	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							07/03/17 11:35	che
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							06/27/17 9:40	sck
Residue, Filterable (TDS) @180C	SM2540C	1	236			mg/L	10	20	06/26/17 15:37	che
Sulfate	D516-02/-07 - Turbidimetric	5	102		*	mg/L	5	25	07/12/17 14:33	bce

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170621 W2

ACZ Sample ID: ***L38018-04***
Date Sampled: *06/21/17 11:08*
Date Received: *06/22/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	07/05/17 18:00	aeh
Zinc, dissolved	M200.7 ICP	1	0.14			mg/L	0.01	0.05	07/05/17 18:00	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							07/03/17 11:37	che
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							06/27/17 9:40	sck
Residue, Filterable (TDS) @180C	SM2540C	1	350			mg/L	10	20	06/26/17 15:39	che
Sulfate	D516-02/-07 - Turbidimetric	5	195		*	mg/L	5	25	07/12/17 14:33	bce

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Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170621 W3

ACZ Sample ID: ***L38018-05***
Date Sampled: *06/21/17 11:20*
Date Received: *06/22/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1	0.130			mg/L	0.005	0.03	07/05/17 18:04	aeh
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	07/05/17 18:04	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							07/03/17 11:39	che
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							06/27/17 9:40	sck
Residue, Filterable (TDS) @180C	SM2540C	1	388		*	mg/L	10	20	06/26/17 15:42	che
Sulfate	D516-02/-07 - Turbidimetric	5	159		*	mg/L	5	25	07/12/17 14:33	bce

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Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170621 W4

ACZ Sample ID: ***L38018-06***
Date Sampled: *06/21/17 11:25*
Date Received: *06/22/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1	0.009	B		mg/L	0.005	0.03	07/05/17 18:13	aeh
Zinc, dissolved	M200.7 ICP	1	0.06			mg/L	0.01	0.05	07/05/17 18:13	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							07/03/17 13:30	jnp
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							06/27/17 9:40	sck
Residue, Filterable (TDS) @180C	SM2540C	1	226		*	mg/L	10	20	06/26/17 15:44	che
Sulfate	D516-02/-07 - Turbidimetric	5	58.1		*	mg/L	5	25	07/12/17 14:33	bce

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170621 MW5

ACZ Sample ID: ***L38018-07***
Date Sampled: *06/21/17 11:45*
Date Received: *06/22/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0035			mg/L	0.0002	0.001	07/03/17 18:30	enb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	07/03/17 18:30	enb
Manganese, dissolved	M200.7 ICP	1	0.017	B		mg/L	0.005	0.03	07/05/17 18:16	aeh
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	07/05/17 18:16	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							07/03/17 13:33	jnp
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							06/27/17 9:40	sck
Residue, Filterable (TDS) @180C	SM2540C	1	648		*	mg/L	10	20	06/26/17 15:46	che
Sulfate	D516-02/-07 - Turbidimetric	10	354		*	mg/L	10	50	07/12/17 14:41	bce

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170621 CM

ACZ Sample ID: ***L38018-08***
Date Sampled: *06/21/17 12:00*
Date Received: *06/22/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0002	0.001	07/03/17 18:33	enb
Cadmium, dissolved	M200.8 ICP-MS	1	0.019			mg/L	0.0001	0.0005	07/03/17 18:33	enb
Manganese, dissolved	M200.7 ICP	1	2.9			mg/L	0.005	0.03	07/05/17 18:26	aeh
Zinc, dissolved	M200.7 ICP	1	5.62			mg/L	0.01	0.05	07/05/17 18:26	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							07/03/17 13:37	jnp
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							06/27/17 9:40	sck
Residue, Filterable (TDS) @180C	SM2540C	1	1010		*	mg/L	10	20	06/26/17 15:47	che
Sulfate	D516-02/-07 - Turbidimetric	50	586		*	mg/L	50	250	07/12/17 14:39	bce

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170621 CG

ACZ Sample ID: ***L38018-09***
Date Sampled: *06/21/17 12:45*
Date Received: *06/22/17*
Sample Matrix: *Surface Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0002	0.001	07/03/17 18:42	enb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0011			mg/L	0.0001	0.0005	07/03/17 18:42	enb
Manganese, dissolved	M200.7 ICP	1	0.015	B		mg/L	0.005	0.03	07/05/17 18:29	aeh
Zinc, dissolved	M200.7 ICP	1	0.29			mg/L	0.01	0.05	07/05/17 18:29	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							07/03/17 13:40	jnp
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							06/27/17 9:40	sck
Residue, Filterable (TDS) @180C	SM2540C	1	276		*	mg/L	10	20	06/26/17 15:49	che
Sulfate	D516-02/-07 - Turbidimetric	5	167		*	mg/L	5	25	07/12/17 15:20	bce

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Colorado Milling Company, LLC

ACZ Project ID: ***L38018***

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG426053													
WG426053ICV	ICV	07/03/17 17:08	MS170420-2	.05		.05095	mg/L		90	110			
WG426053ICV	ICV	07/03/17 17:08	MS170420-2					102	90	110			
WG426053ICB	ICB	07/03/17 17:11				U	mg/L		-0.0006	0.0006			
WG426053LFB	LFB	07/03/17 17:14	MS170524-3					98	85	115			
WG426053LFB	LFB	07/03/17 17:14	MS170524-3	.0501		.04911	mg/L		85	115			
L38018-08AS	AS	07/03/17 18:36	MS170524-3	.0501	.0005	.05522	mg/L		70	130			
L38018-08AS	AS	07/03/17 18:36	MS170524-3					109	70	130			
L38018-08ASD	ASD	07/03/17 18:39	MS170524-3	.0501	.0005	.0571	mg/L		70	130		20	
L38018-08ASD	ASD	07/03/17 18:39	MS170524-3					113	70	130		20	
L38018-08ASD	ASD	07/03/17 18:39	MS170524-3						70	130	3	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG426053													
WG426053ICV	ICV	07/03/17 17:08	MS170420-2					99	90	110			
WG426053ICV	ICV	07/03/17 17:08	MS170420-2	.05		.04962	mg/L		90	110			
WG426053ICB	ICB	07/03/17 17:11				U	mg/L		-0.0003	0.0003			
WG426053LFB	LFB	07/03/17 17:14	MS170524-3	.05005		.04817	mg/L		85	115			
WG426053LFB	LFB	07/03/17 17:14	MS170524-3					96	85	115			
L38018-08AS	AS	07/03/17 18:36	MS170524-3	.05005	.019	.06827	mg/L		70	130			
L38018-08AS	AS	07/03/17 18:36	MS170524-3					98	70	130			
L38018-08ASD	ASD	07/03/17 18:39	MS170524-3	.05005	.019	.06986	mg/L		70	130		20	
L38018-08ASD	ASD	07/03/17 18:39	MS170524-3						70	130	2	20	
L38018-08ASD	ASD	07/03/17 18:39	MS170524-3					102	70	130		20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG426159													
WG426159ICV	ICV	07/05/17 16:51	II170629-1	2		1.8905	mg/L		95	105			
WG426159ICV	ICV	07/05/17 16:51	II170629-1					95	95	105			
WG426159ICB	ICB	07/05/17 16:57				U	mg/L		-0.015	0.015			
WG426159LFB	LFB	07/05/17 17:10	II170629-3	.5		.4934	mg/L		85	115			
WG426159LFB	LFB	07/05/17 17:10	II170629-3					99	85	115			
L37995-01AS	AS	07/05/17 17:16	II170629-3					-20	85	115			M3
L37995-01AS	AS	07/05/17 17:16	II170629-3	.5	9.2	9.102	mg/L		85	115			M3
L37995-01ASD	ASD	07/05/17 17:19	II170629-3	.5	9.2	9.011	mg/L		85	115		20	M3
L37995-01ASD	ASD	07/05/17 17:19	II170629-3					-38	85	115		20	M3
L37995-01ASD	ASD	07/05/17 17:19	II170629-3						85	115	1	20	M3
L38018-05AS	AS	07/05/17 18:07	II170629-3					95	85	115			
L38018-05AS	AS	07/05/17 18:07	II170629-3	.5	.13	.6031	mg/L		85	115			
L38018-05ASD	ASD	07/05/17 18:10	II170629-3						85	115	1	20	
L38018-05ASD	ASD	07/05/17 18:10	II170629-3					93	85	115		20	
L38018-05ASD	ASD	07/05/17 18:10	II170629-3	.5	.13	.5965	mg/L		85	115		20	

Colorado Milling Company, LLC

ACZ Project ID: ***L38018***

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG425506													
WG425506PBW	PBW	06/26/17 15:20				U	mg/L		-20	20			
WG425506LCSW	LCSW	06/26/17 15:21	PCN53196	260		254	mg/L		80	120			
WG425506LCSW	LCSW	06/26/17 15:21	PCN53196					98	80	120			
L38018-04DUP	DUP	06/26/17 15:40									3	10	
L38018-04DUP	DUP	06/26/17 15:40			350	360	mg/L					10	
L38025-02DUP	DUP	06/26/17 15:59									45	10	RA
L38025-02DUP	DUP	06/26/17 15:59			38	24	mg/L					10	RA

Sulfate D516-02/-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG426638													
WG426638ICB	ICB	07/12/17 9:57				U	mg/L		-3	3			
WG426638ICV	ICV	07/12/17 9:57	WI170706-7					100	90	110			
WG426638ICV	ICV	07/12/17 9:57	WI170706-7	20		20	mg/L		90	110			
WG426638LFB	LFB	07/12/17 13:38	WI170131-8					99	90	110			
WG426638LFB	LFB	07/12/17 13:38	WI170131-8	9.99		9.9	mg/L		90	110			
L38013-03DUP	DUP	07/12/17 14:33									2	20	RA
L38013-03DUP	DUP	07/12/17 14:33			31.6	30.9	mg/L					20	RA
L38018-01AS	AS	07/12/17 14:39	SO4TURB50X					-300	90	110			M3
L38018-01AS	AS	07/12/17 14:39	SO4TURB50X	10	1380	1350	mg/L		90	110			M3
WG426640													
WG426640ICB	ICB	07/12/17 9:57				U	mg/L		-3	3			
WG426640ICV	ICV	07/12/17 9:57	WI170706-7					100	90	110			
WG426640ICV	ICV	07/12/17 9:57	WI170706-7	20		20	mg/L		90	110			
WG426640LFB	LFB	07/12/17 15:13	WI170131-8	9.99		9.3	mg/L		90	110			
WG426640LFB	LFB	07/12/17 15:13	WI170131-8					93	90	110			
L38012-01DUP	DUP	07/12/17 15:20			36.4	35.1	mg/L					20	RA
L38012-01DUP	DUP	07/12/17 15:20									4	20	RA
L38012-02AS	AS	07/12/17 15:32	SO4TURB5X					192	90	110			M1
L38012-02AS	AS	07/12/17 15:32	SO4TURB5X	10	15.3	34.5	mg/L		90	110			M1

Colorado Milling Company, LLC

ACZ Project ID: ***L38018***

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG426159													
WG426159ICV	ICV	07/05/17 16:51	II170629-1	2		1.949	mg/L		95	105			
WG426159ICV	ICV	07/05/17 16:51	II170629-1					97	95	105			
WG426159ICB	ICB	07/05/17 16:57				U	mg/L		-0.03	0.03			
WG426159LFB	LFB	07/05/17 17:10	II170629-3	.4845098		.547	mg/L		85	115			
WG426159LFB	LFB	07/05/17 17:10	II170629-3					113	85	115			
L37995-01AS	AS	07/05/17 17:16	II170629-3					-48	85	115			M3
L37995-01AS	AS	07/05/17 17:16	II170629-3	.4845098	8.87	8.378	mg/L		85	115			M3
L37995-01ASD	ASD	07/05/17 17:19	II170629-3					-57	85	115		20	M3
L37995-01ASD	ASD	07/05/17 17:19	II170629-3	.4845098	8.87	8.332	mg/L		85	115		20	M3
L37995-01ASD	ASD	07/05/17 17:19	II170629-3						85	115	1	20	M3
L38018-05AS	AS	07/05/17 18:07	II170629-3	.4845098	U	.507	mg/L		85	115			
L38018-05AS	AS	07/05/17 18:07	II170629-3					105	85	115			
L38018-05ASD	ASD	07/05/17 18:10	II170629-3					104	85	115		20	
L38018-05ASD	ASD	07/05/17 18:10	II170629-3	.4845098	U	.502	mg/L		85	115		20	
L38018-05ASD	ASD	07/05/17 18:10	II170629-3						85	115	1	20	

Colorado Milling Company, LLC ACZ Project ID: ***L38018***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L38018-01	WG426159	Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG426638	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG426159	Zinc, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L38018-02	WG426159	Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG426638	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG426159	Zinc, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L38018-03	WG426638	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L38018-04	WG426638	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L38018-05	WG425506	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG426638	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L38018-06	WG425506	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG426638	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Colorado Milling Company, LLC ACZ Project ID: ***L38018***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L38018-07	WG425506	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG426638	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L38018-08	WG425506	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG426638	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L38018-09	WG425506	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG426640	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Certification Qualifiers

Colorado Milling Company, LLC ACZ Project ID: ***L38018***

No certification qualifiers associated with this analysis

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID: L38018
Date Received: 06/22/2017 10:32
Received By:
Date Printed: 6/22/2017

Receipt Verification

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

A change was made in the Sample I.D. Line 1 and 5 section prior to ACZ custody.

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
4306	1.9	<=6.0	12	Yes

Was ice present in the shipment container(s)?

Yes - Gel ice was present in the shipment container(s).

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

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID:	L38018
Date Received:	06/22/2017 10:32
Received By:	
Date Printed:	6/22/2017

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

ACZ Laboratories, Inc. L38018

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Mark. A. Steen	Address: P.O.Box 1523
Company: Colorado milling company	Longmont, Colo
E-mail: goldtontine@gmail.com	Telephone:

Copy of Report to:

Name: Gordon Sweeney	E-mail: gordon sweeney@gmail.com
Company: CMC LLC	Telephone: 303-440-0633

Invoice to:

Name: mark-A.steen	Address: P.O. Box 1523
Company: Colo milling Co LLC	Longmont. Colo
E-mail: goldtontine@gmail.com	Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES [X] NO [ ]

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes [ ] No [X]

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: LEWIS PERKINS Sampler's Site Information State Colo Zip code 80302 Time Zone MDT

*Sampler's Signature: Lewis Perkins

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:

PO#:

Reporting state for compliance testing: Colorado

Check box if samples include NRC licensed material? [ ]

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	TDS Sulfate							
017@621 TP	6/21/17 12:12 PM	PW		X							
0170621 MW1	" 10:45 AM	GW		X							
0170621 W1	" 11:00 AM	GW		X							
0170621 W2	" 11:08 AM	GW		X							
~~017062[illegible]~~				[illegible]							
01706 21 W3	" 11:20 AM	GW		X							
0170621 W4	" 11:25 AM	GW		X							
0170621 MW5	" 11:45 AM	GW		X							
0170621 CM	" 12:00 AM	GW		X							
0170621 CG	" 12:45 PM	SW		X							

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Call Gordon sweeney @ 303-442-1062 for the metals to be analized for
all samples are Raw Filter as needed

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Lewis Perkins	6/21/17 13:46 PM	U.P.S EGAS	06/21/17
		3795 Frontier Ave	
		Boulder, CO 80301	

L38018 Chain of Custody

FRMADP050 06.14.14 White - Return with sample. Yellow - Retain for your records.

L38018-1707171357

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

Analytical Report

October 13, 2017

Report to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

cc: Gordon E. Sweeney

Bill to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

Project ID:
ACZ Project ID: L40020

Mark Steen:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on September 21, 2017. This project has been assigned to ACZ's project number, L40020. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L40020. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after November 12, 2017. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170920-TP

ACZ Sample ID: ***L40020-01***
Date Sampled: *09/20/17 12:20*
Date Received: *09/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	2	0.0019	B		mg/L	0.0004	0.002	10/09/17 20:19	mfm
Cadmium, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0002	0.001	10/09/17 20:19	mfm
Manganese, dissolved	M200.7 ICP	2	0.06			mg/L	0.01	0.05	10/05/17 16:24	aeh
Zinc, dissolved	M200.7 ICP	2		U		mg/L	0.02	0.1	10/05/17 16:24	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/29/17 10:24	ecc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							10/04/17 14:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	2800			mg/L	10	20	09/25/17 11:10	ecc
Sulfate	D516-02/-07 - Turbidimetric	50	1890		*	mg/L	50	250	10/05/17 11:07	las

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170920-MW1

ACZ Sample ID: ***L40020-02***
Date Sampled: *09/20/17 10:40*
Date Received: *09/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0007	B		mg/L	0.0002	0.001	10/09/17 20:22	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0006			mg/L	0.0001	0.0005	10/09/17 20:22	mfm
Manganese, dissolved	M200.7 ICP	1	0.122			mg/L	0.005	0.03	10/05/17 16:27	aeh
Zinc, dissolved	M200.7 ICP	1	0.10			mg/L	0.01	0.05	10/05/17 16:27	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/29/17 10:41	ecc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							10/04/17 14:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	1450			mg/L	10	20	09/25/17 11:13	ecc
Sulfate	D516-02/-07 - Turbidimetric	50	959		*	mg/L	50	250	10/05/17 11:08	las

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170920-W1

ACZ Sample ID: ***L40020-03***
Date Sampled: *09/20/17 10:55*
Date Received: *09/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	10/05/17 16:37	aeh
Zinc, dissolved	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	10/05/17 16:37	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/29/17 10:57	ecc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							10/04/17 14:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	226			mg/L	10	20	09/25/17 11:15	ecc
Sulfate	D516-02/-07 - Turbidimetric	5	110		*	mg/L	5	25	10/05/17 11:05	las

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170920-W2

ACZ Sample ID: ***L40020-04***
Date Sampled: *09/20/17 11:10*
Date Received: *09/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	10/05/17 16:40	aeh
Zinc, dissolved	M200.7 ICP	1	0.20			mg/L	0.01	0.05	10/05/17 16:40	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/29/17 11:14	ecc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							10/04/17 14:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	394			mg/L	10	20	09/25/17 11:18	ecc
Sulfate	D516-02/-07 - Turbidimetric	10	226		*	mg/L	10	50	10/05/17 11:02	las

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170920-W3

ACZ Sample ID: ***L40020-05***
Date Sampled: *09/20/17 11:20*
Date Received: *09/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	10/05/17 16:43	aeh
Zinc, dissolved	M200.7 ICP	1	0.02	B		mg/L	0.01	0.05	10/05/17 16:43	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/29/17 11:30	ecc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							10/04/17 14:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	330			mg/L	10	20	09/25/17 11:20	ecc
Sulfate	D516-02/-07 - Turbidimetric	5	138		*	mg/L	5	25	10/05/17 11:05	las

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170920-W4

ACZ Sample ID: ***L40020-06***
Date Sampled: *09/20/17 11:26*
Date Received: *09/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	10/05/17 16:47	aeh
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	10/05/17 16:47	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/29/17 11:47	ecc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							10/04/17 14:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	286			mg/L	10	20	09/25/17 11:23	ecc
Sulfate	D516-02/-07 - Turbidimetric	5	98.0		*	mg/L	5	25	10/05/17 11:05	las

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170920-MW5

ACZ Sample ID: ***L40020-07***
Date Sampled: *09/20/17 11:52*
Date Received: *09/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0031			mg/L	0.0002	0.001	10/09/17 20:25	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0001	0.0005	10/09/17 20:25	mfm
Manganese, dissolved	M200.7 ICP	1	0.022	B		mg/L	0.005	0.03	10/05/17 16:50	aeh
Zinc, dissolved	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	10/05/17 16:50	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/29/17 12:04	ecc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							10/04/17 14:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	622			mg/L	10	20	09/25/17 11:26	ecc
Sulfate	D516-02/-07 - Turbidimetric	10	307			mg/L	10	50	10/06/17 11:12	las

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170920-CMP

ACZ Sample ID: ***L40020-08***
Date Sampled: *09/20/17 11:44*
Date Received: *09/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0002	0.001	10/09/17 20:28	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0083			mg/L	0.0001	0.0005	10/09/17 20:28	mfm
Manganese, dissolved	M200.7 ICP	1	2.27			mg/L	0.005	0.03	10/05/17 16:53	aeh
Zinc, dissolved	M200.7 ICP	1	3.03			mg/L	0.01	0.05	10/05/17 16:53	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/29/17 12:20	ecc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							10/04/17 14:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	1120			mg/L	10	20	09/25/17 11:28	ecc
Sulfate	D516-02/-07 - Turbidimetric	25	687		*	mg/L	25	125	10/05/17 11:09	las

Colorado Milling Company, LLC
Project ID:
Sample ID: 0170920-CG

ACZ Sample ID: ***L40020-09***
Date Sampled: *09/20/17 12:01*
Date Received: *09/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0002	0.001	10/09/17 20:44	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.001			mg/L	0.0001	0.0005	10/09/17 20:44	mfm
Manganese, dissolved	M200.7 ICP	1	0.021	B		mg/L	0.005	0.03	10/05/17 16:56	aeh
Zinc, dissolved	M200.7 ICP	1	0.24			mg/L	0.01	0.05	10/05/17 16:56	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/29/17 12:37	ecc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							10/04/17 14:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	286			mg/L	10	20	09/25/17 13:50	ecc
Sulfate	D516-02/-07 - Turbidimetric	5	152		*	mg/L	5	25	10/05/17 11:06	las

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Colorado Milling Company, LLC

ACZ Project ID: ***L40020***

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG433116													
WG433116ICV	ICV	10/09/17 19:23	MS170901-1	.05		.0516	mg/L	103	90	110			
WG433116ICB	ICB	10/09/17 19:26				U	mg/L		-0.0006	0.0006			
WG433116LFB	LFB	10/09/17 19:29	MS170919-2	.0501		.05017	mg/L	100	85	115			
L40020-08AS	AS	10/09/17 20:32	MS170919-2	.0501	.0005	.05649	mg/L	112	70	130			
L40020-08ASD	ASD	10/09/17 20:35	MS170919-2	.0501	.0005	.05274	mg/L	104	70	130	7	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG433116													
WG433116ICV	ICV	10/09/17 19:23	MS170901-1	.05		.05052	mg/L	101	90	110			
WG433116ICB	ICB	10/09/17 19:26				U	mg/L		-0.0003	0.0003			
WG433116LFB	LFB	10/09/17 19:29	MS170919-2	.05005		.04962	mg/L	99	85	115			
L40020-08AS	AS	10/09/17 20:32	MS170919-2	.05005	.0083	.05706	mg/L	97	70	130			
L40020-08ASD	ASD	10/09/17 20:35	MS170919-2	.05005	.0083	.05667	mg/L	97	70	130	1	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG432897													
WG432897ICV	ICV	10/05/17 15:38	II171002-1	2		2.0058	mg/L	100	95	105			
WG432897ICB	ICB	10/05/17 15:45				U	mg/L		-0.015	0.015			
WG432897LFB	LFB	10/05/17 15:58	II171003-4	.5		.5063	mg/L	101	85	115			
L39986-05AS	AS	10/05/17 16:14	II171003-4	.5	U	.5168	mg/L	103	85	115			
L39986-05ASD	ASD	10/05/17 16:17	II171003-4	.5	U	.5101	mg/L	102	85	115	1	20	
L40074-01AS	AS	10/05/17 17:22	II171003-4	.5	U	.5022	mg/L	100	85	115			
L40074-01ASD	ASD	10/05/17 17:26	II171003-4	.5	U	.501	mg/L	100	85	115	0	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG432013													
WG432013PBW	PBW	09/25/17 11:00				U	mg/L		-20	20			
WG432013LCSW	LCSW	09/25/17 11:02	PCN54006	260		246	mg/L	95	80	120			
L40020-08DUP	DUP	09/25/17 11:31			1120	1120	mg/L				0	10	
WG432039													
WG432039PBW	PBW	09/25/17 13:45				U	mg/L		-20	20			
WG432039LCSW	LCSW	09/25/17 13:47	PCN54006	260		252	mg/L	97	80	120			
L40049-05DUP	DUP	09/25/17 14:16			1140	1160	mg/L				2	10	

Colorado Milling Company, LLC

ACZ Project ID: ***L40020***

Sulfate D516-02/-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG432834													
WG432834ICB	ICB	10/05/17 9:00				U	mg/L		-3	3			
WG432834ICV	ICV	10/05/17 9:00	WI170922-1	20		20	mg/L	100	90	110			
WG432834LFB	LFB	10/05/17 10:27	WI170809-6	10		10.2	mg/L	102	90	110			
L40020-09AS	AS	10/05/17 11:06	SO4TURB5X	10	152	159	mg/L	70	90	110			M3
L40020-08DUP	DUP	10/05/17 11:09			687	681	mg/L				1	20	
WG432953													
WG432953ICB	ICB	10/06/17 8:38				U	mg/L		-3	3			
WG432953ICV	ICV	10/06/17 8:38	WI170922-1	20		19.1	mg/L	96	90	110			
WG432953LFB	LFB	10/06/17 10:57	WI170809-6	10		10.6	mg/L	106	90	110			
L40027-01AS	AS	10/06/17 11:04	SO4TURB5X	10	95.6	105	mg/L	94	90	110			
L40020-07DUP	DUP	10/06/17 11:12			307	308	mg/L				0	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG432897													
WG432897ICV	ICV	10/05/17 15:38	II171002-1	2		1.985	mg/L	99	95	105			
WG432897ICB	ICB	10/05/17 15:45				U	mg/L		-0.03	0.03			
WG432897LFB	LFB	10/05/17 15:58	II171003-4	.4942		.537	mg/L	109	85	115			
L39986-05AS	AS	10/05/17 16:14	II171003-4	.4942	U	.538	mg/L	109	85	115			
L39986-05ASD	ASD	10/05/17 16:17	II171003-4	.4942	U	.534	mg/L	108	85	115	1	20	
L40074-01AS	AS	10/05/17 17:22	II171003-4	.4942	U	.526	mg/L	106	85	115			
L40074-01ASD	ASD	10/05/17 17:26	II171003-4	.4942	U	.511	mg/L	103	85	115	3	20	

Colorado Milling Company, LLC ACZ Project ID: ***L40020***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L40020-01	WG432834	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L40020-02	WG432834	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L40020-03	WG432834	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L40020-04	WG432834	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L40020-05	WG432834	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L40020-06	WG432834	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L40020-08	WG432834	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L40020-09	WG432834	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Certification Qualifiers

Colorado Milling Company, LLC ACZ Project ID: ***L40020***

No certification qualifiers associated with this analysis

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID: L40020
Date Received: 09/21/2017 10:10
Received By:
Date Printed: 9/22/2017

Receipt Verification

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

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
4827	2.7	<=6.0	15	Yes

Was ice present in the shipment container(s)?

Yes - Gel ice was present in the shipment container(s).

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

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID:	L40020
Date Received:	09/21/2017 10:10
Received By:	
Date Printed:	9/22/2017

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

ACZ Laboratories, Inc. L40020

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Mark A. Steen
Company: Colorado milling company
E-mail: goldtontine@gmail.com
Address: P.O. Box 1523 Longmont, Colo
Telephone:

Copy of Report to:

Name: Gordon Sweeney
Company: CMC LLC
E-mail: gordon sweeney@gmail.com
Telephone: 303-440-0633

Invoice to:

Name: Mark Steen
Company: Colorado milling Co LLC
E-mail: goldtontine@gmail.com
Address: P.O. Box 1523 Longmont Colo
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☐ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☐

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: L. Perkins **Sampler's Site Information** State Colo Zip code 80302 Time Zone MDT

***Sampler's Signature:** Lewis Perkins

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:
PO#:
Reporting state for compliance testing:
Check box if samples include NRC licensed material? ☐

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	TDS Sulfate						
01709 20 - TP	9/20/17 12:20 PM	3		X						
01709 20 - MW1	9/20/17 10:40 AM	3		X						
01709 20 - W1	9/20/17 10:55 AM	3		X						
01709 20 - W2	9/20/17 11:10 AM	3		X						
01709 20 - W3	9/20/17 11:20 AM	3		X						
01709 20 - W4	9/20/17 11:26 AM	3		X						
01709 20 - MW5	9/20/17 11:52 AM	3		X						
01709 20 - CMP	9/20/17 11:44 AM	3		X						
01709 20 - CG	9/20/17 12:01 PM	3		X						

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Call Gordon Sweeney @ 303-442-1062 for the metals to be analized for
all samples are Raw, Filter as needed

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Lewis Perkins	9/20/17	EG3	9-20-17 1600
			9/21/17 1010

L40020 Chain of Custody

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

Analytical Report

January 10, 2018

Report to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

cc: Gordon E. Sweeney

Bill to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

Project ID:
ACZ Project ID: L41908

Mark Steen:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 21, 2017. This project has been assigned to ACZ's project number, L41908. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L41908. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after February 09, 2018. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

Sue Webber has reviewed and approved this report.

Colorado Milling Company, LLC
Project ID:
Sample ID: 017/012/19 TP

ACZ Sample ID: ***L41908-01***
Date Sampled: *12/19/17 10:00*
Date Received: *12/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	2	0.0017	B		mg/L	0.0004	0.002	01/08/18 21:47	mfm
Cadmium, dissolved	M200.8 ICP-MS	2	0.0002	B		mg/L	0.0002	0.001	01/08/18 21:47	mfm
Manganese, dissolved	M200.7 ICP	2		U		mg/L	0.01	0.05	01/05/18 0:08	aeh
Zinc, dissolved	M200.7 ICP	2	0.04	B		mg/L	0.02	0.1	01/05/18 0:08	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/28/17 14:59	mh
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							01/03/18 15:00	scp
Residue, Filterable (TDS) @180C	SM2540C	2	3380			mg/L	20	40	12/21/17 16:45	mh
Sulfate	D516-02/-07 - Turbidimetric	100	1970		*	mg/L	100	500	12/29/17 13:19	jmm

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 017/012/19 MW1

ACZ Sample ID: ***L41908-02***
Date Sampled: *12/19/17 10:17*
Date Received: *12/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.001			mg/L	0.0002	0.001	01/08/18 21:50	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0011			mg/L	0.0001	0.0005	01/08/18 21:50	mfm
Manganese, dissolved	M200.7 ICP	1	0.147			mg/L	0.005	0.03	01/05/18 0:11	aeh
Zinc, dissolved	M200.7 ICP	1	0.14			mg/L	0.01	0.05	01/05/18 0:11	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/28/17 15:02	mh
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							01/03/18 15:00	scp
Residue, Filterable (TDS) @180C	SM2540C	1	1460			mg/L	10	20	12/21/17 16:48	mh
Sulfate	D516-02/-07 - Turbidimetric	50	829		*	mg/L	50	250	12/29/17 13:08	jmm

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 017/012/19 W1

ACZ Sample ID: ***L41908-03***
Date Sampled: *12/19/17 10:30*
Date Received: *12/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	01/05/18 0:14	aeh
Zinc, dissolved	M200.7 ICP	1	0.02	B		mg/L	0.01	0.05	01/05/18 0:14	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/28/17 15:05	mh
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							01/03/18 15:00	scp
Residue, Filterable (TDS) @180C	SM2540C	1	334			mg/L	10	20	12/21/17 16:51	mh
Sulfate	D516-02/-07 - Turbidimetric	5	159		*	mg/L	5	25	12/29/17 12:53	jmm

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 017/012/19 W2

ACZ Sample ID: ***L41908-04***
Date Sampled: *12/19/17 10:41*
Date Received: *12/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	01/05/18 0:17	aeh
Zinc, dissolved	M200.7 ICP	1	0.32			mg/L	0.01	0.05	01/05/18 0:17	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/28/17 15:08	mh
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							01/03/18 15:00	scp
Residue, Filterable (TDS) @180C	SM2540C	1	476			mg/L	10	20	12/21/17 16:55	mh
Sulfate	D516-02/-07 - Turbidimetric	10	241		*	mg/L	10	50	12/29/17 13:07	jmm

Colorado Milling Company, LLC
Project ID:
Sample ID: 017/012/19 W3

ACZ Sample ID: ***L41908-05***
Date Sampled: *12/19/17 10:56*
Date Received: *12/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	01/05/18 0:21	aeh
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	01/05/18 0:21	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/28/17 15:11	mh
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							01/03/18 15:00	scp
Residue, Filterable (TDS) @180C	SM2540C	1	390			mg/L	10	20	12/21/17 16:58	mh
Sulfate	D516-02/-07 - Turbidimetric	5	153		*	mg/L	5	25	01/02/18 11:27	jmm

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Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 017/012/19 W4

ACZ Sample ID: ***L41908-06***
Date Sampled: *12/19/17 11:09*
Date Received: *12/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1	0.009	B		mg/L	0.005	0.03	01/05/18 14:35	dcm
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	01/05/18 14:35	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/28/17 15:15	mh
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							01/03/18 15:00	scp
Residue, Filterable (TDS) @180C	SM2540C	1	380			mg/L	10	20	12/21/17 17:01	mh
Sulfate	D516-02/-07 - Turbidimetric	5	121		*	mg/L	5	25	01/02/18 11:30	jmm

Colorado Milling Company, LLC
Project ID:
Sample ID: 017/012/19 MW5

ACZ Sample ID: ***L41908-07***
Date Sampled: *12/19/17 12:25*
Date Received: *12/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0027			mg/L	0.0002	0.001	01/08/18 21:53	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	01/08/18 21:53	mfm
Manganese, dissolved	M200.7 ICP	1	0.007	B		mg/L	0.005	0.03	01/05/18 14:38	dcm
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	01/05/18 14:38	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/28/17 15:18	mh
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							01/03/18 15:00	scp
Residue, Filterable (TDS) @180C	SM2540C	1	656			mg/L	10	20	12/21/17 17:05	mh
Sulfate	D516-02/-07 - Turbidimetric	10	322		*	mg/L	10	50	01/02/18 12:00	jmm

Colorado Milling Company, LLC
Project ID:
Sample ID: 017/012/19 CMP

ACZ Sample ID: ***L41908-08***
Date Sampled: *12/19/17 12:35*
Date Received: *12/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0004	B		mg/L	0.0002	0.001	01/08/18 21:56	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.008			mg/L	0.0001	0.0005	01/08/18 21:56	mfm
Manganese, dissolved	M200.7 ICP	1	2.02			mg/L	0.005	0.03	01/05/18 14:41	dcm
Zinc, dissolved	M200.7 ICP	1	3.41			mg/L	0.01	0.05	01/05/18 14:41	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/28/17 15:21	mh
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							01/03/18 15:00	scp
Residue, Filterable (TDS) @180C	SM2540C	1	1070			mg/L	10	20	12/21/17 17:08	mh
Sulfate	D516-02/-07 - Turbidimetric	20	612		*	mg/L	20	100	01/02/18 12:00	jmm

Colorado Milling Company, LLC
Project ID:
Sample ID: 017/012/19 CG

ACZ Sample ID: ***L41908-09***
Date Sampled: *12/19/17 12:50*
Date Received: *12/21/17*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	01/08/18 21:59	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0015			mg/L	0.0001	0.0005	01/08/18 21:59	mfm
Manganese, dissolved	M200.7 ICP	1	0.013	B		mg/L	0.005	0.03	01/05/18 14:44	dcm
Zinc, dissolved	M200.7 ICP	1	0.44			mg/L	0.01	0.05	01/05/18 14:44	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/28/17 15:24	mh
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							01/03/18 15:00	scp
Residue, Filterable (TDS) @180C	SM2540C	1	396			mg/L	10	20	12/21/17 17:11	mh
Sulfate	D516-02/-07 - Turbidimetric	10	223			mg/L	10	50	01/02/18 12:00	jmm

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Colorado Milling Company, LLC

ACZ Project ID: ***L41908***

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG439579													
WG439579ICV	ICV	01/08/18 20:59	MS171115-2	.05		.05087	mg/L	102	90	110			
WG439579ICB	ICB	01/08/18 21:02				U	mg/L		-0.0006	0.0006			
WG439579LFB	LFB	01/08/18 21:05	MS171129-3	.0501		.04822	mg/L	96	85	115			
L41807-05AS	AS	01/08/18 21:23	MS171129-3	.1002	.003	.10528	mg/L	102	70	130			
L41807-05ASD	ASD	01/08/18 21:26	MS171129-3	.1002	.003	.10554	mg/L	102	70	130	0	20	
L41935-04AS	AS	01/08/18 22:20	MS171129-3	.0501	.0028	.05364	mg/L	101	70	130			
L41935-04ASD	ASD	01/08/18 22:23	MS171129-3	.0501	.0028	.05157	mg/L	97	70	130	4	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG439579													
WG439579ICV	ICV	01/08/18 20:59	MS171115-2	.05		.05294	mg/L	106	90	110			
WG439579ICB	ICB	01/08/18 21:02				U	mg/L		-0.0003	0.0003			
WG439579LFB	LFB	01/08/18 21:05	MS171129-3	.05005		.05013	mg/L	100	85	115			
L41807-05AS	AS	01/08/18 21:23	MS171129-3	.1001	U	.09726	mg/L	97	70	130			
L41807-05ASD	ASD	01/08/18 21:26	MS171129-3	.1001	U	.1009	mg/L	101	70	130	4	20	
L41935-04AS	AS	01/08/18 22:20	MS171129-3	.05005	U	.04862	mg/L	97	70	130			
L41935-04ASD	ASD	01/08/18 22:23	MS171129-3	.05005	U	.0473	mg/L	95	70	130	3	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG439373													
WG439373ICV	ICV	01/04/18 23:35	II171221-1	2		1.9635	mg/L	98	95	105			
WG439373ICB	ICB	01/04/18 23:41				U	mg/L		-0.015	0.015			
WG439373LFB	LFB	01/04/18 23:53	II171220-5	.5		.5052	mg/L	101	85	115			
L41827-02AS	AS	01/05/18 0:02	II171220-5	.5	U	.4951	mg/L	99	85	115			
L41827-02ASD	ASD	01/05/18 0:05	II171220-5	.5	U	.5013	mg/L	100	85	115	1	20	
WG439451													
WG439451ICV	ICV	01/05/18 13:59	II171220-1	2		1.9665	mg/L	98	95	105			
WG439451ICB	ICB	01/05/18 14:05				U	mg/L		-0.015	0.015			
WG439451LFB	LFB	01/05/18 14:18	II171220-5	.5		.5226	mg/L	105	85	115			
L41827-02AS	AS	01/05/18 14:28	II171220-5	.5	U	.5165	mg/L	103	85	115			
L41827-02ASD	ASD	01/05/18 14:31	II171220-5	.5	U	.532	mg/L	106	85	115	3	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG438782													
WG438782PBW	PBW	12/21/17 15:59				16	mg/L		-20	20			
WG438782LCSW	LCSW	12/21/17 16:02	PCN54004	260		256	mg/L	98	80	120			
L41908-09DUP	DUP	12/21/17 17:14			396	396	mg/L				0	10	

Colorado Milling Company, LLC

ACZ Project ID: ***L41908***

Sulfate D516-02/-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG439075													
WG439075ICB	ICB	12/29/17 10:14				U	mg/L		-3	3			
WG439075ICV	ICV	12/29/17 10:14	WI171228-8	20		18.7	mg/L	94	90	110			
WG439075LFB	LFB	12/29/17 12:47	WI171212-5	10		9.4	mg/L	94	90	110			
L37466-31DUP	DUP	12/29/17 12:47			2.2	2.1	mg/L				5	20	RA
L41908-01AS	AS	12/29/17 13:19	SO4TURB	10	1970	2020	mg/L	500	90	110			M3
WG439137													
WG439137ICB	ICB	01/02/18 11:12				U	mg/L		-3	3			
WG439137ICV	ICV	01/02/18 11:12	WI171228-8	20		18.3	mg/L	92	90	110			
WG439137LFB	LFB	01/02/18 11:21	WI171212-5	10		9.3	mg/L	93	90	110			
L41871-01DUP	DUP	01/02/18 11:28			19600	20700	mg/L				5	20	
L41969-01AS	AS	01/02/18 11:53	SO4TURB5X	10	55.2	65.5	mg/L	103	90	110			
L41967-01DUP	DUP	01/02/18 11:56			92.6	112	mg/L				19	20	
L41872-01AS	AS	01/02/18 12:00	SO4TURB	10	2900	2820	mg/L	-800	90	110			M3

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG439373													
WG439373ICV	ICV	01/04/18 23:35	II171221-1	2		1.935	mg/L	97	95	105			
WG439373ICB	ICB	01/04/18 23:41				U	mg/L		-0.03	0.03			
WG439373LFB	LFB	01/04/18 23:53	II171220-5	.4942		.517	mg/L	105	85	115			
L41827-02AS	AS	01/05/18 0:02	II171220-5	.4942	U	.525	mg/L	106	85	115			
L41827-02ASD	ASD	01/05/18 0:05	II171220-5	.4942	U	.512	mg/L	104	85	115	3	20	
WG439451													
WG439451ICV	ICV	01/05/18 13:59	II171220-1	2		1.992	mg/L	100	95	105			
WG439451ICB	ICB	01/05/18 14:05				U	mg/L		-0.03	0.03			
WG439451LFB	LFB	01/05/18 14:18	II171220-5	.4942		.547	mg/L	111	85	115			
L41827-02AS	AS	01/05/18 14:28	II171220-5	.4942	U	.541	mg/L	109	85	115			
L41827-02ASD	ASD	01/05/18 14:31	II171220-5	.4942	U	.534	mg/L	108	85	115	1	20	

Colorado Milling Company, LLC ACZ Project ID: ***L41908***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L41908-01	WG439075	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L41908-02	WG439075	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L41908-03	WG439075	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L41908-04	WG439075	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L41908-05	WG439137	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L41908-06	WG439137	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L41908-07	WG439137	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L41908-08	WG439137	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Certification Qualifiers

Colorado Milling Company, LLC ACZ Project ID: ***L41908***

No certification qualifiers associated with this analysis

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID: L41908
Date Received: 12/21/2017 12:33
Received By:
Date Printed: 12/22/2017

Receipt Verification

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

A change was made in the Sample ID: Line 1 and Analyses Requested Section 4 section prior to ACZ custody.

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
5308	4	<=6.0	13	Yes

Was ice present in the shipment container(s)?

Yes - Gel ice was present in the shipment container(s) but was thawed by receipt at ACZ.

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

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID:	L41908
Date Received:	12/21/2017 12:33
Received By:	
Date Printed:	12/22/2017

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

ACZ Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

L41908

CHAIN of CUSTODY

Report to:

Name: Mark A. Steen
Company: Colorado Milling Co.
E-mail: goldtontone@gmail.com
Address: P.O. Box 1523 Longmont, Colo
Telephone:

Copy of Report to:

Name: Gorden Sweeney
Company: CMC LLC
E-mail: gordon sweeney@gmail.com
Telephone:

Invoice to:

Name: Mark A. Steen
Company: Colo Milling Co LLC
E-mail: goldtontone@gmail.com
Address: P.O. Box 1523 Longmont Colo
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES [X] NO [ ]

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes [ ] No [X]

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: Lewis Perkins Sampler's Site Information State Colo Zip code 80302 Time Zone MDT

*Sampler's Signature: Lewis Perkins

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:
PO#:
Reporting state for compliance testing: Colorado
Check box if samples include NRC licensed material?

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	TDS SOLIDS
017/012/19 TB TP	12/19/17 10:00 AM	3		
017/012/19 MW1	12/19/17 10:17 AM	3		
017/012/19 W1	12/19/17 10:30 AM	3		
017/012/19 W2	12/19/17 10:41 AM	3		
017/012/19 W3	12/19/17 10:56 AM	3		
017/012/19 W4	12/19/17 11:09 AM	3		
017/012/19 MW5	12/19/17 12:25 PM	3		
017/012/19 CMP	12/19/17 12:35 PM	3		
017/012/19 CG	12/19/17 12:50 PM	3		

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

call gorden sweeney @ 303-442-1062 for the metals to be analyzed for
all samples are Raw, Filter as needed

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Lewis Perkins	12/20/2017	UPS 3795 Frontier Pkwy Boulder CO 80301	12/20/17

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

Analytical Report

March 29, 2018

Report to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

cc: Gordon E. Sweeney

Bill to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

Project ID:
ACZ Project ID: L43155

Mark Steen:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on March 14, 2018. This project has been assigned to ACZ's project number, L43155. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L43155. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after April 28, 2018. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

Sue Webber has reviewed and approved this report.

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-13 MW1

ACZ Sample ID: ***L43155-01***
Date Sampled: *03/13/18 10:45*
Date Received: *03/14/18*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.001			mg/L	0.0002	0.001	03/22/18 16:06	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0005	03/27/18 12:33	mfm
Manganese, dissolved	M200.7 ICP	1	0.147			mg/L	0.005	0.03	03/21/18 13:03	aeh
Zinc, dissolved	M200.7 ICP	1	0.13			mg/L	0.01	0.05	03/21/18 13:03	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/22/18 11:40	enb
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/20/18 11:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	1500			mg/L	10	20	03/16/18 11:39	emk
Sulfate	D516-02/-07 - Turbidimetric	50	901		*	mg/L	50	250	03/19/18 9:11	kea

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-13 W1

ACZ Sample ID: ***L43155-02***
Date Sampled: *03/13/18 10:55*
Date Received: *03/14/18*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0002	0.001	03/22/18 16:15	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0005	03/27/18 12:35	mfm
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	03/21/18 13:06	aeh
Zinc, dissolved	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	03/21/18 13:06	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/22/18 11:41	enb
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/20/18 11:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	364			mg/L	10	20	03/16/18 11:41	emk
Sulfate	D516-02/-07 - Turbidimetric	5	165		*	mg/L	5	25	03/19/18 9:01	kea

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-13 W2

ACZ Sample ID: ***L43155-03***
Date Sampled: *03/13/18 11:10*
Date Received: *03/14/18*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	03/21/18 13:16	aeh
Zinc, dissolved	M200.7 ICP	1	0.31			mg/L	0.01	0.05	03/21/18 13:16	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/22/18 11:43	enb
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/20/18 11:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	506			mg/L	10	20	03/16/18 11:43	emk
Sulfate	D516-02/-07 - Turbidimetric	20	246		*	mg/L	20	100	03/19/18 9:11	kea

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-13 W3

ACZ Sample ID: ***L43155-04***
Date Sampled: *03/13/18 11:20*
Date Received: *03/14/18*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	03/21/18 13:19	aeh
Zinc, dissolved	M200.7 ICP	1	0.02	B		mg/L	0.01	0.05	03/21/18 13:19	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/22/18 11:44	enb
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/20/18 11:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	414			mg/L	10	20	03/16/18 11:45	emk
Sulfate	D516-02/-07 - Turbidimetric	5	153		*	mg/L	5	25	03/19/18 9:01	kea

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-13 W4

ACZ Sample ID: ***L43155-05***
Date Sampled: *03/13/18 11:30*
Date Received: *03/14/18*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1	0.357			mg/L	0.005	0.03	03/21/18 13:22	aeh
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	03/21/18 13:22	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/22/18 11:46	enb
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/20/18 11:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	476			mg/L	10	20	03/16/18 11:47	emk
Sulfate	D516-02/-07 - Turbidimetric	5	167		*	mg/L	5	25	03/19/18 9:01	kea

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-13 MW5

ACZ Sample ID: ***L43155-06***
Date Sampled: *03/13/18 12:15*
Date Received: *03/14/18*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0027			mg/L	0.0002	0.001	03/22/18 16:18	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0001	0.0005	03/27/18 12:38	mfm
Manganese, dissolved	M200.7 ICP	1	0.018	B		mg/L	0.005	0.03	03/21/18 13:25	aeh
Zinc, dissolved	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	03/21/18 13:25	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/22/18 11:48	enb
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/20/18 11:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	666			mg/L	10	20	03/16/18 11:49	emk
Sulfate	D516-02/-07 - Turbidimetric	20	329		*	mg/L	20	100	03/19/18 9:11	kea

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-13 CASH MINE

ACZ Sample ID: ***L43155-07***
Date Sampled: *03/13/18 12:00*
Date Received: *03/14/18*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0008	B		mg/L	0.0002	0.001	03/22/18 16:21	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0008			mg/L	0.0001	0.0005	03/27/18 12:41	mfm
Manganese, dissolved	M200.7 ICP	1	15.1			mg/L	0.005	0.03	03/21/18 13:35	aeh
Zinc, dissolved	M200.7 ICP	1	1.16			mg/L	0.01	0.05	03/21/18 13:35	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/22/18 11:49	enb
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/20/18 11:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	1870			mg/L	10	20	03/16/18 11:51	emk
Sulfate	D516-02/-07 - Turbidimetric	50	1160		*	mg/L	50	250	03/19/18 9:13	kea

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-13 CASH GULCH

ACZ Sample ID: ***L43155-08***
Date Sampled: *03/13/18 12:36*
Date Received: *03/14/18*
Sample Matrix: *Ground Water*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	03/22/18 16:25	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0014			mg/L	0.0001	0.0005	03/22/18 16:25	mfm
Manganese, dissolved	M200.7 ICP	1	0.011	B		mg/L	0.005	0.03	03/21/18 13:38	aeh
Zinc, dissolved	M200.7 ICP	1	0.39			mg/L	0.01	0.05	03/21/18 13:38	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							03/22/18 11:51	enb
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							03/20/18 11:30	aeh
Residue, Filterable (TDS) @180C	SM2540C	1	420			mg/L	10	20	03/16/18 11:55	emk
Sulfate	D516-02/-07 - Turbidimetric	20	221		*	mg/L	20	100	03/19/18 9:11	kea

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Colorado Milling Company, LLC

ACZ Project ID: ***L43155***

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG443924													
WG443924ICV	ICV	03/22/18 15:16	MS180219-2	.05		.04909	mg/L	98	90	110			
WG443924ICB	ICB	03/22/18 15:19				U	mg/L		-0.0006	0.0006			
WG443924LFB	LFB	03/22/18 15:23	MS180302-2	.0501		.04399	mg/L	88	85	115			
L43155-01AS	AS	03/22/18 16:09	MS180302-2	.0501	.001	.05331	mg/L	104	70	130			
L43155-01ASD	ASD	03/22/18 16:12	MS180302-2	.0501	.001	.05544	mg/L	109	70	130	4	20	E6

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG443924													
WG443924ICV	ICV	03/22/18 15:16	MS180219-2	.05		.05026	mg/L	101	90	110			
WG443924ICB	ICB	03/22/18 15:19				U	mg/L		-0.0003	0.0003			
WG443924LFB	LFB	03/22/18 15:23	MS180302-2	.05005		.04651	mg/L	93	85	115			
L43155-01AS	AS	03/22/18 16:09	MS180302-2	.05005	.0004	.05091	mg/L	101	70	130			E6
L43155-01ASD	ASD	03/22/18 16:12	MS180302-2	.05005	.0004	.05112	mg/L	101	70	130	0	20	E6
WG444163													
WG444163ICV	ICV	03/27/18 12:25	MS180219-2	.05		.05066	mg/L	101	90	110			
WG444163ICB	ICB	03/27/18 12:28				U	mg/L		-0.0003	0.0003			
WG444163LFB	LFB	03/27/18 12:30	MS180302-2	.05005		.04656	mg/L	93	85	115			
L43190-01AS	AS	03/27/18 13:09	MS180302-2	.05005	U	.04728	mg/L	94	70	130			
L43190-01ASD	ASD	03/27/18 13:12	MS180302-2	.05005	U	.04495	mg/L	90	70	130	5	20	
L43146-02AS	AS	03/27/18 13:33	MS180302-2	.05005	.0002	.04842	mg/L	96	70	130			
L43146-02ASD	ASD	03/27/18 13:35	MS180302-2	.05005	.0002	.04813	mg/L	96	70	130	1	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG443817													
WG443817ICV	ICV	03/21/18 12:37	II180305-1	2		1.9567	mg/L	98	95	105			
WG443817ICB	ICB	03/21/18 12:44				U	mg/L		-0.015	0.015			
WG443817LFB	LFB	03/21/18 12:57	II180319-4	.5		.5038	mg/L	101	85	115			
L43155-02AS	AS	03/21/18 13:09	II180319-4	.5	U	.5125	mg/L	103	85	115			
L43155-02ASD	ASD	03/21/18 13:13	II180319-4	.5	U	.5135	mg/L	103	85	115	0	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG443517													
WG443517PBW	PBW	03/16/18 11:30				10	mg/L		-20	20			
WG443517LCSW	LCSW	03/16/18 11:31	PCN55379	260		266	mg/L	102	80	120			
L43155-07DUP	DUP	03/16/18 11:53			1870	1860	mg/L				1	10	
L43181-14DUP	DUP	03/16/18 12:14			5800	5790	mg/L				0	10	

Colorado Milling Company, LLC

ACZ Project ID: ***L43155***

Sulfate D516-02/-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG443603													
WG443603ICB	ICB	03/19/18 8:40				U	mg/L		-3	3			
WG443603ICV	ICV	03/19/18 8:40	WI180308-2	20		20	mg/L	100	90	110			
WG443603LFB	LFB	03/19/18 8:53	WI171212-5	10		9.5	mg/L	95	90	110			
L43155-02AS	AS	03/19/18 9:01	WI171212-5	50	165	174	mg/L	18	90	110			M3
L43155-01DUP	DUP	03/19/18 9:11			901	908	mg/L				1	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG443817													
WG443817ICV	ICV	03/21/18 12:37	II180305-1	2		2.001	mg/L	100	95	105			
WG443817ICB	ICB	03/21/18 12:44				U	mg/L		-0.03	0.03			
WG443817LFB	LFB	03/21/18 12:57	II180319-4	.4942		.512	mg/L	104	85	115			
L43155-02AS	AS	03/21/18 13:09	II180319-4	.4942	.01	.531	mg/L	105	85	115			
L43155-02ASD	ASD	03/21/18 13:13	II180319-4	.4942	.01	.536	mg/L	106	85	115	1	20	

Colorado Milling Company, LLC ACZ Project ID: ***L43155***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L43155-01	WG443603	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L43155-02	WG443603	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L43155-03	WG443603	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L43155-04	WG443603	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L43155-05	WG443603	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L43155-06	WG443603	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L43155-07	WG443603	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L43155-08	WG443603	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Certification Qualifiers

Colorado Milling Company, LLC ACZ Project ID: ***L43155***

No certification qualifiers associated with this analysis

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID: L43155
Date Received: 03/14/2018 11:30
Received By:
Date Printed: 3/15/2018

Receipt Verification

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

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
4474	2.1	<=6.0	14	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID:	L43155
Date Received:	03/14/2018 11:30
Received By:	
Date Printed:	3/15/2018

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

ACZ Laboratories, Inc. L43155

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Mark A. Steen
Company: Colorado Milling Company
E-mail: goldfontime@gmail.com
Address: PO Box 1523
Lovgmont, COLO
Telephone:

Copy of Report to:

Name: Gordon Sweeney
Company: CMC LLC
E-mail: Gordon Sweeney@gmail.com
Telephone: 303-440-0633

Invoice to:

Name: MARK Steen
Company: CMC LLC
E-mail: goldfontime@gmail.com
Address: P.O Box 1523
Lovgmont CO
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☐ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☐

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: Lewis Perkins **Sampler's Site Information** **State** Colo **Zip code** 80302 **Time Zone** MDT

***Sampler's Signature:** _____

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:
PO#:
Reporting state for compliance testing:
Check box if samples include NRC licensed material? ☐

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	TDS satiate							
018-03-13 TP	FROZEN			O							
018-03-13 MW1	03/13/18 10:45	3		X							
018-03-13 W1	03/13/18 10:55	3		X							
018-03-13 W2	03/13/18 11:10	3		X							
018-03-13 W3	03/13/18 11:20	3		X							
018-03-13 W4	03/13/18 11:30	3		X							
018-03-13 MW5	03/13/18 12:15	3		X							
018-03-13 Cash Mine	03/13/18 12:00	3		X							
018-03-13 Cash Gulch	03/13/18 12:36	3		X							

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Call Gordon Sweeney at 303-442-1062 for metal to be analized for.
all samples are Raw, Filter as needed

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Lewis Perkins	03/13/18	URS Frontier MC	03/13/2018 3:55 PM
		BCK	3/14/18 1130

L43155 Chain of Custody

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

Analytical Report

October 02, 2018

Report to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

cc: Gordon E. Sweeney

Bill to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

Project ID:
ACZ Project ID: L47001

Mark Steen:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on September 19, 2018. This project has been assigned to ACZ's project number, L47001. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L47001. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after November 01, 2018. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

Sue Webber has reviewed and approved this report.

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-BTP

ACZ Sample ID: ***L47001-01***
Date Sampled: *09/18/18 12:56*
Date Received: *09/19/18*
Sample Matrix: *Groundwater*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	2	0.0009	B		mg/L	0.0004	0.002	10/01/18 22:00	bsu
Cadmium, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0001	0.0005	10/01/18 22:00	bsu
Manganese, dissolved	M200.7 ICP	2		U		mg/L	0.01	0.05	09/28/18 18:19	dcm
Zinc, dissolved	M200.7 ICP	2		U		mg/L	0.02	0.1	09/28/18 18:19	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:03	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:00	dcm
Residue, Filterable (TDS) @180C	SM2540C	2	3470			mg/L	20	40	09/20/18 16:23	nmc
Sulfate	D516-02/-07 - Turbidimetric	200	2540		*	mg/L	200	1000	09/24/18 13:49	mss2

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-13 MW1

ACZ Sample ID: ***L47001-02***
Date Sampled: *09/18/18 10:07*
Date Received: *09/19/18*
Sample Matrix: *Groundwater*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0006	B		mg/L	0.0002	0.001	10/01/18 22:02	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00016	B		mg/L	0.00005	0.0003	10/01/18 22:02	bsu
Manganese, dissolved	M200.7 ICP	1	0.008	B		mg/L	0.005	0.03	09/28/18 18:22	dcm
Zinc, dissolved	M200.7 ICP	1	0.06			mg/L	0.01	0.05	09/28/18 18:22	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:06	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:00	dcm
Residue, Filterable (TDS) @180C	SM2540C	1	1470		*	mg/L	10	20	09/21/18 13:50	kja
Sulfate	D516-02/-07 - Turbidimetric	50	857		*	mg/L	50	250	09/24/18 14:00	mss2

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-13 W1

ACZ Sample ID: ***L47001-03***
Date Sampled: *09/18/18 10:20*
Date Received: *09/19/18*
Sample Matrix: *Groundwater*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	10/01/18 22:04	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.00005	0.0003	10/01/18 22:04	bsu
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	09/28/18 18:25	dcm
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	09/28/18 18:25	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:08	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:00	dcm
Residue, Filterable (TDS) @180C	SM2540C	1	252		*	mg/L	10	20	09/21/18 13:52	kja
Sulfate	D516-02/-07 - Turbidimetric	5	110		*	mg/L	5	25	09/24/18 13:07	mss2

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-13 W2

ACZ Sample ID: ***L47001-04***
Date Sampled: *09/18/18 10:35*
Date Received: *09/19/18*
Sample Matrix: *Groundwater*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	09/28/18 18:28	dcm
Zinc, dissolved	M200.7 ICP	1	0.17			mg/L	0.01	0.05	09/28/18 18:28	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:11	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:00	dcm
Residue, Filterable (TDS) @180C	SM2540C	1	416		*	mg/L	10	20	09/21/18 13:54	kja
Sulfate	D516-02/-07 - Turbidimetric	20	207		*	mg/L	20	100	09/24/18 13:29	mss2

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-13 W3

ACZ Sample ID: ***L47001-05***
Date Sampled: *09/18/18 10:40*
Date Received: *09/19/18*
Sample Matrix: *Groundwater*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	09/28/18 18:36	dcm
Zinc, dissolved	M200.7 ICP	1	0.02	B		mg/L	0.01	0.05	09/28/18 18:36	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:13	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:00	dcm
Residue, Filterable (TDS) @180C	SM2540C	1	404		*	mg/L	10	20	09/21/18 13:56	kja
Sulfate	D516-02/-07 - Turbidimetric	5	181		*	mg/L	5	25	09/24/18 13:07	mss2

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-31 W4

ACZ Sample ID: ***L47001-06***
Date Sampled: *09/18/18 10:50*
Date Received: *09/19/18*
Sample Matrix: *Groundwater*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1	0.087			mg/L	0.005	0.03	09/28/18 18:39	dcm
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	09/28/18 18:39	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:15	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:01	dcm
Residue, Filterable (TDS) @180C	SM2540C	1	472		*	mg/L	10	20	09/21/18 13:58	kja
Sulfate	D516-02/-07 - Turbidimetric	5	172		*	mg/L	5	25	09/24/18 14:17	mss2

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-31 MW5

ACZ Sample ID: ***L47001-07***
Date Sampled: *09/18/18 11:15*
Date Received: *09/19/18*
Sample Matrix: *Groundwater*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0017			mg/L	0.0002	0.001	10/01/18 22:06	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00034			mg/L	0.00005	0.0003	10/01/18 22:06	bsu
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	09/28/18 18:43	dcm
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	09/28/18 18:43	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:18	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:01	dcm
Residue, Filterable (TDS) @180C	SM2540C	1	666		*	mg/L	10	20	09/21/18 14:00	kja
Sulfate	D516-02/-07 - Turbidimetric	20	331		*	mg/L	20	100	09/24/18 14:23	mss2

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-31 CM

ACZ Sample ID: ***L47001-08***
Date Sampled: *09/18/18 11:30*
Date Received: *09/19/18*
Sample Matrix: *Groundwater*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0002	0.001	10/01/18 22:08	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00609			mg/L	0.00005	0.0003	10/01/18 22:08	bsu
Manganese, dissolved	M200.7 ICP	1	1.29			mg/L	0.005	0.03	09/28/18 18:52	dcm
Zinc, dissolved	M200.7 ICP	1	2.87			mg/L	0.01	0.05	09/28/18 18:52	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:20	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:01	dcm
Residue, Filterable (TDS) @180C	SM2540C	1	1040		*	mg/L	10	20	09/21/18 14:02	kja
Sulfate	D516-02/-07 - Turbidimetric	50	553		*	mg/L	50	250	09/24/18 14:25	mss2

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-03-31 CG

ACZ Sample ID: ***L47001-09***
Date Sampled: *09/18/18 11:50*
Date Received: *09/19/18*
Sample Matrix: *Groundwater*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	10/01/18 22:10	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00105			mg/L	0.00005	0.0003	10/01/18 22:10	bsu
Manganese, dissolved	M200.7 ICP	1	0.031			mg/L	0.005	0.03	09/28/18 18:55	dcm
Zinc, dissolved	M200.7 ICP	1	0.20			mg/L	0.01	0.05	09/28/18 18:55	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:23	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:01	dcm
Residue, Filterable (TDS) @180C	SM2540C	1	336		*	mg/L	10	20	09/21/18 14:04	kja
Sulfate	D516-02/-07 - Turbidimetric	5	179		*	mg/L	5	25	09/24/18 14:17	mss2

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Colorado Milling Company, LLC ACZ Project ID: ***L47001***

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

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457555													
WG457555ICV	ICV	10/01/18 21:38	MS180914-2	.05		.04879	mg/L	98	90	110			
WG457555ICB	ICB	10/01/18 21:40				U	mg/L		-0.00044	0.00044			
WG457555LFB	LFB	10/01/18 21:42	MS180830-2	.0501		.04876	mg/L	97	85	115			
L46978-13AS	AS	10/01/18 21:51	MS180830-2	.0501	.0011	.05031	mg/L	98	70	130			
L46978-13ASD	ASD	10/01/18 21:53	MS180830-2	.0501	.0011	.04974	mg/L	97	70	130	1	20	
L47004-03AS	AS	10/01/18 22:17	MS180830-2	.0501	.0002	.04488	mg/L	89	70	130			
L47004-03ASD	ASD	10/01/18 22:23	MS180830-2	.0501	.0002	.04596	mg/L	91	70	130	2	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457555													
WG457555ICV	ICV	10/01/18 21:38	MS180914-2	.05		.048347	mg/L	97	90	110			
WG457555ICB	ICB	10/01/18 21:40				U	mg/L		-0.00011	0.00011			
WG457555LFB	LFB	10/01/18 21:42	MS180830-2	.05005		.047795	mg/L	95	85	115			
L46978-13AS	AS	10/01/18 21:51	MS180830-2	.05005	U	.045268	mg/L	90	70	130			
L46978-13ASD	ASD	10/01/18 21:53	MS180830-2	.05005	U	.043932	mg/L	88	70	130	3	20	
L47004-03AS	AS	10/01/18 22:17	MS180830-2	.05005	.00017	.043236	mg/L	86	70	130			
L47004-03ASD	ASD	10/01/18 22:23	MS180830-2	.05005	.00017	.044225	mg/L	88	70	130	2	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457450													
WG457450ICV	ICV	09/28/18 17:58	II180824-2	2		1.9565	mg/L	98	95	105			
WG457450ICB	ICB	09/28/18 18:03				U	mg/L		-0.015	0.015			
WG457450LFB	LFB	09/28/18 18:16	II180926-3	.5005		.4906	mg/L	98	85	115			
L47001-04AS	AS	09/28/18 18:31	II180926-3	.5005	U	.4897	mg/L	98	85	115			
L47001-04ASD	ASD	09/28/18 18:33	II180926-3	.5005	U	.4884	mg/L	98	85	115	0	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG456844													
WG456844PBW	PBW	09/20/18 16:13				10	mg/L		-20	20			
WG456844LCSW	LCSW	09/20/18 16:15	PCN56349	260		276	mg/L	106	80	120			
L47015-02DUP	DUP	09/20/18 16:44			2540	2550	mg/L				0	10	
WG456908													
WG456908PBW	PBW	09/21/18 13:45				10	mg/L		-20	20			
WG456908LCSW	LCSW	09/21/18 13:46	PCN56349	260		262	mg/L	101	80	120			
L47004-01DUP	DUP	09/21/18 14:08			70	66	mg/L				6	10	RA

Colorado Milling Company, LLC

ACZ Project ID: ***L47001***

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

Sulfate D516-02/-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457007													
WG457007ICB	ICB	09/24/18 12:31				U	mg/L		-3	3			
WG457007ICV	ICV	09/24/18 12:31	WI180919-3	20		19.7	mg/L	99	90	110			
WG457007LFB	LFB	09/24/18 12:56	WI180919-5	10.03		10	mg/L	100	90	110			
L47000-05DUP	DUP	09/24/18 13:34			U	U	mg/L				0	20	RA
L47001-01AS	AS	09/24/18 13:49	SO4TURB20X	100	2540	2500	mg/L	-40	90	110			M3
WG457008													
WG457008ICB	ICB	09/24/18 12:31				U	mg/L		-3	3			
WG457008ICV	ICV	09/24/18 12:31	WI180919-3	20		19.7	mg/L	99	90	110			
WG457008LFB	LFB	09/24/18 14:09	WI180919-5	10.03		10	mg/L	100	90	110			
L47001-06DUP	DUP	09/24/18 14:17			172	176	mg/L				2	20	
L47001-07AS	AS	09/24/18 14:38	SO4TURB20X	10	331	346	mg/L	150	90	110			M3

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457450													
WG457450ICV	ICV	09/28/18 17:58	II180824-2	2		2.014	mg/L	101	95	105			
WG457450ICB	ICB	09/28/18 18:03				U	mg/L		-0.03	0.03			
WG457450LFB	LFB	09/28/18 18:16	II180926-3	.4942		.519	mg/L	105	85	115			
L47001-04AS	AS	09/28/18 18:31	II180926-3	.4942	.17	.675	mg/L	102	85	115			
L47001-04ASD	ASD	09/28/18 18:33	II180926-3	.4942	.17	.678	mg/L	103	85	115	0	20	

Colorado Milling Company, LLC ACZ Project ID: ***L47001***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L47001-01	WG457007	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L47001-02	WG456908	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457007	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L47001-03	WG456908	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457007	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L47001-04	WG456908	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457007	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L47001-05	WG456908	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457007	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L47001-06	WG456908	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457008	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L47001-07	WG456908	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457008	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Colorado Milling Company, LLC ACZ Project ID: ***L47001***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L47001-08	WG456908	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457008	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L47001-09	WG456908	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457008	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

No certification qualifiers associated with this analysis

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID: L47001
Date Received: 09/19/2018 11:42
Received By:
Date Printed: 9/20/2018

Receipt Verification

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

A change was made in the Sample Identification Line 1 section prior to ACZ custody.

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
5052	2.5	<=6.0	15	Yes

Was ice present in the shipment container(s)?

Yes - Gel ice was present in the shipment container(s).

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

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID:	L47001
Date Received:	09/19/2018 11:42
Received By:	
Date Printed:	9/20/2018

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

ACZ Laboratories, Inc. L47001

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Mark Steen
Company: Colorado Milling CO
E-mail: goldtontime@gmail.com
Address: P.O. Box 1523 Longmont, CO
Telephone:

Copy of Report to:

Name: Gordon Sweeney
Company: CMC LLC
E-mail: gordon.sweeney@gmail.com
Telephone: 303-440-0633

Invoice to:

Name: Mark Steen
Company: CMC LLC
E-mail: Goldtontime@gmail.com
Address: P.O Box 1523 Longmont, CO
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☐ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☐

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: KM/LP **Sampler's Site Information** State CO Zip code 80302 Time Zone MDT

***Sampler's Signature:** _____

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:
PO#:
Reporting state for compliance testing:
Check box if samples include NRC licensed material? ☐

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	TDS 160.1 Filtered
~~9/18/18~~ 018-03-13TA	9/18/18 12:56	3		X
018-03-13 MW1	9/18/18 10:07	3		X
018-03-13 W1	9/18/18 10:20	3		X
018-03-13 W2	9/18/18 10:35	3		X
018-03-13 W3	9/18/18 10:40	3		X
018-03-31 W4	9/18/18 10:50	3		X
018-03-31 MW5	9/18/18 11:15	3		X
018-03-31 CMM	9/18/18 11:30	3		X
018-03-31 CG	9/18/18 11:50	3		X

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Call Gordon Sweeney at 303-442-1062 for metal to be analized for.
all samples are raw. Filter as needed

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Lewis Perkins	09/18/2018	U.P.S	09/18/18
		3795 Frontier Ave	3:35 PM
		Boulder, CO 80301	

L47001 Chain of Custod

FRMAD050.00.14.14 White - Return with sample. Yellow - Retain for your records. JJC 9-19-18 10:42

L47001-1810021546

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

Analytical Report

December 26, 2018

Report to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

cc: Gordon E. Sweeney

Bill to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

Project ID:
ACZ Project ID: L48761

Mark Steen:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 11, 2018. This project has been assigned to ACZ's project number, L48761. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L48761. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after January 25, 2019. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

Sue Webber has reviewed and approved this report.

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-12-10-MW1

ACZ Sample ID: ***L48761-01***
Date Sampled: *12/10/18 09:10*
Date Received: *12/11/18*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								12/18/18 13:50	rap

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0002	0.001	12/20/18 12:33	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00007	B		mg/L	0.00005	0.0003	12/20/18 12:33	mfm
Manganese, dissolved	M200.7 ICP	1	0.010	B		mg/L	0.005	0.03	12/20/18 15:12	aeh
Zinc, dissolved	M200.7 ICP	1	0.04	B		mg/L	0.01	0.05	12/20/18 15:12	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/12/18 18:29	nmc
Residue, Filterable (TDS) @180C	SM2540C	1	1440			mg/L	10	20	12/11/18 18:06	nmc
Sulfate	D516-02/-07 - Turbidimetric	40	814		*	mg/L	40	200	12/14/18 15:08	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-12-10-W1

ACZ Sample ID: ***L48761-02***
Date Sampled: *12/10/18 09:20*
Date Received: *12/11/18*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								12/18/18 13:50	rap

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	12/20/18 12:35	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00014	B		mg/L	0.00005	0.0003	12/20/18 12:35	mfm
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	12/20/18 15:15	aeh
Zinc, dissolved	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	12/20/18 15:15	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/12/18 18:36	nmc
Residue, Filterable (TDS) @180C	SM2540C	1	254			mg/L	10	20	12/13/18 13:17	mh
Sulfate	D516-02/-07 - Turbidimetric	5	115		*	mg/L	5	25	12/14/18 14:08	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-12-10-W2

ACZ Sample ID: ***L48761-03***
Date Sampled: *12/10/18 09:35*
Date Received: *12/11/18*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								12/18/18 13:50	rap

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	12/20/18 15:32	aeh
Zinc, dissolved	M200.7 ICP	1	0.18			mg/L	0.01	0.05	12/20/18 15:32	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/12/18 18:44	nmc
Residue, Filterable (TDS) @180C	SM2540C	1	434			mg/L	10	20	12/13/18 13:20	mh
Sulfate	D516-02/-07 - Turbidimetric	10	211		*	mg/L	10	50	12/14/18 14:11	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-12-10-W3

ACZ Sample ID: ***L48761-04***
Date Sampled: *12/10/18 09:50*
Date Received: *12/11/18*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								12/18/18 13:50	rap

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	12/20/18 15:35	aeh
Zinc, dissolved	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	12/20/18 15:35	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/12/18 18:51	nmc
Residue, Filterable (TDS) @180C	SM2540C	1	394			mg/L	10	20	12/13/18 13:23	mh
Sulfate	D516-02/-07 - Turbidimetric	5	155		*	mg/L	5	25	12/14/18 14:08	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-12-10-W4

ACZ Sample ID: ***L48761-05***
Date Sampled: *12/10/18 10:00*
Date Received: *12/11/18*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								12/18/18 13:50	rap

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1	0.122			mg/L	0.005	0.03	12/20/18 15:38	aeh
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/20/18 15:38	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/12/18 18:58	nmc
Residue, Filterable (TDS) @180C	SM2540C	1	430			mg/L	10	20	12/13/18 13:26	mh
Sulfate	D516-02/-07 - Turbidimetric	5	164		*	mg/L	5	25	12/14/18 14:09	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-12-10-MW5

ACZ Sample ID: ***L48761-06***
Date Sampled: *12/10/18 10:45*
Date Received: *12/11/18*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								12/18/18 13:50	rap

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0017			mg/L	0.0002	0.001	12/20/18 12:37	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0003			mg/L	0.00005	0.0003	12/20/18 12:37	mfm
Manganese, dissolved	M200.7 ICP	1	0.015	B		mg/L	0.005	0.03	12/20/18 15:42	aeh
Zinc, dissolved	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	12/20/18 15:42	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/12/18 19:05	nmc
Residue, Filterable (TDS) @180C	SM2540C	1	662			mg/L	10	20	12/13/18 13:29	mh
Sulfate	D516-02/-07 - Turbidimetric	10	337		*	mg/L	10	50	12/14/18 14:11	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 018-12-10-CG

ACZ Sample ID: ***L48761-07***
Date Sampled: *12/10/18 11:15*
Date Received: *12/11/18*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								12/18/18 13:50	rap

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	12/20/18 12:42	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.001			mg/L	0.00005	0.0003	12/20/18 12:42	mfm
Manganese, dissolved	M200.7 ICP	1	0.010	B		mg/L	0.005	0.03	12/20/18 15:45	aeh
Zinc, dissolved	M200.7 ICP	1	0.32			mg/L	0.01	0.05	12/20/18 15:45	aeh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							12/12/18 19:13	nmc
Residue, Filterable (TDS) @180C	SM2540C	1	350			mg/L	10	20	12/13/18 13:31	mh
Sulfate	D516-02/-07 - Turbidimetric	10	206		*	mg/L	10	50	12/14/18 14:27	wtc

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Colorado Milling Company, LLC

ACZ Project ID: ***L48761***

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

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463158													
WG463158ICV	ICV	12/20/18 12:17	MS181210-2	.05		.05053	mg/L	101	90	110			
WG463158ICB	ICB	12/20/18 12:19				U	mg/L		-0.00044	0.00044			
WG463158LFB	LFB	12/20/18 12:21	MS181208-2	.05005		.04832	mg/L	97	85	115			
L48757-03AS	AS	12/20/18 12:30	MS181208-2	.05005	.0005	.04666	mg/L	92	70	130			
L48757-03ASD	ASD	12/20/18 12:32	MS181208-2	.05005	.0005	.04827	mg/L	95	70	130	3	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463158													
WG463158ICV	ICV	12/20/18 12:17	MS181210-2	.05		.051464	mg/L	103	90	110			
WG463158ICB	ICB	12/20/18 12:19				U	mg/L		-0.00011	0.00011			
WG463158LFB	LFB	12/20/18 12:21	MS181208-2	.05005		.047859	mg/L	96	85	115			
L48757-03AS	AS	12/20/18 12:30	MS181208-2	.05005	.00006	.048586	mg/L	97	70	130			
L48757-03ASD	ASD	12/20/18 12:32	MS181208-2	.05005	.00006	.048649	mg/L	97	70	130	0	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463174													
WG463174ICV	ICV	12/20/18 14:30	II181217-1	2		1.9445	mg/L	97	95	105			
WG463174ICB	ICB	12/20/18 14:36				U	mg/L		-0.015	0.015			
WG463174LFB	LFB	12/20/18 14:49	II181219-2	.4995		.4842	mg/L	97	85	115			
L48761-02AS	AS	12/20/18 15:19	II181219-2	.4995	U	.4804	mg/L	96	85	115			
L48761-02ASD	ASD	12/20/18 15:29	II181219-2	.4995	U	.482	mg/L	96	85	115	0	20	
L48773-04AS	AS	12/20/18 16:08	II181219-2	.4995	U	.4824	mg/L	97	85	115			
L48773-04ASD	ASD	12/20/18 16:11	II181219-2	.4995	U	.484	mg/L	97	85	115	0	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG462378													
WG462378PBW	PBW	12/11/18 17:09				10	mg/L		-20	20			
WG462378LCSW	LCSW	12/11/18 17:11	PCN56953	260		260	mg/L	100	80	120			
L48761-01DUP	DUP	12/11/18 18:09			1440	1450	mg/L				1	10	
WG462560													
WG462560PBW	PBW	12/13/18 13:09				U	mg/L		-20	20			
WG462560LCSW	LCSW	12/13/18 13:11	PCN57516	260		256	mg/L	98	80	120			
L48775-03DUP	DUP	12/13/18 13:43			154	152	mg/L				1	10	

Sulfate D516-02/-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG462670													
WG462670ICB	ICB	12/14/18 8:36				U	mg/L		-3	3			
WG462670ICV	ICV	12/14/18 8:36	WI181203-1	20		19.4	mg/L	97	90	110			
WG462670LFB	LFB	12/14/18 13:40	WI181024-4	10.03		10	mg/L	100	90	110			
L48765-02DUP	DUP	12/14/18 13:44			4.3	3.7	mg/L				15	20	RA
L48765-01AS	AS	12/14/18 14:10	SO4TURB5X	10	40	47.5	mg/L	75	90	110			M3

Colorado Milling Company, LLC

ACZ Project ID: ***L48761***

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

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463174													
WG463174ICV	ICV	12/20/18 14:30	II181217-1	2		1.973	mg/L	99	95	105			
WG463174ICB	ICB	12/20/18 14:36				U	mg/L		-0.03	0.03			
WG463174LFB	LFB	12/20/18 14:49	II181219-2	.4942		.514	mg/L	104	85	115			
L48761-02AS	AS	12/20/18 15:19	II181219-2	.4942	.01	.534	mg/L	106	85	115			
L48761-02ASD	ASD	12/20/18 15:29	II181219-2	.4942	.01	.528	mg/L	105	85	115	1	20	
L48773-04AS	AS	12/20/18 16:08	II181219-2	.4942	.01	.531	mg/L	105	85	115			
L48773-04ASD	ASD	12/20/18 16:11	II181219-2	.4942	.01	.533	mg/L	106	85	115	0	20	

Colorado Milling Company, LLC ACZ Project ID: ***L48761***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L48761-01	WG462670	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L48761-02	WG462670	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L48761-03	WG462670	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L48761-04	WG462670	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L48761-05	WG462670	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L48761-06	WG462670	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L48761-07	WG462670	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Certification Qualifiers

Colorado Milling Company, LLC ACZ Project ID: ***L48761***

No certification qualifiers associated with this analysis

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID: L48761
Date Received: 12/11/2018 11:34
Received By:
Date Printed: 12/11/2018

Receipt Verification

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

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
4467	0.1	<=6.0	15	Yes

Was ice present in the shipment container(s)?

Yes - Gel ice was present in the shipment container(s) but was thawed by receipt at ACZ.

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

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID:	L48761
Date Received:	12/11/2018 11:34
Received By:	
Date Printed:	12/11/2018

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

ACZ Laboratories, Inc. L48761

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Mark A. Steen
Company: Colorado milling company
E-mail: goldtontine@gmail.com
Address: P.O. Box 1523 Longmont, Colo
Telephone:

Copy of Report to:

Name: Gordon Sweeney
Company: CMC LLC
E-mail: gordon sweeney@gmail.com
Telephone: 303-440-0633

Invoice to:

Name: Mark steen
Company: CMC LLC
E-mail: Goldtontine@gmail.com
Address: P.O. Box 1523 Longmont Colo
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☐ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☐

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: L. Perkins **Sampler's Site Information** **State** Colo **Zip code** 80302 **Time Zone** MDT

***Sampler's Signature:** _____

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:
PO#:
Reporting state for compliance testing:
Check box if samples include NRC licensed material? ☐

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	TDS Sulfate							
~~018-12-10 FP~~	~~Frozen~~			x							
018-12-10-MW1	12/10/18 9:10AM			x							
018-12-10-W1	12/10/18 9:20AM			x							
018-12-10-W2	12/10/18 9:35AM			x							
018-12-10-W3	12/10/18 9:50AM			x							
018-12-10-W4	12/10/18 10:00AM			x							
018-12-10-MW5	12/10/18 10:45AM			x							
~~018-12-10-EMP~~	~~Frozen~~			x							
018-12-10-CG	12/10/18 11:15AM			x							

Sample not received JJ 12/1/18

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Call Gordon sweeney@ 303-442-1062 for the metals to be analized for
all samples are Raw, filter as needed

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Lewis Perkins	12/10/18	UPS frontier AE BOULDER 80301	12/10/2018

L48761 Chain of Custod

L48761:1:20181206 White - Return with sample. Yellow - Retain for your records. 12/1/18 11:34

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

Analytical Report

April 05, 2019

Report to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

cc: Gordon E. Sweeney

Bill to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

Project ID:
ACZ Project ID: L50766

Mark Steen:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on March 26, 2019. This project has been assigned to ACZ's project number, L50766. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L50766. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after May 05, 2019. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

Sue Webber has reviewed and approved this report.

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190325 MW1

ACZ Sample ID: ***L50766-01***
Date Sampled: *03/25/19 10:30*
Date Received: *03/26/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								03/28/19 14:00	rap

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0007	B		mg/L	0.0002	0.001	04/02/19 19:09	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00009	B		mg/L	0.00005	0.0003	04/02/19 19:09	bsu
Manganese, dissolved	M200.7 ICP	1	0.019	B		mg/L	0.005	0.03	04/02/19 12:38	dcm
Zinc, dissolved	M200.7 ICP	1	0.05			mg/L	0.01	0.05	04/02/19 12:38	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							04/02/19 12:18	emk
Residue, Filterable (TDS) @180C	SM2540C	1	1450			mg/L	10	20	03/28/19 13:27	mh
Sulfate	D516-02/-07 - Turbidimetric	40	866		*	mg/L	40	200	04/03/19 13:54	wtc

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190325 W1

ACZ Sample ID: ***L50766-02***
Date Sampled: *03/25/19 10:41*
Date Received: *03/26/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								03/28/19 14:00	rap

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0002	0.001	04/02/19 19:10	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00013	B		mg/L	0.00005	0.0003	04/02/19 19:10	bsu
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	04/02/19 12:41	dcm
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	04/02/19 12:41	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							04/02/19 12:22	emk
Residue, Filterable (TDS) @180C	SM2540C	1	232			mg/L	10	20	03/28/19 13:29	mh
Sulfate	D516-02/-07 - Turbidimetric	5	76.6		*	mg/L	5	25	04/03/19 13:14	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190325 W2

ACZ Sample ID: ***L50766-03***
Date Sampled: *03/25/19 10:55*
Date Received: *03/26/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								03/28/19 14:00	rap

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	04/02/19 12:44	dcm
Zinc, dissolved	M200.7 ICP	1	0.02	B		mg/L	0.01	0.05	04/02/19 12:44	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							04/02/19 12:26	emk
Residue, Filterable (TDS) @180C	SM2540C	1	432			mg/L	10	20	03/28/19 13:32	mh
Sulfate	D516-02/-07 - Turbidimetric	5	151		*	mg/L	5	25	04/03/19 13:52	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190325 W3

ACZ Sample ID: ***L50766-04***
Date Sampled: *03/25/19 11:10*
Date Received: *03/26/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								03/28/19 14:00	rap

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	04/02/19 12:53	dcm
Zinc, dissolved	M200.7 ICP	1	0.13			mg/L	0.01	0.05	04/02/19 12:53	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							04/02/19 12:30	emk
Residue, Filterable (TDS) @180C	SM2540C	1	436			mg/L	10	20	03/28/19 13:34	mh
Sulfate	D516-02/-07 - Turbidimetric	10	197		*	mg/L	10	50	04/03/19 13:54	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190325 W4

ACZ Sample ID: ***L50766-05***
Date Sampled: *03/25/19 11:25*
Date Received: *03/26/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								03/28/19 14:00	rap

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1	0.023	B		mg/L	0.005	0.03	04/02/19 12:56	dcm
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	04/02/19 12:56	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							04/02/19 12:34	emk
Residue, Filterable (TDS) @180C	SM2540C	1	424			mg/L	10	20	03/28/19 13:37	mh
Sulfate	D516-02/-07 - Turbidimetric	5	140		*	mg/L	5	25	04/03/19 13:38	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190325 MW5

ACZ Sample ID: ***L50766-06***
Date Sampled: *03/25/19 11:45*
Date Received: *03/26/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								03/28/19 14:00	rap

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0017			mg/L	0.0002	0.001	04/02/19 19:12	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00021	B		mg/L	0.00005	0.0003	04/02/19 19:12	bsu
Manganese, dissolved	M200.7 ICP	1	0.006	B		mg/L	0.005	0.03	04/02/19 12:59	dcm
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	04/02/19 12:59	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							04/02/19 12:38	emk
Residue, Filterable (TDS) @180C	SM2540C	1	688		*	mg/L	10	20	03/28/19 16:51	nmc
Sulfate	D516-02/-07 - Turbidimetric	20	327		*	mg/L	20	100	04/03/19 15:43	wtc

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Colorado Milling Company, LLC ACZ Project ID: ***L50766***

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

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG469338													
WG469338ICV	ICV	04/02/19 18:56	MS190225-2	.05		.05281	mg/L	106	90	110			
WG469338ICB	ICB	04/02/19 18:58				U	mg/L		-0.00044	0.00044			
WG469338LFB	LFB	04/02/19 18:59	MS190208-2	.05005		.0507	mg/L	101	85	115			
L50603-02AS	AS	04/02/19 19:05	MS190208-2	.05005	.0049	.05712	mg/L	104	70	130			
L50603-02ASD	ASD	04/02/19 19:07	MS190208-2	.05005	.0049	.05546	mg/L	101	70	130	3	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG469338													
WG469338ICV	ICV	04/02/19 18:56	MS190225-2	.05		.051144	mg/L	102	90	110			
WG469338ICB	ICB	04/02/19 18:58				U	mg/L		-0.00011	0.00011			
WG469338LFB	LFB	04/02/19 18:59	MS190208-2	.05005		.048952	mg/L	98	85	115			
L50603-02AS	AS	04/02/19 19:05	MS190208-2	.05005	U	.049064	mg/L	98	70	130			
L50603-02ASD	ASD	04/02/19 19:07	MS190208-2	.05005	U	.047825	mg/L	96	70	130	3	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG469162													
WG469162ICV	ICV	04/02/19 12:17	II190211-1	2		1.966	mg/L	98	95	105			
WG469162ICB	ICB	04/02/19 12:23				U	mg/L		-0.015	0.015			
WG469162LFB	LFB	04/02/19 12:35	II190312-3	.4995		.5058	mg/L	101	85	115			
L50766-03AS	AS	04/02/19 12:47	II190312-3	.4995	U	.5071	mg/L	102	85	115			
L50766-03ASD	ASD	04/02/19 12:50	II190312-3	.4995	U	.5126	mg/L	103	85	115	1	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG469038													
WG469038PBW	PBW	03/28/19 12:41				U	mg/L		-20	20			
WG469038LCSW	LCSW	03/28/19 12:43	PCN58058	260		274	mg/L	105	80	120			
L50766-05DUP	DUP	03/28/19 13:40			424	430	mg/L				1	10	
WG469083													
WG469083PBW	PBW	03/28/19 16:46				28	mg/L		-20	20			B7
WG469083LCSW	LCSW	03/28/19 16:48	PCN58058	260		282	mg/L	108	80	120			
L50784-06DUP	DUP	03/28/19 17:17			5910	5880	mg/L				1	10	

Colorado Milling Company, LLC

ACZ Project ID: ***L50766***

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

Sulfate D516-02/-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG469454													
WG469454ICB	ICB	04/03/19 10:56				U	mg/L		-3	3			
WG469454ICV	ICV	04/03/19 10:56	WI190322-1	20		19.8	mg/L	99	90	110			
WG469454LFB	LFB	04/03/19 13:04	WI181024-4	10.03		10.4	mg/L	104	90	110			
L50766-05DUP	DUP	04/03/19 13:38			140	140	mg/L				0	20	
L50766-04AS	AS	04/03/19 13:54	SO4TURB10X	10	197	183	mg/L	-140	90	110			M3
WG469470													
WG469470LFB	LFB	04/03/19 15:41	WI181024-4	10.03		10.3	mg/L	103	90	110			
L50766-06DUP	DUP	04/03/19 15:43			327	327	mg/L				0	20	
L50781-01AS	AS	04/03/19 15:44	SO4TURB60X	9.99	881	932	mg/L	511	90	110			M3

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG469162													
WG469162ICV	ICV	04/02/19 12:17	II190211-1	2		1.917	mg/L	96	95	105			
WG469162ICB	ICB	04/02/19 12:23				U	mg/L		-0.03	0.03			
WG469162LFB	LFB	04/02/19 12:35	II190312-3	.4942		.498	mg/L	101	85	115			
L50766-03AS	AS	04/02/19 12:47	II190312-3	.4942	.02	.516	mg/L	100	85	115			
L50766-03ASD	ASD	04/02/19 12:50	II190312-3	.4942	.02	.513	mg/L	100	85	115	1	20	

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2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Extended Qualifier Report

Colorado Milling Company, LLC ACZ Project ID: ***L50766***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L50766-01	WG469454	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L50766-02	WG469454	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L50766-03	WG469454	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L50766-04	WG469454	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L50766-05	WG469454	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L50766-06	WG469083	Residue, Filterable (TDS) @180C	SM2540C	B7	Target analyte detected in prep / method blank at or above acceptance limit. Sample value is > 10X the concentration in the method blank.
	WG469470	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

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Certification Qualifiers

Colorado Milling Company, LLC

ACZ Project ID: ***L50766***

No certification qualifiers associated with this analysis

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID: L50766
Date Received: 03/26/2019 11:40
Received By:
Date Printed: 3/26/2019

Receipt Verification

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

A change was made in the sample id section prior to ACZ custody.

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
5153	0.1	<=6.0	14	Yes

Was ice present in the shipment container(s)?

Yes - Gel ice was present in the shipment container(s).

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

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID:	L50766
Date Received:	03/26/2019 11:40
Received By:	
Date Printed:	3/26/2019

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

ACZ Laboratories, Inc. L50766

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Mark A. Steen
Company: Colorado mill company
E-mail: goldtontine@gmail.com
Address: P.O. Box 1522
Longmont Colo
Telephone:

Copy of Report to:

Name: Gordon Sweeney
Company: CMC LLC
E-mail: [redacted]t gordon sweeny@gmail.com
Telephone: 303-440-0633

Invoice to:

Name: mark steen
Company: Colorado milling Co LLC
E-mail: goldtontine@gmail.com
Address: P.O. Box 1523
Longmont, Colo
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☐ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☐

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: L. Perkins **Sampler's Site Information** **State** Colo **Zip code** 80302 **Time Zone** MDT

***Sampler's Signature:** Lewis Perkins

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:
PO#:
Reporting state for compliance testing:
Check box if samples include NRC licensed material? ☐

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	TDS SOL FATE						
[redacted] 190325 MW1	3/25/19 10:30 AM	3		X						
0190325 W1	3/25/19 10:4/4M	3		X						
0190325 W2	3/25/19 10:55 AM	3		X						
0190325 W3	3/25/19 11:10 AM	3		X						
0190325 W4	3/25/19 11:25 AM	3		X						
0190325 MW5	3/25/19 11:45	3		X						
tailings Pond Frozen		0								
Cash mine Pond Frozen		0								
Cash gulch creek Frozen		0								

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Call gordon sweeney @ 303-442-1062 For metals to be analized For
all samples are Raw, Filter as needed

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Lewis Perkins	3/25/19	UPS FRONTIER	03/25/19
		AC BOARD 8D101	
		MLP	3/26/19 11:40

L50766 Chain of Custod

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

Analytical Report

July 12, 2019

Report to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

cc: Gordon E. Sweeney

Bill to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

Project ID:
ACZ Project ID: L52747

Mark Steen:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 25, 2019. This project has been assigned to ACZ's project number, L52747. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L52747. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after August 11, 2019. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

Sue Webber has reviewed and approved this report.

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190624-TP

ACZ Sample ID: ***L52747-01***
Date Sampled: *06/24/19 10:30*
Date Received: *06/25/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								07/02/19 8:50	mfm

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0007	B		mg/L	0.0002	0.001	07/08/19 20:50	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00018	B		mg/L	0.00005	0.0003	07/08/19 20:50	bsu
Manganese, dissolved	M200.7 ICP	1	0.14			mg/L	0.01	0.05	07/11/19 20:05	dcm
Zinc, dissolved	M200.7 ICP	1	0.02	B		mg/L	0.01	0.05	07/11/19 20:05	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							06/28/19 15:06	kja
Residue, Filterable (TDS) @180C	SM2540C	1	1610		*	mg/L	20	40	06/25/19 17:00	oah/enb
Sulfate	D516-02/-07 - Turbidimetric	50	943		*	mg/L	50	250	07/02/19 12:41	ttg

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190624-MW1

ACZ Sample ID: ***L52747-02***
Date Sampled: *06/24/19 08:05*
Date Received: *06/25/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								07/02/19 8:50	mfm

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0002	0.001	07/08/19 20:52	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00016	B		mg/L	0.00005	0.0003	07/08/19 20:52	bsu
Manganese, dissolved	M200.7 ICP	1	0.03	B		mg/L	0.01	0.05	07/11/19 20:08	dcm
Zinc, dissolved	M200.7 ICP	1	0.03	B		mg/L	0.01	0.05	07/11/19 20:08	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							06/28/19 15:10	kja
Residue, Filterable (TDS) @180C	SM2540C	1	1420		*	mg/L	20	40	06/25/19 17:02	oah/enb
Sulfate	D516-02/-07 - Turbidimetric	50	777		*	mg/L	50	250	07/02/19 12:41	ttg

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190624-W-1

ACZ Sample ID: ***L52747-03***
Date Sampled: *06/24/19 08:15*
Date Received: *06/25/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								07/02/19 8:50	mfm

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	07/08/19 20:54	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00025	B		mg/L	0.00005	0.0003	07/08/19 20:54	bsu
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	07/11/19 20:11	dcm
Zinc, dissolved	M200.7 ICP	1	0.02	B		mg/L	0.01	0.05	07/11/19 20:11	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							06/28/19 15:13	kja
Residue, Filterable (TDS) @180C	SM2540C	1	262		*	mg/L	20	40	06/25/19 17:04	oah/enb
Sulfate	D516-02/-07 - Turbidimetric	5	120		*	mg/L	5	25	07/02/19 12:27	ttg

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190624-W-2

ACZ Sample ID: ***L52747-04***
Date Sampled: *06/24/19 08:26*
Date Received: *06/25/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								07/02/19 8:50	mfm

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	07/11/19 20:14	dcm
Zinc, dissolved	M200.7 ICP	1	0.08			mg/L	0.01	0.05	07/11/19 20:14	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							06/28/19 15:17	kja
Residue, Filterable (TDS) @180C	SM2540C	1	350		*	mg/L	20	40	06/27/19 15:20	eij
Sulfate	D516-02/-07 - Turbidimetric	5	155			mg/L	5	25	07/03/19 7:35	rbt

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190624-W-3

ACZ Sample ID: ***L52747-05***
Date Sampled: *06/24/19 08:35*
Date Received: *06/25/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								07/02/19 8:50	mfm

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	07/11/19 20:23	dcm
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	07/11/19 20:23	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							06/28/19 15:20	kja
Residue, Filterable (TDS) @180C	SM2540C	1	414		*	mg/L	20	40	06/27/19 15:22	eij
Sulfate	D516-02/-07 - Turbidimetric	5	159			mg/L	5	25	07/03/19 7:35	rbt

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190624-W-4

ACZ Sample ID: ***L52747-06***
Date Sampled: *06/24/19 08:45*
Date Received: *06/25/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								07/02/19 8:50	mfm

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	07/11/19 20:26	dcm
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	07/11/19 20:26	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							06/28/19 15:24	kja
Residue, Filterable (TDS) @180C	SM2540C	1	230		*	mg/L	20	40	06/27/19 15:24	eij
Sulfate	D516-02/-07 - Turbidimetric	5	42.6			mg/L	5	25	07/03/19 7:35	rbt

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190624-MW-5

ACZ Sample ID: ***L52747-07***
Date Sampled: *06/24/19 09:10*
Date Received: *06/25/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								07/02/19 8:50	mfm

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0016			mg/L	0.0002	0.001	07/08/19 20:56	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00025	B		mg/L	0.00005	0.0003	07/08/19 20:56	bsu
Manganese, dissolved	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	07/11/19 20:29	dcm
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	07/11/19 20:29	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							06/28/19 15:27	kja
Residue, Filterable (TDS) @180C	SM2540C	1	686		*	mg/L	20	40	06/27/19 15:26	eij
Sulfate	D516-02/-07 - Turbidimetric	25	309			mg/L	25	125	07/03/19 7:51	rbt

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190624-CMP

ACZ Sample ID: ***L52747-08***
Date Sampled: *06/24/19 09:20*
Date Received: *06/25/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								07/02/19 8:50	mfm

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0004	B		mg/L	0.0002	0.001	07/08/19 21:01	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.0184			mg/L	0.00005	0.0003	07/08/19 21:01	bsu
Manganese, dissolved	M200.7 ICP	1	4.79			mg/L	0.01	0.05	07/11/19 20:38	dcm
Zinc, dissolved	M200.7 ICP	1	5.89			mg/L	0.01	0.05	07/11/19 20:38	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							06/28/19 15:31	kja
Residue, Filterable (TDS) @180C	SM2540C	1	1270		*	mg/L	20	40	06/27/19 15:28	eij
Sulfate	D516-02/-07 - Turbidimetric	25	760			mg/L	25	125	07/03/19 7:42	rbt

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190624-CG

ACZ Sample ID: ***L52747-09***
Date Sampled: *06/24/19 09:40*
Date Received: *06/25/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								07/02/19 8:50	mfm

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	07/08/19 21:03	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00066			mg/L	0.00005	0.0003	07/08/19 21:03	bsu
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	07/11/19 20:41	dcm
Zinc, dissolved	M200.7 ICP	1	0.19			mg/L	0.01	0.05	07/11/19 20:41	dcm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							06/28/19 15:35	kja
Residue, Filterable (TDS) @180C	SM2540C	1	290		*	mg/L	20	40	06/27/19 15:30	eij
Sulfate	D516-02/-07 - Turbidimetric	5	151			mg/L	5	25	07/03/19 7:37	rbt

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4) EPA SW-846. Test Methods for Evaluating Solid Waste.
(5) Standard Methods for the Examination of Water and Wastewater.

Comments

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3) Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:
https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf

REP001.03.15.02

Colorado Milling Company, LLC ACZ Project ID: ***L52747***

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

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG476405													
WG476405ICV	ICV	07/08/19 20:39	MS190630-2	.05		.04965	mg/L	99	90	110			
WG476405ICB	ICB	07/08/19 20:41				U	mg/L		-0.00044	0.00044			
WG476405LFB	LFB	07/08/19 20:43	MS190606-3	.05005		.04785	mg/L	96	85	115			
L52681-01AS	AS	07/08/19 20:46	MS190606-3	.05005	.0015	.05174	mg/L	100	70	130			
L52681-01ASD	ASD	07/08/19 20:48	MS190606-3	.05005	.0015	.05161	mg/L	100	70	130	0	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG476405													
WG476405ICV	ICV	07/08/19 20:39	MS190630-2	.05		.049849	mg/L	100	90	110			
WG476405ICB	ICB	07/08/19 20:41				U	mg/L		-0.00011	0.00011			
WG476405LFB	LFB	07/08/19 20:43	MS190606-3	.05005		.046727	mg/L	93	85	115			
L52681-01AS	AS	07/08/19 20:46	MS190606-3	.05005	U	.048422	mg/L	97	70	130			
L52681-01ASD	ASD	07/08/19 20:48	MS190606-3	.05005	U	.048562	mg/L	97	70	130	0	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG476730													
WG476730ICV	ICV	07/11/19 19:43	II190702-1	2		1.897	mg/L	95	95	105			
WG476730ICB	ICB	07/11/19 19:49				U	mg/L		-0.03	0.03			
WG476730LFB	LFB	07/11/19 20:02	II190701-2	.4995		.511	mg/L	102	85	115			
L52747-04AS	AS	07/11/19 20:17	II190701-2	.4995	U	.498	mg/L	100	85	115			
L52747-04ASD	ASD	07/11/19 20:20	II190701-2	.4995	U	.5	mg/L	100	85	115	0	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG475549													
WG475549PBW	PBW	06/25/19 16:30				U	mg/L		-40	40			
WG475549LCSW	LCSW	06/25/19 16:32	PCN58472	260		262	mg/L	101	80	120			
L52752-06DUP	DUP	06/25/19 17:19			162	150	mg/L				8	10	RA
WG475765													
WG475765PBW	PBW	06/27/19 15:15				U	mg/L		-40	40			
WG475765LCSW	LCSW	06/27/19 15:16	PCN58472	260		270	mg/L	104	80	120			
L52772-03DUP	DUP	06/27/19 15:38			256	252	mg/L				2	10	RA

Colorado Milling Company, LLC

ACZ Project ID: ***L52747***

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

Sulfate D516-02/-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG476077													
WG476077ICB	ICB	07/02/19 10:10				U	mg/L		-3	3			
WG476077ICV	ICV	07/02/19 10:10	WI190625-1	20		19.2	mg/L	96	90	110			
WG476077LFB	LFB	07/02/19 12:15	WI181024-4	10.03		9.1	mg/L	91	90	110			
L52731-01DUP	DUP	07/02/19 12:39			957	944	mg/L				1	20	
L52731-03AS	AS	07/02/19 12:39	SO4TURB50X	10	859	849	mg/L	-100	90	110			M3
WG476155													
WG476155ICB	ICB	07/03/19 7:19				U	mg/L		-3	3			
WG476155ICV	ICV	07/03/19 7:19	WI190625-1	20		19.2	mg/L	96	90	110			
WG476155LFB	LFB	07/03/19 7:29	WI181024-4	10.03		9.3	mg/L	93	90	110			
L52714-01AS	AS	07/03/19 7:29	WI181024-4	10.03	20.9	31.4	mg/L	105	90	110			
L52714-02DUP	DUP	07/03/19 7:29			21	20.8	mg/L				1	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG476730													
WG476730ICV	ICV	07/11/19 19:43	II190702-1	2		1.909	mg/L	95	95	105			
WG476730ICB	ICB	07/11/19 19:49				U	mg/L		-0.03	0.03			
WG476730LFB	LFB	07/11/19 20:02	II190701-2	.50075		.495	mg/L	99	85	115			
L52747-04AS	AS	07/11/19 20:17	II190701-2	.50075	.08	.557	mg/L	95	85	115			
L52747-04ASD	ASD	07/11/19 20:20	II190701-2	.50075	.08	.558	mg/L	95	85	115	0	20	

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

Inorganic Extended Qualifier Report

Colorado Milling Company, LLC ACZ Project ID: ***L52747***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L52747-01	WG475549	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476077	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L52747-02	WG475549	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476077	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L52747-03	WG475549	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476077	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L52747-04	WG475765	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L52747-05	WG475765	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L52747-06	WG475765	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L52747-07	WG475765	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L52747-08	WG475765	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L52747-09	WG475765	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

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

Certification Qualifiers

Colorado Milling Company, LLC

ACZ Project ID: ***L52747***

No certification qualifiers associated with this analysis

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID: L52747
Date Received: 06/25/2019 12:26
Received By:
Date Printed: 6/26/2019

Receipt Verification

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

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
6223	2.8	<=6.0	15	N/A

Was ice present in the shipment container(s)?

Yes - Gel ice was present in the shipment container(s).

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

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID:	L52747
Date Received:	06/25/2019 12:26
Received By:	
Date Printed:	6/26/2019

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

ACZ Laboratories, Inc. L52747

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Mark. A. steen	Address: P.O. Box 1523
Company: Colorado milling company	Longmont, Colo
E-mail: goldtontine@gmail.com	Telephone:

Copy of Report to:

Name: Gordon Sweeny	E-mail: Gordon sweeney@g-mail.com
Company: CMC LLC	Telephone: 303-440-0633

Invoice to:

Name: Mark Steen	Address: P.O. Box 1523
Company: Colorado milling Co	Longmont, Colo
E-mail: goldtontine@gmail.com	Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☐ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☐

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: L. Perkins **Sampler's Site Information** **State** Colo **Zip code** 80302 **Time Zone** MDT

***Sampler's Signature:** Lewis Perkins

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:

PO#:

Reporting state for compliance testing:

Check box if samples include NRC licensed material? ☐

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	TDS, Sol FATE						
0190624-TP	6/24/19-10:30 AM	3		X						
0190624-MW1	6/24/19-8:05 AM	3		X						
0190624-W-1	6/24/19-8:15 AM	3		X						
0190624-W-2	6/24/19-8:26 AM	3		X						
0190624-W-3	6/24/19-8:35 AM	3		X						
0190624-W-4	6/24/19-8:45 AM	3		X						
0190624-MW-5	6/24/19-9:10 AM	3		X						
0190624-CMP	6/24/19-9:20 AM	3		X						
0190624-CG	6/24/19-9:40 AM	3		X						

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Call Gordon @ 303-442-1062 For the metals to Be analized For
all samples are Raw, Filter as needed

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Lewis Perkins	6/24/2019	UPS FRONTIER LAS	06/24/19 6/25/19 12:26

L52747 Chain of Custod

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

Analytical Report

October 09, 2019

Report to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

Bill to:
Mark Steen
Colorado Milling Company , LLC
PO Box 1523
Longmont, CO 80502

Project ID:
ACZ Project ID: L54800

Mark Steen:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on September 24, 2019. This project has been assigned to ACZ's project number, L54800. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L54800. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after November 08, 2019. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

Sue Webber has reviewed and approved this report.

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190923 TP

ACZ Sample ID: ***L54800-01***
Date Sampled: *09/23/19 09:10*
Date Received: *09/24/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								09/26/19 16:08	kja

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	2	0.0007	B		mg/L	0.0004	0.002	09/30/19 18:55	bsu
Cadmium, dissolved	M200.8 ICP-MS	2		U		mg/L	0.0001	0.0005	09/30/19 18:55	bsu
Manganese, dissolved	M200.7 ICP	2		U	*	mg/L	0.02	0.1	10/07/19 17:08	kja
Zinc, dissolved	M200.7 ICP	2	0.45		*	mg/L	0.02	0.1	10/07/19 17:08	kja

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/27/19 10:34	mlh
Residue, Filterable (TDS) @180C	SM2540C	1	2020			mg/L	20	40	09/25/19 10:45	jck
Sulfate	D516-02/-07 - Turbidimetric	80	1220		*	mg/L	80	400	10/04/19 14:05	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190923 MW1

ACZ Sample ID: ***L54800-02***
Date Sampled: *09/23/19 09:25*
Date Received: *09/24/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								09/26/19 16:12	kja

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0006	B		mg/L	0.0002	0.001	09/30/19 19:00	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00015	B		mg/L	0.00005	0.0003	09/30/19 19:00	bsu
Manganese, dissolved	M200.7 ICP	1	0.09		*	mg/L	0.01	0.05	10/07/19 17:11	kja
Zinc, dissolved	M200.7 ICP	1	0.05		*	mg/L	0.01	0.05	10/07/19 17:11	kja

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/27/19 10:40	mlh
Residue, Filterable (TDS) @180C	SM2540C	1	1440			mg/L	20	40	09/25/19 10:47	jck
Sulfate	D516-02/-07 - Turbidimetric	40	853		*	mg/L	40	200	10/04/19 14:02	wtc

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

Inorganic Analytical Results

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190923 W1

ACZ Sample ID: ***L54800-03***
Date Sampled: *09/23/19 09:35*
Date Received: *09/24/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								09/26/19 16:16	kja

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	09/30/19 19:02	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00021	B		mg/L	0.00005	0.0003	09/30/19 19:02	bsu
Manganese, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	10/07/19 17:14	kja
Zinc, dissolved	M200.7 ICP	1	0.02	B	*	mg/L	0.01	0.05	10/07/19 17:14	kja

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/27/19 10:46	mlh
Residue, Filterable (TDS) @180C	SM2540C	1	328			mg/L	20	40	09/25/19 10:52	jck
Sulfate	D516-02/-07 - Turbidimetric	5	158		*	mg/L	5	25	10/04/19 13:37	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190923 W2

ACZ Sample ID: ***L54800-04***
Date Sampled: *09/23/19 09:45*
Date Received: *09/24/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								09/26/19 16:20	kja

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	10/07/19 17:17	kja
Zinc, dissolved	M200.7 ICP	1	0.14		*	mg/L	0.01	0.05	10/07/19 17:17	kja

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/27/19 10:52	mlh
Residue, Filterable (TDS) @180C	SM2540C	1	374			mg/L	20	40	09/25/19 10:55	jck
Sulfate	D516-02/-07 - Turbidimetric	5	180		*	mg/L	5	25	10/04/19 13:38	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190923 W3

ACZ Sample ID: ***L54800-05***
Date Sampled: *09/23/19 09:55*
Date Received: *09/24/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								09/26/19 16:24	kja

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	10/07/19 17:21	kja
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	10/07/19 17:21	kja

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/27/19 10:58	mlh
Residue, Filterable (TDS) @180C	SM2540C	1	342			mg/L	20	40	09/25/19 10:57	jck
Sulfate	D516-02/-07 - Turbidimetric	5	129		*	mg/L	5	25	10/04/19 13:37	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190923 W4

ACZ Sample ID: ***L54800-06***
Date Sampled: *09/23/19 10:00*
Date Received: *09/24/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								09/26/19 16:28	kja

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Manganese, dissolved	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	10/07/19 17:24	kja
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	10/07/19 17:24	kja

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/27/19 11:04	mlh
Residue, Filterable (TDS) @180C	SM2540C	1	316			mg/L	20	40	09/25/19 11:00	jck
Sulfate	D516-02/-07 - Turbidimetric	5	91.0		*	mg/L	5	25	10/04/19 13:37	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190923 MW5

ACZ Sample ID: ***L54800-07***
Date Sampled: *09/23/19 10:25*
Date Received: *09/24/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								09/26/19 16:32	kja

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0017			mg/L	0.0002	0.001	09/30/19 19:04	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00023	B		mg/L	0.00005	0.0003	09/30/19 19:04	bsu
Manganese, dissolved	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	10/07/19 17:27	kja
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	10/07/19 17:27	kja

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/27/19 11:10	mlh
Residue, Filterable (TDS) @180C	SM2540C	1	680			mg/L	20	40	09/25/19 11:02	jck
Sulfate	D516-02/-07 - Turbidimetric	20	336		*	mg/L	20	100	10/04/19 13:40	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190923 CMP

ACZ Sample ID: ***L54800-08***
Date Sampled: *09/23/19 10:32*
Date Received: *09/24/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								09/26/19 16:36	kja

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0002	0.001	09/30/19 19:06	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.0107			mg/L	0.00005	0.0003	09/30/19 19:06	bsu
Manganese, dissolved	M200.7 ICP	1	3.97			mg/L	0.01	0.05	10/07/19 17:30	kja
Zinc, dissolved	M200.7 ICP	1	4.34		*	mg/L	0.01	0.05	10/07/19 17:30	kja

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/27/19 11:16	mlh
Residue, Filterable (TDS) @180C	SM2540C	1	1180			mg/L	20	40	09/25/19 11:05	jck
Sulfate	D516-02/-07 - Turbidimetric	20	700		*	mg/L	20	100	10/04/19 14:02	wtc

Colorado Milling Company, LLC
Project ID:
Sample ID: 0190923 CG

ACZ Sample ID: ***L54800-09***
Date Sampled: *09/23/19 11:00*
Date Received: *09/24/19*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								09/26/19 16:40	kja

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0007	B		mg/L	0.0002	0.001	09/30/19 19:07	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00042			mg/L	0.00005	0.0003	09/30/19 19:07	bsu
Manganese, dissolved	M200.7 ICP	1	0.04	B		mg/L	0.01	0.05	10/07/19 17:33	kja
Zinc, dissolved	M200.7 ICP	1	0.22		*	mg/L	0.01	0.05	10/07/19 17:33	kja

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um filter)	SOPWC050	1							09/27/19 11:22	mlh
Residue, Filterable (TDS) @180C	SM2540C	1	310			mg/L	20	40	09/25/19 11:07	jck
Sulfate	D516-02/-07 - Turbidimetric	5	157		*	mg/L	5	25	10/04/19 13:38	wtc

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4) EPA SW-846. Test Methods for Evaluating Solid Waste.
(5) Standard Methods for the Examination of Water and Wastewater.

Comments

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3) Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:
https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf

REP001.03.15.02

Colorado Milling Company, LLC ACZ Project ID: ***L54800***

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

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG482771													
WG482771ICV	ICV	09/30/19 18:38	MS190806-2	.05		.04991	mg/L	100	90	110			
WG482771ICB	ICB	09/30/19 18:40				U	mg/L		-0.00044	0.00044			
WG482771LFB	LFB	09/30/19 18:42	MS190905-3	.05005		.05183	mg/L	104	85	115			
L54798-03AS	AS	09/30/19 18:49	MS190905-3	.05005	.0009	.0529	mg/L	104	70	130			
L54798-03ASD	ASD	09/30/19 18:51	MS190905-3	.05005	.0009	.05515	mg/L	108	70	130	4	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG482771													
WG482771ICV	ICV	09/30/19 18:38	MS190806-2	.05		.049473	mg/L	99	90	110			
WG482771ICB	ICB	09/30/19 18:40				U	mg/L		-0.00011	0.00011			
WG482771LFB	LFB	09/30/19 18:42	MS190905-3	.05005		.051317	mg/L	103	85	115			
L54798-03AS	AS	09/30/19 18:49	MS190905-3	.05005	.00091	.050532	mg/L	99	70	130			
L54798-03ASD	ASD	09/30/19 18:51	MS190905-3	.05005	.00091	.054531	mg/L	107	70	130	8	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG483269													
WG483269ICV	ICV	10/07/19 16:11	II190926-2	2		1.978	mg/L	99	95	105			
WG483269ICB	ICB	10/07/19 16:17				U	mg/L		-0.03	0.03			
WG483269LFB	LFB	10/07/19 16:30	II190920-2	.5015		.523	mg/L	104	85	115			
L54769-26AS	AS	10/07/19 16:52	II190920-2	.5015	4.34	4.427	mg/L	17	85	115			M3
L54769-26ASD	ASD	10/07/19 16:55	II190920-2	.5015	4.34	4.415	mg/L	15	85	115	0	20	M3
L54841-01AS	AS	10/07/19 17:50	II190920-2	2.5075	.14	2.949	mg/L	112	85	115			
L54841-01ASD	ASD	10/07/19 17:53	II190920-2	2.5075	.14	2.983	mg/L	113	85	115	1	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG482365													
WG482365PBW	PBW	09/25/19 10:20				U	mg/L		-40	40			
WG482365LCSW	LCSW	09/25/19 10:22	PCN59650	1000		1000	mg/L	100	80	120			
L54800-02DUP	DUP	09/25/19 10:50			1440	1450	mg/L				1	10	
L54804-02DUP	DUP	09/25/19 11:12			542	544	mg/L				0	10	

Sulfate D516-02/-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG483144													
WG483144ICB	ICB	10/04/19 8:45				U	mg/L		-3	3			
WG483144ICV	ICV	10/04/19 8:45	WI190926-3	20		20.9	mg/L	105	90	110			
WG483144LFB	LFB	10/04/19 13:05	WI190801-3	10.01		9.6	mg/L	96	90	110			
L54825-36DUP	DUP	10/04/19 13:09			9.5	8.8	mg/L				8	20	RA
L54800-09AS	AS	10/04/19 13:38	SO4TURB5X	10	157	167	mg/L	100	90	110			

Colorado Milling Company, LLC

ACZ Project ID: ***L54800***

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

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG483269													
WG483269ICV	ICV	10/07/19 16:11	II190926-2	2		1.982	mg/L	99	95	105			
WG483269ICB	ICB	10/07/19 16:17				U	mg/L		-0.03	0.03			
WG483269LFB	LFB	10/07/19 16:30	II190920-2	.50075		.546	mg/L	109	85	115			
L54769-26AS	AS	10/07/19 16:52	II190920-2	.50075	1.69	2.077	mg/L	77	85	115			M3
L54769-26ASD	ASD	10/07/19 16:55	II190920-2	.50075	1.69	2.064	mg/L	75	85	115	1	20	M3
L54841-01AS	AS	10/07/19 17:50	II190920-2	2.50375	U	2.924	mg/L	117	85	115			M1
L54841-01ASD	ASD	10/07/19 17:53	II190920-2	2.50375	U	3.146	mg/L	126	85	115	7	20	M1

Colorado Milling Company, LLC ACZ Project ID: ***L54800***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L54800-01	WG483269	Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG483144	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG483269	Zinc, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L54800-02	WG483269	Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG483144	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG483269	Zinc, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L54800-03	WG483269	Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG483144	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG483269	Zinc, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L54800-04	WG483144	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG483269	Zinc, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L54800-05	WG483144	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG483269	Zinc, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L54800-06	WG483144	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG483269	Zinc, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L54800-07	WG483144	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG483269	Zinc, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L54800-08	WG483144	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG483269	Zinc, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

Inorganic Extended Qualifier Report

Colorado Milling Company, LLC ACZ Project ID: ***L54800***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L54800-09	WG483144	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG483269	Zinc, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

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

Certification Qualifiers

Colorado Milling Company, LLC

ACZ Project ID: ***L54800***

No certification qualifiers associated with this analysis

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID: L54800
Date Received: 09/24/2019 12:18
Received By:
Date Printed: 9/25/2019

Receipt Verification

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

A change was made in the Sample ID: Date:Time Line 5 and Analyses Requested section prior to ACZ custody.

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
6082	3.1	<=6.0	18	Yes

Was ice present in the shipment container(s)?

Yes - Gel ice was present in the shipment container(s).

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

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

Sample Receipt

Colorado Milling Company, LLC

ACZ Project ID:	L54800
Date Received:	09/24/2019 12:18
Received By:	
Date Printed:	9/25/2019

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

ACZ Laboratories, Inc. | 54800

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: Mark A. Steen
Company: Colorado Milling Company
E-mail: goldfontine@gmail.com
Address: P.O. Box 1523 Longmont, Colorado
Telephone:

Copy of Report to:

Name:
Company: Same as above
E-mail:
Telephone: Same as above

Invoice to:

Name: Mark Steen
Company: Colorado milling Company
E-mail: goldfontine@gmail.com
Address: P.O. Box 1523 Longmont, Colo
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☐ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☐

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: L. Perkins **Sampler's Site Information** **State** Colo **Zip code** 80302 **Time Zone** MDT

***Sampler's Signature:** Lewis Perkins

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:
PO#:
Reporting state for compliance testing:
Check box if samples include NRC licensed material? ☐

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	TDS SO4 Fate							
01909 23 TP	9/23/19 9:10 AM	3		X							
01909 23 MW1	9/23/19 9:25 AM	3		X							
01909 23 W1	9/23/19 9:35 AM	3		X							
01909 23 W2	9/23/19 9:45 AM	3		X							
	~~9/23/19~~										
01909 23 W3	9/23/19 9:55 AM	3		X							
01909 23 W4	9/23/19 10:00 AM	3		X							
01909 23 MW5	9/23/19 10:25 AM	3		X							
01909 23 CMP	9/23/19 10:32 AM	3		X							
01909 23 CG	9/23/19 11:00 AM	3		X							

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Lewis Perkins	9/23/19	U.P.S center 3795 Frontier Rd Bouvar	09/23/19 12:15 PM

FRMAD050.06.14.14 White - Return with sample. Yellow - Retain for your records.

9/24/19 295

L54800-1910091019 Page 19 of 19

L54800 Chain of Custod