Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

March 21, 2023

Mr. Lucas West
State of Colorado
Division of Reclamation, Mining and Safety
Room 215
1001 E 62nd Avenue
Denver, CO 80216

Re: Battle Mountain Resources, Inc.
San Luis Project - San Luis, Colorado
Annual Report and Fee 2022
CMLRB Permit No. M-1988-112

Dear Mr. West:

Please find included the Battle Mountain Resources, Inc. (BMRI) "San Luis Project" (Permit No. M-1988-112) Annual Report and a site map as requested in the February 21, 2023, email from the Colorado Division of Reclamation, Mining, and Safety (CDRMS) to Julio Madrid of BMRI/Newmont. The following summarizes the operation, reclamation, permitted area, dam inspections, and site monitoring activities performed, as well as any technical revisions and permit amendments made for the San Luis Project during 2022.

General Reclamation Activities

Reclamation activities and technical revisions during 2022 included:

- Completed Technical Revision 36 (TR-36) to convert Pond 2's lining from HDPE to concrete ;
- Continued stormwater management on and adjacent to reclaimed and unreclaimed mine land. Stormwater inspections were performed on May 23, 2022 and September 21 2022, and any issues noted were corrected;
- Treatment of water from the West Pit and Rito Seco alluvial groundwater systems;
- Tailing facility storage pond, underdrain, and leak detection system management;
- Surface and ground water management.

Reclamation Areas

BMRI did not perform any additional reclamation in 2022. There are 78.7 acres of reclamation remaining, as summarized in Table 1.

Table 1 - Summary of San Luis Project Reclamation

Area	Actual Disturbance (Acres)	Reclamation Completed Through 2021 (Acres)	Reclamation Completed In 2022 (Acres)	Remaining Reclamation (Acres)
East Pit	20	20	0	0
West Pit	100	71.3	0	28.7
Waste Rock A	0	0	0	0
Waste Rock B	18	18	0	0
Waste Rock C	28	28	0	0
Waste Rock D	42	42	0	0
South Waste Rock	35	35	0	0
Mill Area	25.6	25.6	0	0
ESI Leach Pad	10	10	0	0
Borrow Area	5.5	0	0	5.5
Road Around Tailing Facility and Collection Pond	4	0	0	4
Tailing Facility Perimeter Road	12.9	0	0	12.9
Waste Rock C Access Road	3.7	3.7	0	0
Pink Gneiss Pit Haul Road	3.8	3.8	0	0
Tailing Facility	192	169.4	0	22.6
Tailing Collection Pond	5	0	0	5
Admin. Office Complex – Deeded lands to Costilla County Soil Conservation District (CCSCD)	3	3	0	0
Total Area	508.5	429.8	0	78.7

Permitted Areas

The current unreleased Permit Areas consist of both reclaimed and un-reclaimed land and disturbed and undisturbed land. BMRI did not receive a land release in 2022, therefore the 2022 Permit Area remaining is 428.22 acres. Table 2 summarizes the disturbed areas in the permit.

Table 2 - Summary of Permitted Areas

Area	Permitted Disturbance (Acres)	Actual Disturbance Areas (Acres)	Disturbance Areas Released from Permit Area (Acres)	Disturbance Areas Remaining in Permit Area (Acres)
East Pit	20	20	20	0
West Pit	110	100	8.9	91.1
Waste Rock A	0	0	0	0
Waste Rock B	18	18	18	0
Waste Rock C	30	28	25.8	2.2
Waste Rock D	42	42	42	0
South Waste Rock	50	35	33.6	1.4
Mill Area	25.6	25.6	15.6	10.0
ESI Leach Pad	10	10	10	0
Borrow Area	11	5.5	0	5.5
Roads	30	24.4	13.2	11.2
Tailing Facility	192	192	17.6	174.4
Tailing Collection Pond	5	5	0	5
Admin. Office Complex – Deeded lands to Costilla County Soil Conservation District (CCSCD)	3	3	3	0
Total Area	546.6	508.5	207.7	300.8

Dam Inspections

During 2022, quarterly dam inspections were performed as required in Technical Revision 33 (TR-33). The first, third, and fourth quarter dam inspections were performed by BMRI and the second quarterly inspection was done by EA's Mark Abshire as the 2022 Annual Dam Inspection. The dam inspections were submitted previously to CDRMS and are also included in Appendix A of this report.

Site Monitoring

Water level data, laboratory analytical results, and flows were submitted to CDRMS as part of the Monthly Reports throughout 2022 and are also included in Appendix B of this report. During 2022, groundwater sampling and water level measurements were performed as required in Technical Revision 32 (TR-32). Sampling and laboratory analyses for groundwater monitoring well M-14 continued during 2022 under the CDRMS approved Response Plan. M-14 will continue to be sampled and results reported, as required in TR-32, in 2023.

The Lined Tailing Facility (LTF) collection pond leak detection system (underdrain) was monitored monthly and evacuated and pumped to the LTF. The monthly leak-detection flows for

2022 ranged from a low of 25.6 gallons per day (gpd) to a high of 31.8 gpd. The average monthly leak-detection flow, for 2022, was 28.8 gpd. The collection pond underdrain water was sampled and analyzed quarterly and the results and flows were submitted to CDRMS in the Monthly and Quarterly Sampling Reports and are also included in Appendix B of this report.

The LTF underdrain flows were monitored monthly at the base of the embankment and the flows for 2022 ranged from a low of 28.4 gallons per minute (gpm) to a high of 33.0 gpm. In 2022, the monthly average underdrain flow was 31.8 gpm. The monthly underdrain flows were submitted previously to CDRMS as part of the Monthly Reports and are also included in Appendix B of this report.

The LTF system lysimeters were monitored monthly. The lysimeters were dry or contained less than twelve inches of water and no groundwater was present for sampling or analysis in 2022.

There was no sludge transferred from the water treatment plant drying pads to the LTF in 2022. The monthly sludge management information was submitted previously to the CDRMS in the Monthly Reports, which are also included in Appendix B of this report.

During 2022, BMRI managed the Rito Seco and West Pit alluvial hydrologic systems, in compliance with Technical Revision 26 (TR-26). BMRI measured the West Pit backfill monitoring wells weekly and the monthly average groundwater elevations were maintained below the TR-26 required level of 8,582 feet above mean sea level (amsl). The groundwater table elevations and potentiometric surface maps, developed by Engineering Analytics, Inc., confirm the groundwater flow gradient was from the Rito Seco alluvium to the West Pit backfill during 2022. The groundwater elevations and potentiometric surface maps were previously submitted to CDPHE with the DMR's, BMP, and WET Testing Reports under permit number CO0045675 and are also included in Appendix C of this report. BMRI also performed monthly visual inspections for seepage in the historic seepage area along the Rito Seco Creek and no seeps were observed during 2022.

Additionally, the two groundwater capture wells, M-32 and M-33, were operated in conjunction with other groundwater table elevation control in the West Pit during 2022. Groundwater elevations were maintained equal to or lower than 8,540 feet amsl in wells M-32 and M-33, as required under TR-26. These elevations were also previously submitted to CDPHE with the DMR's, BMP, and WET Testing Reports under permit number CO0045675 and are also included in Appendix C of this report. Groundwater pumped from these wells was either treated at the West Pit Water Treatment Plant and discharged to the Rito Seco under the BMRI discharge permit, or pumped to the LTF for water management. In 2022, the West Pit water treatment plant treated and discharged a total of 92,981,900 gallons of water to the Rito Seco Creek. Additionally, a total of 5,126,900 gallons of water was transferred from the West Pit to the LTF.

There was one Technical Revision in 2022, TR-36. This technical revision was approved via email from Luas West of CDRMS on September 13, 2022. TR-36 requested permission to replace

Pond 2 and Pond 3 liners from HDPE to concrete.

Should additional information be required or if any clarifications are necessary, please contact me at (719) 379-0538.

Julio Madrid

Sr. Supervisor Legacy Sites Closure and Reclamation

Cc: Devon Horntvedt (electronic)
Lawrence Fiske, BMRI (electronic)
Melissa Chalona, Engineering Analytics
BMRI File

Enclosures:

Appendix A – Dam Inspection Reports
Appendix B – Monthly Reports and Monthly and Quarterly Sampling Results
Appendix C – DMR's, BMP, and WET Testing Reports
Appendix D – Report Request
Appendix E – 2022 Site Map

APPENDIX A
DAM INSPECTION REPORTS

BATTLE MOUNTAIN RESOURCES, INC.

April 13, 2022

RECEIVED
APR 19 2022
DIVISION OF RECLAMATION,
MINING & SAFETY-MINERALS

Mr. Lucas West

Colorado Division of Reclamation, Mining and Safety

1313 Sherman Street, Room 215

Denver, CO 80203

Re: San Luis Project Tailing Dam Q1 2022 Inspection Report, Technical Revision No. 33, Permit No. M-1988-112

Dear Mr. West:

Battle Mountain Resources Inc. (BMRI) is pleased to provide the Q1 2022 San Luis Tailing Dam Inspection Report in accordance with Technical Revision No. 33 to BMRI's Reclamation Permit.

The Inspection was conducted by BMRI Site Manager Mr. David Carino and Operator Mr. Aaron Taylor.

Enclosed with the inspection report are photos of the Tailing Impoundment facilities to include the drop structure and the under-drain discharge area. Also included are the Q1 2022 Piezometer Inspection results.

Respectfully,

Julio F. Madrid

Sr. Supervisor Colorado Legacy Sites

(719) 379-0538

cc: Devon Horntvedt

David Carino

		INSPECTION PERIOD:	Jan 2022 thru March 2022			page	1/1	
DAM:	SAN LUIS PROJECT TAILING DAM	INSPECTOR:	David S. Cariño Aaron Taylor			CHECK ACTION NEEDED		
AREA INSPECTED	ITEM NO.	CONDITION	YES	NO	OBSERVATIONS	MONITOR	INVESTI-GATE	REPAIR
CREST	1	ANY SURFACE CRACKING?		✓				
	2	ANY UNUSUAL LOW AREAS?		✓				
	3	ANY RUTS OR PUDDLES?		✓				
	4	ANY HORIZONTAL OFFSET?		✓				
	5	NEED VEGETATION CONTROL?		✓				
UPSTREAM SLOPE & BEACH AREA	6	ANY SLIDES, SLOUGHS, SCARPS?		✓				
	7	ANY SINKHOLES OR UNUSUAL DEPRESSIONS?		✓				
	8	ANY EROSION ?		✓				
	9	CHANGES AT ABUTMENT CONTACTS?		✓				
	10	NEED VEGETATION CONTROL?		✓				
	11							
DOWNSTREAM SLOPE	12	ANY WET AREAS?		✓				
	13	ANY SLIDES, SLOUGHS, SCARPS?		✓				
	14	CHANGES AT DAM-ABUTMENT CONTACT?		✓				
	15	ANY EROSION?	✓		minor erosion Northside groan area	✓		
	16	ANY UNUSUAL BULGING OR SLOPE MOVEMENT?		✓				
	17	NEED VEGETATION CONTROL?		✓				
	18							
SEEPAGE COLLECTION AND PUMPBACK SYSTEM	19	IS DRAIN OUTLET CLOGGED OR OBSTRUCTED?		✓				
	20	ARE DRAIN FLOWS MUDDY OR TURBID?		✓				
	21	IS EMBANKMENT WET AROUND DRAIN OUTLET?	✓		minor leakage around piping	✓		
	22	ANY PROBLEMS WITH COLLECTION POND?		✓				
	23	IS PUMPBACK SYSTEM WORKING PROPERLY?	✓					
	24							
DIVERSION CHANNEL AND DROP STRUCTURE	25	ANY EROSION?		✓				
	26	NEED VEGETATION CONTROL?		✓				
	27	ANY DEBRIS IN CHANNELS OR DROP STRUCTURE?		✓				
	28	ANY CRACKS OR DETERIORATION OF CONCRETE?		✓				
	29	ANY CORROSION OF PIPE?		✓				
	30							

ADDITIONAL COMMENTS (REFER TO ITEM NO. IF APPLICABLE):

QUARTERLY INSPECTION SUMMARY

NAME OF DAM:	San Luis Project Tailing Dam			CO DRMS Permit #:	M-1988-112
REPORTING PERIOD:	1/22	thru	3/22	REPORT #:	

INSPECTION ITEMS		PHOTOS
Piezometer Levels	Included in report.	No
Drain Collection and Pumpback System Observations	System working properly	Yes
Seepage/Erosion Observations	minor erosion on North groin area (down stream)	Yes
Vegetation/Rodent/ Other Maintenance Observations	None	No
Diversion System Observations	Channel in good condition, No Issues	Yes

RECOMMENDATIONS/COMMENTS

INSPECTION AND REPORTING PERSONNEL

NAME	REPRESENTING	TITLE/ROLE
David S Cariño	BMRI / Newmont	Site Manager
Julio Madrid	BMRI / Newmont	Site Supervisor

Monthly Piezometer Elevations

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	01/31/2022	72.46	DRY	N/A
P7	01/31/2022	92.50	92.29	0.21
P8	01/31/2022	97.51	96.58	0.93
P9	01/31/2022	72.30	71.93	0.37
P10	01/31/2022	58.30	57.51	0.79
P11	01/31/2022	41.80	41.40	0.40
P12	01/31/2022	41.71	41.65	0.06
P13	01/31/2022	41.34	41.02	0.32
P14	01/31/2022	41.24	DRY	N/A
P15	01/31/2022	41.10	40.87	0.23

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	02/28/2022	72.46	DRY	N/A
P7	02/28/2022	92.50	92.27	0.23
P8	02/28/2022	97.51	96.58	0.93
P9	02/28/2022	72.30	71.92	0.38
P10	02/28/2022	58.30	57.46	0.84
P11	02/28/2022	41.80	41.41	0.39
P12	02/28/2022	41.71	41.65	0.06
P13	02/28/2022	41.34	41.02	0.32
P14	02/28/2022	41.24	DRY	N/A
P15	02/28/2022	41.10	40.86	0.24

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	03/31/2022	72.46	DRY	N/A
P7	03/31/2022	92.50	92.29	0.21
P8	03/31/2022	97.51	96.58	0.93
P9	03/31/2022	72.30	71.92	0.38
P10	03/31/2022	58.30	57.48	0.82
P11	03/31/2022	41.80	41.41	0.39
P12	03/31/2022	41.71	41.65	0.06
P13	03/31/2022	41.34	41.01	0.33
P14	03/31/2022	41.24	DRY	N/A
P15	03/31/2022	41.10	40.87	0.25

August 5, 2022

Mr. Lucas West
Colorado Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, CO 80203

RE: San Luis Project Tailings Dam
2022 Annual Inspection Report
Technical Revision No. 33
Permit No. M-1988-112

Dear Mr. West:

Battle Mountain Resources Inc. (BMRI) is pleased to provide the 2022 Annual San Luis Tailings Dam Inspection Report in accordance with Technical Revision No. 33 to BMRI's Reclamation Permit. The inspection was conducted by Mark S. Abshire, PE of Engineering Analytics, Inc., and BMRI Site Manager David Carino. Enclosed with the inspection report are photos of the tailings impoundment facilities, including the drop structure and the underdrain discharge area.

Please let me know if you have any questions.

Respectfully,

Julio F. Madrid
Senior Supervisor Colorado Legacy Sites

Cc: David Carino
Devon Horntvedt
Karen De Aguero
Jonathan Gillen

Enclosures: 2022 Annual Dam Safety Inspection Report: San Luis Tailings Dam,
CDRMS Permit No. M-1988-112
File Name: *San Luis TSF_2022 Annual Dam Safety Inspection Report.pdf*

Engineering Analytics, Inc. ▪ 1600 Specht Point Rd. ▪ Suite 209 ▪ Fort Collins, CO 80525 ▪ 970.488.3111 ▪ www.EngAnalytics.com

August 5, 2022 Project No. 2101.05.15

Mr. David Carino
Battle Mountain Resources, Inc.
P.O. Box 310
San Luis, CO 81152-0310

RE: 2022 Annual Dam Safety Inspection Report
San Luis Tailings Dam
CDRMS Permit No. M-1988-112

Dear Mr. Carino,

At your request, Engineering Analytics, Inc. (EA) conducted the 2022 annual dam safety inspection for the San Luis Tailings Dam. The inspection was conducted on June 14 by Mark S. Abshire, P.E., in conformance with the Tailing Dam Safety Inspection and Reporting Program prepared by Miller Geotechnical Consultants, Inc. (MGC), dated March 12, 2013. Also present were Jonathan Gillen, PE and Karen De Aguero (Newmont), yourself and Julio Madrid (BMRI).

EA's inspection included review of the following historical project documents:

- San Luis Project Tailing Dam Detailed Inspection Report (MGC, February 2014)
- 2015 Annual Inspection Report (MGC, June 10, 2015)
- 2016 Annual Inspection Report (MGC, July 6, 2016)
- 2017 Annual Inspection Report (EA, August 18, 2017)
- 2018 Annual Inspection Report (MGC, August 7, 2018)
- 2019 Annual Inspection Report (MGC, July 3, 2019)
- 2020 Annual Inspection Report (MGC, September 25, 2020)
- 2021 Annual Inspection Report (EA, August 24, 2021).

An overall site plan of the San Luis TSF is presented on Figure 1. Specific inspection results are detailed on the Tailing Dam Inspection Form (Attachment 1), and findings are presented on Figure 2. Figures 3 and 4 present piezometer levels and underdrain flow measurements, respectively. Photographs taken during the inspection are included as Attachment 2.

PREVIOUS FINDINGS

The primary issues identified in the 2021 annual inspection included minor surface erosion on the downstream dam slope, the potential for surface erosion in disturbed areas around the South Diversion Ditch Drop Structure (construction completed in 2019), and the ongoing need for maintenance around the underdrain outfall to reduce ponding of surface water in that area.

Additionally, it was recommended that BMRI consider installing a concrete structure for collecting underdrain flows from the toe drains to facilitate maintenance in the toe drain area, improve conditions for monitoring and inspecting the drain system, and to prevent the attraction of animals to the area by pooling of leakage from the drain pipes.

INSTRUMENTATION

Piezometers: Piezometer readings from March 2021 through March 2022 are shown in Table 1, and readings from July 2020 through March 2022 are presented graphically on Figure 3. The piezometers all indicate dry conditions or minor amounts of water present at the bottom of the casings due to moisture condensation. This behavior is consistent with historic observations and indicates that the sub-drains are functioning, and low phreatic conditions are maintained within the dam embankment. No abnormalities are indicated in the measurements.

Table 1 San Luis TSF Piezometer Levels: March 2021 - March 2022

PIEZOMETER ID TOTAL DEPTH (ft)*	P6 72.46	P7 92.50	P8 97.51	P9 72.30	P10 58.30	P11 41.80	P12 41.71	P13 41.34	P14 41.24	P15 41.10
3/31/2021	72.46	92.28	96.61	71.91	57.61	41.40	41.67	41.02	41.24	40.86
4/29/2021	72.46	92.28	96.63	71.91	57.62	41.40	41.66	41.02	41.24	40.85
5/27/2021	72.46	92.28	96.60	71.91	57.61	41.40	41.66	41.02	41.24	40.86
6/30/2021	72.46	92.27	96.59	71.91	57.61	41.40	41.67	41.03	41.24	40.86
7/29/2021	72.46	92.27	96.58	71.91	57.61	41.40	41.67	41.03	41.24	40.87
8/31/2021	72.46	92.28	96.57	71.91	57.60	41.40	41.67	41.02	41.24	40.87
9/30/2021	72.46	92.27	96.57	71.91	57.61	41.41	41.67	41.02	41.24	40.87
11/30/2021	72.46	92.27	96.57	71.91	57.61	41.40	41.67	41.02	41.24	40.87
12/30/2021	72.46	92.29	96.58	71.92	57.58	41.40	41.66	41.02	41.24	40.87
1/31/2022	72.46	92.29	96.58	71.93	57.51	41.40	41.65	41.02	41.24	40.87
2/28/2022	72.46	92.27	96.58	71.92	57.46	41.41	41.65	41.02	41.24	40.86
3/31/2022	72.46	92.29	96.58	71.92	57.48	41.41	41.65	41.01	41.24	40.87

* Piezometer total depths measured from top of casing

Underdrain: Underdrain flow rates discharging to the seepage collection pond from March 2021 through March 2022 are shown in Table 2, and flow rates from 2016 to 2022 are presented graphically on Figure 4. Average underdrain flow measurements from 2019-21 (30.8 gpm) are slightly lower than from 2016-2022 (34.5 gpm).

The underdrain pipes were jet-cleaned in 2014 in conjunction with the first camera inspection of the accessible downstream ends of the pipes. A second video inspection of the pipe ends was done without jet cleaning in 2018. The 2018 videos showed some accumulation of sediment and precipitates in the pipes compared to the 2014 videos, but the pipes were all still flowing (not clogged). Thus, the observed slight reduction in underdrain flow in recent years is likely due to ongoing severe regional drought. The pipes were jet-cleaned again on October 5, 2020, with no video inspection. It is recommended that jetting of the pipes and video inspections be conducted

at least every 3 years unless a change in measured drainage flow rates warrants more frequent cleaning and inspection.

Table 2 San Luis TSF Underdrain Flow Measurements: March 2021 - March 2022

Date	Flow (gpm)
3/31/2021	30.5
4/29/2021	31.0
5/27/2021	31.0
6/30/2021	32.0
7/29/2021	32.0
8/31/2021	31.0
9/30/2021	31.0
11/30/2021	32.0
12/30/2021	32.0
1/31/2022	31.5
2/28/2022	31.5
3/31/2022	31.0

2022 INSPECTION FINDINGS

The overall surficial conditions of the tailings dam at the time of the inspection were generally satisfactory, except for minor issues discussed in more detail below.

Right Downstream Groin: Revegetation in this area following repairs continues to improve. This area and also the cross-berms and rock-lined down-drains should be monitored closely to make sure erosion does not progress to detrimental levels.

South Diversion Ditch Drop Structure: Disturbed areas adjacent to the drop structure that are not protected by riprap were seeded in 2019. However, vegetation establishment is poor to date due to extended drought conditions, and erosional rilling is progressing in these areas. The condition is presently judged to be minor; however, erosion will progress in the absence of vegetation, and mitigation will likely be required in 2023. Mitigation will entail repair of eroded areas and reseeding all slopes, followed by installation of erosion control blankets and/or cutting in shallow swales along the slopes to reduce runoff flow path lengths. EA is available to assist BMRI with developing mitigation plans for these areas.

Seepage Underdrain Collection System: Continue the jetting and video inspection program to ensure the drain pipes do not become clogged. Consider installing a concrete structure for collecting underdrain flows from the toe drains to facilitate maintenance in the toe drain area, improve conditions for monitoring and inspecting the drain system, and to prevent the attraction of animals to the area by pooling of leakage from the drain pipes.

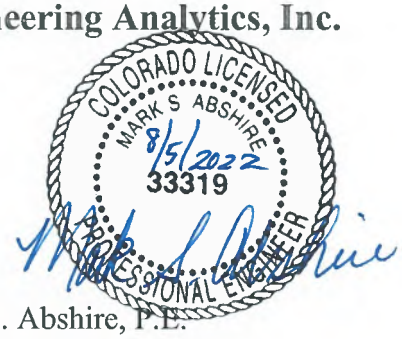
Choked Runoff Diversion Ditch Culvert: Clear toe runoff channel culvert immediately south of toe drain outfall pipe

CONCLUSIONS

Based on the observations described above, the overall surficial condition of the dam is judged to be 'Conditionally Satisfactory' at this time. Please don't hesitate to call should you have questions or concerns regarding this inspection report.

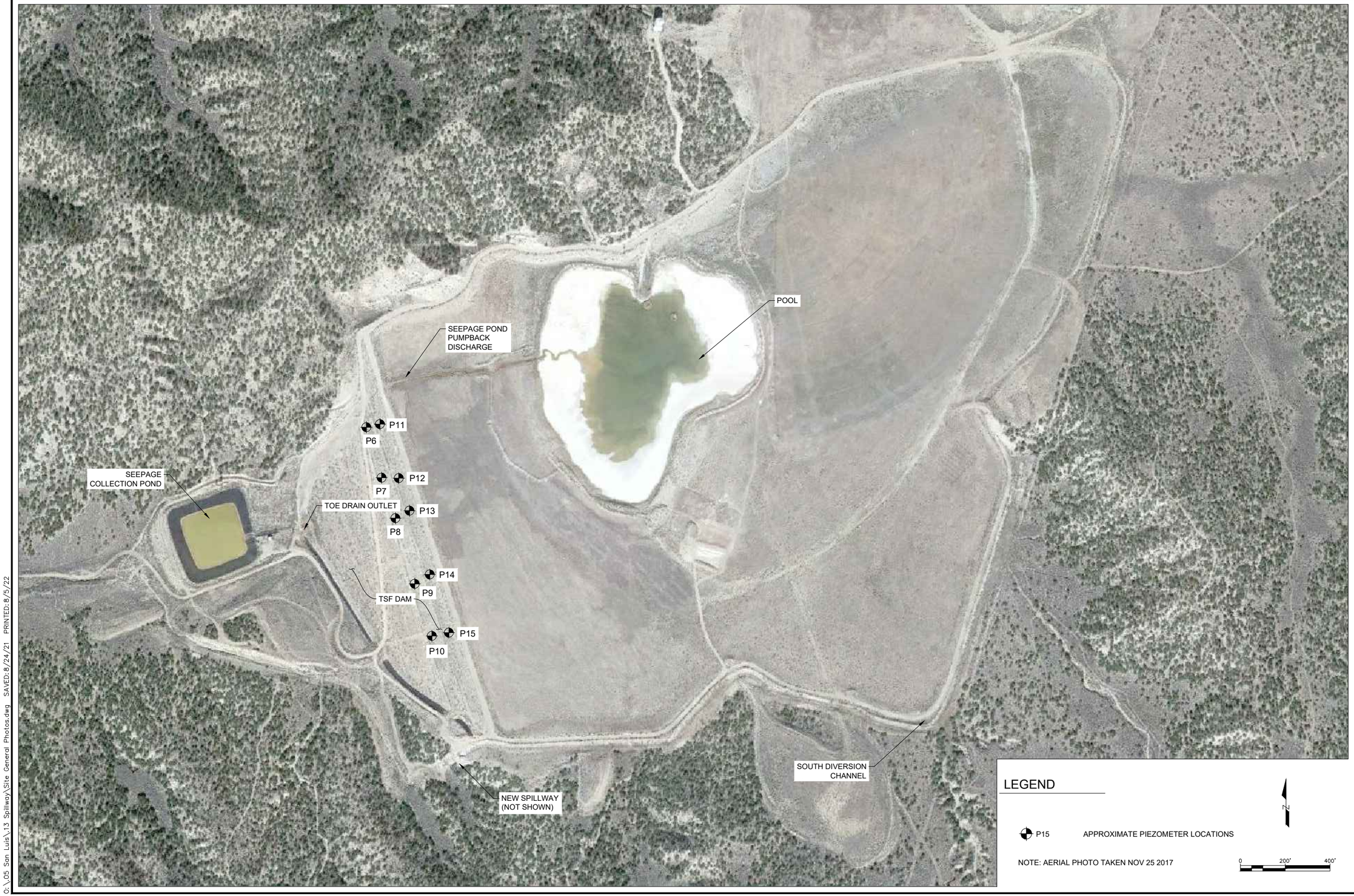
Respectfully Submitted,

Engineering Analytics, Inc.



Mark S. Abshire, P.E.
Senior Geotechnical Engineer

FIGURES



LEGEND

P15 APPROXIMATE PIEZOMETER LOCATIONS

NOTE: AERIAL PHOTO TAKEN NOV 25 2017

N

0 200' 400'

NO	REVISION/DESCR.	DATE	BY

BATTLE MOUNTAIN RESOURCES, INC.

SAN LUIS TAILINGS STORAGE FACILITY

OVERALL SITE PLAN

Engineering Analytics, Inc.
1600 Specht Point Road, Suite 209
Fort Collins, CO 80525
(970) 488-3111

ISSUED BY:

Project Number:	101.05.13
Drawn By:	
Designed By:	
Approved By:	MSA
Date:	8/05/2022
Scale:	1" = 400'

FIGURE 1

O:_05 San Luis_13 Spillway\Site General Photos.dwg SAVED:8/24/21 PRINTED:8/5/22

LEGEND

AREA WITH RILLING TO BE MONITORED

NOTE: AERIAL PHOTO TAKEN NOV 25 2017

N

0 80' 160'

NO	REVISION/DESCR.	DATE	BY

BATTLE MOUNTAIN RESOURCES, INC.

SAN LUIS TAILINGS STORAGE FACILITY

2022 ANNUAL DAM SAFETY INSPECTION

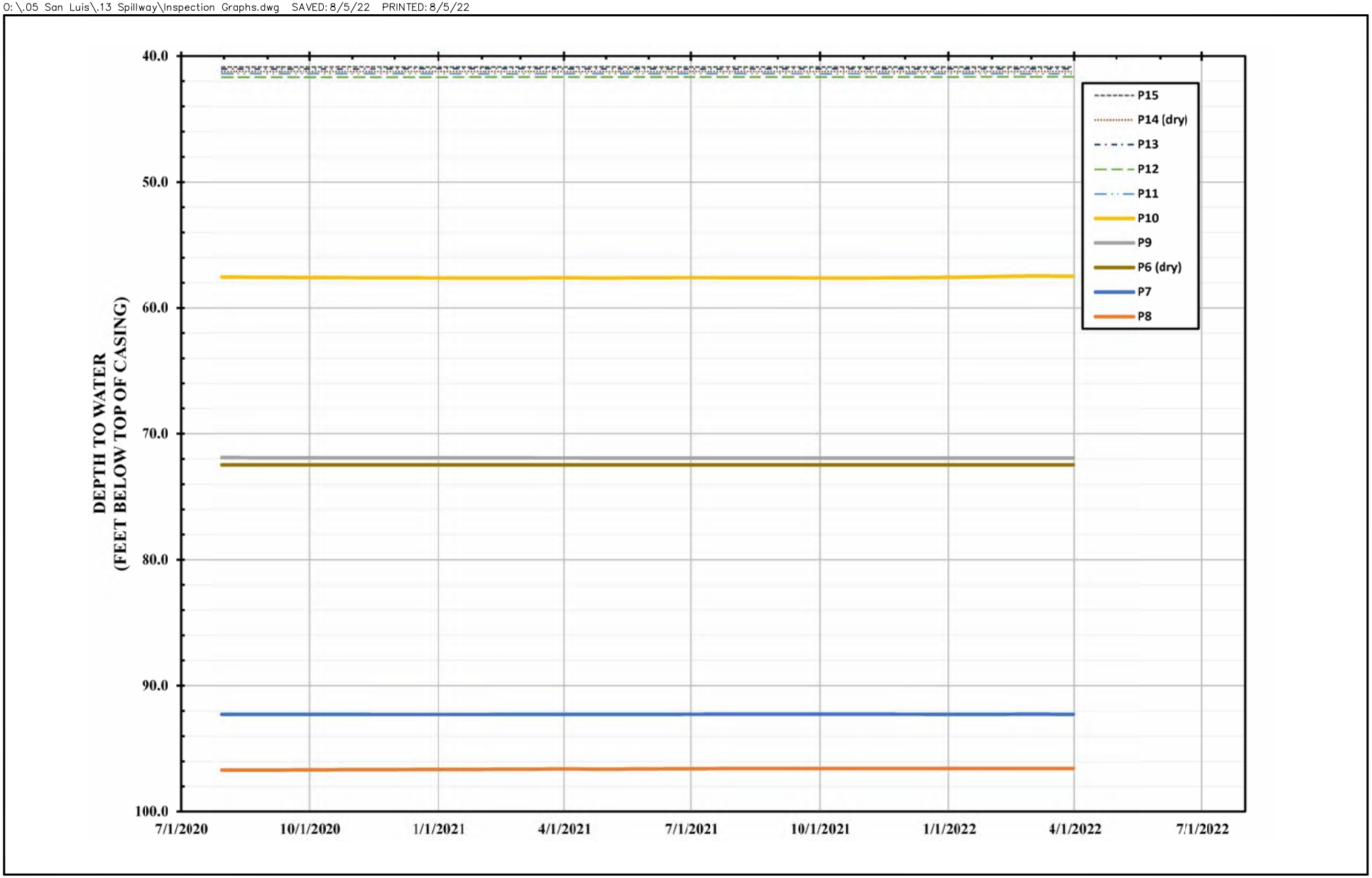
Engineering Analytics, Inc.
1600 Specht Point Road, Suite 209
Fort Collins, CO 80525
(970) 486-3111

ISSUED BY:

Project Number:	101.05.13
Drawn By:	
Designed By:	
Approved By:	MSA
Date:	8/05/2022
Scale:	1" = 160'

FIGURE 2

O:_05 San Luis_13 Spillway\Site General Photos.dwg SAVED: 8/24/21 PRINTED: 8/5/22

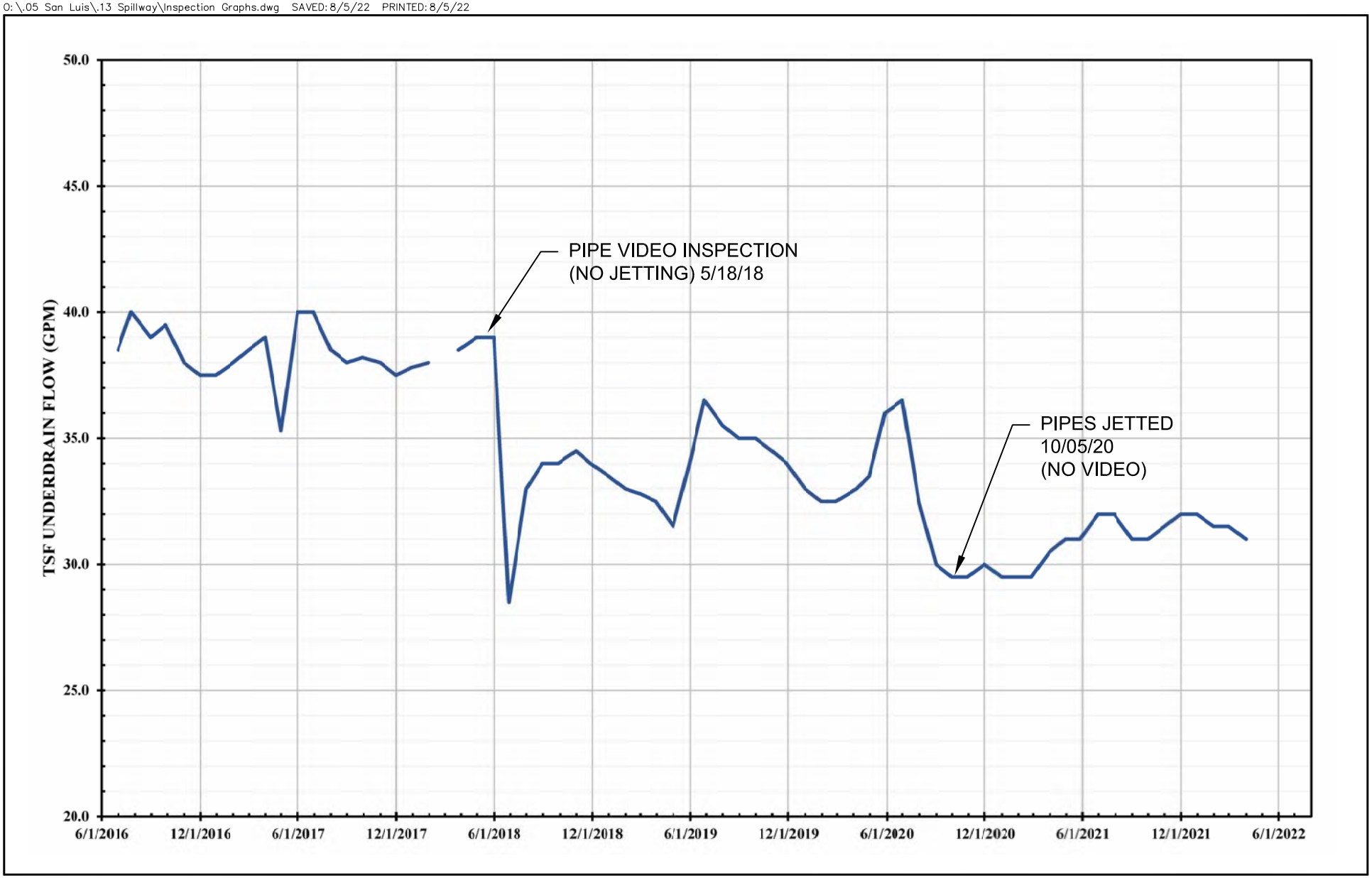


Project No. 210105.13

August 2022

Engineering Analytics, Inc.

FIGURE 3
PIEZOMETER LEVELS
2022 ANNUAL DAM SAFETY INSPECTION
SAN LUIS TAILINGS STORAGE FACILITY



Project No. 210105.13

August 2022

Engineering Analytics, Inc.

FIGURE 4
UNDERDRAIN FLOW
2022 ANNUAL DAM SAFETY INSPECTION
SAN LUIS TAILINGS STORAGE FACILITY

ATTACHMENT 1

SAN LUIS TAILINGS DAM

2022 ANNUAL DAM SAFETY INSPECTION FORM

JUNE 14, 2022 INSPECTION

DAM NAME: **San Luis Tailings Dam** DATE OF REPORT: August 5, 2022

TAILINGS DAM INSPECTION FORM

Name of Professional Conducting Inspection: Mark S. Abshire, PE	Colorado P.E. License No.: 33319
Company Name and Address: Engineering Analytics, Inc. 1600 Specht Point Road, Suite 209 Fort Collins, Colorado 80525	Phone Nos.: 970-488-3111 (Office) 970-692-4265 (Cell) email: mabshire@enganalytics.com

INSPECTION PREPARATION: I have reviewed all pertinent technical documentation related to this dam and site in the Owner's files:
☒ Yes ☐ No Comment:

STATEMENT OF EXPERIENCE: I am experienced in the technical disciplines or I am working with other professionals experienced in the technical disciplines to properly inspect this dam and appurtenant works. Technical disciplines in addition to general civil engineering may include geotechnical, geological, hydrologic, hydraulics, and structural
☒Yes ☐ No Comment:

YR COMPL 1993 Ph II, Raise 1 1995 Ph II, Raise 2	T R Sec COUNTY Not Applicable- Sangre de Cristo Land Grant Costilla		DATE OF INSPECTION: June 14, 2022	
DAM HEIGHT (FT) ~ 155	DAM LENGTH (FT) ~ 1,900	CREST WIDTH (FT) ~25	PREVIOUS INSPECTION: June 8, 2021	
FREEBOARD (FT) ~ 12	DRAINAGE AREA (AC) 741 total 537 diverted	CREST ELEV (FT) ~ 8620	NORMAL STORAGE (AF) 1,105 at dam crest	POOL SURFACE AREA (AC) 136.7 at dam crest

BEACH LENGTH ABOVE POOL (FT): ~600 DIVERSION CHANNEL CAPACITY (CFS): ~1,500

OWNER: Battle Mountain Resources, Inc.	OWNER REPRESENTATIVE/CONTACT: David Carino
OWNER ADDRESS: P.O. Box 310 San Luis, Colorado 81152	OWNER CONTACT PHONE NOS.: 719-379-0827 (water treatment plant)

FIELD CONDITIONS OBSERVED

WATER LEVEL BELOW DAM CREST: 12+ FT

GROUND MOISTURE CONDITION: ☒ DRY ☐WET ☐ SNOW COVER ☐ OTHER

Directions: Mark and X for conditions found and underline words that apply

UPSTREAM SLOPE AND IMPOUNDMENT AREA

PROBLEMS NOTED:

☒ (0) NONE ☐(1) EROSION PROTECTION - Missing/ Sparse ☐ (2) BEACH AREA WAVE EROSION
☐ (3) CRACKS WITH DISPLACEMENT ☐ (4) SINKHOLE ☐ (5) APPEARS TOO STEEP
☐ (6) DEPRESSIONS OR BULGES ☐ (7) SLIDES ☐ (8) ANIMAL BURROWS
☐ (9) OTHER

CONDITIONS OBSERVED: ☒ GOOD ☐ ACCEPTABLE ☐ POOR

CREST

PROBLEMS NOTED:

☒ (10) NONE ☐ (11) RUTS OR PUDDLES ☐ (12) EROSION
☐ (13) CRACKS WITH DISPLACEMENT ☐ (14) SINKHOLES ☐ (15) NOT WIDE ENOUGH
☐ (16) LOW AREA ☐ (17) MISALIGNMENT ☐ (18) IMPROPER SURFACE DRAINAGE
☐ (19) OTHER

CONDITIONS OBSERVED: ☒ GOOD ☐ ACCEPTABLE ☐ POOR

DOWNSTREAM SLOPE

PROBLEMS NOTED:

☒ (20) NONE ☐ (21) LIVESTOCK DAMAGE ☐ (22) EROSION OR GULLIES (R DS Groin)
☐ (23) CRACKS WITH ☐ (24) SINKHOLE ☐ (25) APPEARS TOO STEEP
☐ (26) DEPRESSIONS OR BULGES ☐ (27) SLIDES ☐ (28) SOFT AREAS
☐ (29) OTHER

CONDITIONS OBSERVED: ☒ GOOD ☐ ACCEPTABLE ☐ POOR

DAM NAME: **San Luis Tailing Dam** DATE OF REPORT: August 5 2022

TAILINGS DAM INSPECTION FORM

Directions: Mark and X for conditions found and underline words that apply

SEEPAGE AND DRAIN OUTFALL

PROBLEMS NOTED:

☐ (30) NONE ☐ (31) SATURATED EMBANKMENT AREA ☐ (32) SEEPAGE EXITS ON DAM

☐ (33) SEEPAGE EXITS AT POINT SOURCE ☒ (34) MINOR PONDING OF PIPE LEAKAGE AT TOE

DRAIN OUTFALL SEEN: ☒ YES ☐ NO

☐ (35) FLOW ADJACENT TO DRAIN PIPE ☐ (36) DRAIN OUTFLOW TURBID ☐ (37) DRAIN DRY/OBSTRUCTED

☐ (38) OTHER

SHOW LOCATION OF DRAIN ON SKETCH AND INDICATE AMOUNT AND QUALITY OF SEEPAGE: See Figure 1. Minor leakage from toe drain creates puddle, attracting animals, but no pipe damage.

CONDITIONS OBSERVED: ☐ GOOD ☒ ACCEPTABLE ☐ POOR

STORMWATER MANAGEMENT SYSTEM

PROBLEMS NOTED:

☐ (40) NONE ☐ (41) NO EMERGENCY SPILLWAY ☒ (42) EROSION AT DROP STRUCTURE

☐ (43) CONCRETE DETERIORATED/UNDERMINED ☐ (45) STRUCTURE MAY BE TOO SMALL

☐ (46) DIVERSION CHANNEL EROSION ☐ (47) INADEQUATE CHANNEL FLOW CAPACITY ☒ (48) CHANNEL FLOW OBSTRUCTED

☒ (49) OTHER Rilling along both sides of drop structure is advancing- continue monitoring and begin planning mitigation strategy.

South diversion channel and downstream toe runoff collection swales are in good condition except for choking of culvert south of toe drain (Photo 22). Continue monitoring erosion and revegetation at both side of the drop structure; mitigation will likely be required in 2023.

CONDITIONS OBSERVED: ☐ GOOD ☒ ACCEPTABLE ☐ POOR

MONITORING

EXISTING INSTRUMENTATION FOUND:

☐ (5O) NONE ☐ (51) GAGE ROD IN POOL AREA ☒ (52) PIEZOMETERS

☐ (53) SEEPAGE WEIRS/FLUMES ☐ (54) SURVEY MONUMENTS ☒ (55) OTHER Underdrain flow

MONITORING OF INSTRUMENTATION:

☐ (56) NO WEIRS/FLUMES ☒ (57) YES

PERIODIC INSPECTIONS BY:

☒ (58) OWNER ☐ (59) ENGINEER

Piezometers remain dry. Average underdrain flow measurements from 2020-22 (30.8 gpm) are slightly lower than from 2016-2022 (34.5 gpm). Reduction is likely due to ongoing severe regional drought, but continue jetting and video inspection program.

CONDITIONS OBSERVED: ☒ GOOD ☐ ACCEPTABLE ☐ POOR

MAINTENANCE AND REPAIRS

PROBLEMS NOTED:

☐ (60) NONE ☐ (61) ACCESS ROAD NEEDS MAINTENANCE ☐ (62) CATTLE DAMAGE

☐ (63) BRUSH ON: UPSTREAM SLOPE/BEACH, CREST, DOWNSTREAM SLOPE, TOE

☐ (64) RODENT ACTIVITY ON: UPSTREAM SLOPE/BEACH, CREST, DOWNSTREAM SLOPE, TOE

☒ (65) OTHER #48: Clear toe runoff channel culvert immediately south of toe drain outfall pipe.
#49: Disturbed areas adjacent to the South Diversion Ditch Drop Structure that are not protected by riprap were seeded in 2019, but due to drought conditions vegetation establishment is poor to date and erosional rilling is progressing along both sides of the structure; erosion mitigation will likely be required in 2023.

CONDITIONS OBSERVED: ☐ GOOD ☒ ACCEPTABLE ☐ POOR

OVERALL CONDITIONS

Based on this inspection and recent file review, the overall surficial condition is determined to be:

☐ SATISFACTORY ☒ CONDITIONALLY SATISFACTORY ☐ UNSATISFACTORY

DAM NAME: San Luis Tailing Dam DATE OF REPORT: August 5, 2022

TAILING DAM INSPECTION FORM

ITEMS REQUIRING ACTION BY OWNER TO IMPROVE THE SAFETY OF THE DAM

MAINTENANCE • MINOR REPAIR • MONITORING

☐ (1) PROVIDE ADDITIONAL EROSION PROTECTION:

☐ (2) CLEAR BRUSH FROM:

☐ (3) INITIATE RODENT CONTROL PROGRAM AND PROPERLY BACKFILL EXISTING HOLES:

☐ (4) GRADE CREST TO A UNIFORM ELEVATION WITH DRAINAGE TO THE UPSTREAM SLOPE:

☐ (5) PROVIDE SURFACE DRAINAGE FOR:

☒ (6) MONITOR: Continue monitoring rilling and gullying at right downstream groin.

☒ (7) MONITOR: Continue underdrain jetting cleanout and camera inspection of accessible lengths of underdrain pipes.

☒ (8) MONITOR: Per Item 49, continue monitoring erosion along the side slopes of the drop structure, and begin preparing mitigation plans for 2023. Mitigation will require erosion repair, followed by reseeding and installation of erosion control blankets, and/or cutting in shallow swales along the slope to reduce runoff flow path lengths.

☒ (9) OTHER: Protect toe drain area from disturbance by cattle.

☒ (10) OTHER: Per 2020 inspection, consider installing a concrete structure for collection of drain discharges to facilitate access for cleanout and monitoring of the drains.

ENGINEERING • EMPLOY AN ENGINEER EXPERIENCED IN DESIGN AND CONSTRUCTION OF DAMS TO:

(Plans and specifications to be improved by CDRMS prior to construction.)

☐ (11) PREPARE PLANS AND SPECIFICATIONS FOR REHABILITATION OF THE DAM:

☐ (12) PREPARE AS-BUILT DRAWINGS OF:

☐ (13) PERFORM A GEOTECHNICAL INVESTIGATION TO EVALUATE THE STABILITY OF THE DAM:

☐ (14) PERFORM A HYDROLOGIC STUDY TO DETERMINE REQUIRED SIZE OF FLOOD BYPASS/SPILLWAY:

☐ (15) PREPARE PLANS AND SPECIFICATIONS FOR AN ADEQUATE SPILLWAY:

☐ (16) SET UP OR IMPROVE MONITORING SYSTEM:

☐ (17) OTHER:

☐ (18) OTHER:

Figure 1 Overall Site Plan and Photo Log
Figure 2 2022 Annual Dam Safety Inspection
Figure 3 Piezometer Levels
Figure 4 Underdrain Flow
Attachment 2 2022 Inspection Photos

☒ Photographs (Photos 1-22) ☒ Attachments (Piezometer and underdrain data)

ENGINEER'S INSTRUCTION: Instructed owner on the safety concerns with the structure and how to monitor and inspect the dam and appurtenant works in the interim period between the regulatory annual inspections. ☒ Yes ☐ No

Comment:

COLORADO LICENSED
MARK S. ARCHULETA
8/5/2022
33319
PROFESSIONAL ENGINEER

Professional Engineer's Signature: Mark S. Archuleta Date: 8/5/2022

Reviewed by: Owner/Owner's Representative Date: 8-5-2022

DAM NAME: **San Luis Tailing Dam** DATE OF REPORT: August 5, 2022

GUIDELINES FOR DETERMINING CONDITIONS		
CONDITIONS OBSERVED - APPLIES TO UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE		
GOOD In general, this part of the structure has a good appearance, and conditions observed in this area do not appear to threaten the safety of the dam.	ACCEPTABLE Although general cross-section is maintained, surfaces may be irregular, eroded, rutted, spalled, or otherwise not in new condition. Conditions in this area do not currently appear to threaten the safety of the dam.	POOR Conditions observed in this area appear to threaten the safety of the dam.
CONDITIONS OBSERVED - APPLIES TO SEEPAGE		
GOOD No evidence of uncontrolled seepage. No unexplained increase in flows from designed drains. All seepage is clear. Seepage conditions did not appear to threaten the safety of the dam.	ACCEPTABLE Some seepage exists at areas other than the drain outfalls, or other designed drams. No unexplained increase in seepage. All seepage is clear. Seepage conditions observed do not currently appear to threaten the safety of the dam.	POOR Seepage conditions observed appear to threaten the safety of the dam. Examples: 1) Designed drain or seepage flows have increased without increases in pool level. 2) Drain or seepage flows contain sediment, i.e., muddy water or particles in Jar samples. 3) Widespread seepage, concentrated seepage, or ponding appears to threaten the safety of the dam.
CONDITIONS OBSERVED - APPLIES TO MONITORING		
GOOD Monitoring includes movement surveys, leakage measurements, and piezometer readings. Instrumentation is in reliable, working condition. A plan for monitoring the instrumentation and analyzing results by the owner's engineer is in effect. Periodic inspections bv Owner's engineer.	ACCEPTABLE Monitoring includes movement surveys and leakage measurements. Instrumentation is in serviceable condition. A plan for monitoring instrumentation is in effect by owner. Periodic inspections by Owner or representative.	POOR Instrumentation and monitoring described under "ACCEPTABLE" here are not provided, or required periodic readings are not being made, or unexplained changes in readings are not reacted to by Owner.
CONDITIONS OBSERVED - APPLIES TO MAINTENANCE AND REPAIR		
GOOD Dam appears to receive effective on-going maintenance and repair, and only a few minor items may need to be addressed.	ACCEPTABLE Dam appears to receive maintenance, but some maintenance items need to be addressed. No major repairs are required.	POOR Dam does not appear to receive adequate maintenance. One or more items needing maintenance or repair has begun to threaten the safety of the dam.
OVERALL CONDITIONS		
SATISFACTORY The safety inspection indicates no conditions that appear to threaten the safety of the dam, and the dam is expected to perform satisfactorily under all design loading conditions. Most of the required monitoring is being performed.	CONDITIONALLY SATISFACTORY The safety inspection indicates symptoms of structural distress (seepage, evidence of minor displacements, etc.) which, if conditions worsen, could lead to the failure of the dam. Essential monitoring, inspection, and maintenance must be performed as a requirement for continued full storage in the impoundment area.	UNSATISFACTORY The safety inspection indicates definite signs of structural distress (excessive seepage, cracks, slides, sinkholes, severe deterioration, etc.), which could lead to the failure of the dam if the reservoir is used to full capacity. The dam is judged unsafe for full storage of water.

ATTACHMENT 2
SAN LUIS TAILINGS STORAGE FACILITY
2022 ANNUAL DAM SAFETY INSPECTION
JUNE 14, 2022
INSPECTION PHOTOS

Photo 1 Looking east along the access road from the north (right) end of the dam, showing good conditions of the impoundment. Note the pool at the upper right, which is within normal limits.

Photo 2 Looking south over the dam crest road and impoundment from the north (right) end of the dam, showing good conditions.

Photo 3 Looking east from the dam crest over the impoundment and toe drain collection pond pumpback line, showing good conditions.

Photo 4 Looking south over the water treatment plant discharge and pool, showing good conditions.

Photo 5 Looking east over the impoundment and south diversion channel from the south (left) end of the dam, showing good conditions.

Photo 6 Looking south over the perimeter road and impoundment from the northeast corner, showing good conditions.

Photo 7 Looking southwest over the impoundment from the northeast corner, showing good conditions.

Photo 8 Looking west over the perimeter road and impoundment from the northeast corner, showing good conditions.

Photo 9 Looking south along the dam crest, showing good conditions and straight alignment.

Photo 10 Looking south along the right downstream face and groin run-on diversion channel, showing good conditions.

Photo 11 Looking north over the downstream face and toe drain collection pond, showing good conditions.

Photo 12 Looking northeast up the downstream face from near the toe drain discharge point, showing good conditions.

Photo 13 Looking southwest over the right downstream groin, showing significantly improved revegetation conditions following 2013/2014 erosion repairs. Note the seepage collection pond in the background.

Photo 14 Looking northeast over the right downstream groin and rock drop channel, showing good conditions.

Photo 15 Looking north along the right downstream toe and toe drain outlet pipes, showing clear seepage and good conditions.

Photo 16 Closeup of toe drain outlet pipes, showing clear seepage and good conditions.

Photo 17 Looking west (downstream) into the drop structure from near the top, showing good conditions.

Photo 18 Looking east (upstream) into the drop structure from the bottom, showing good conditions.

Photo 18 Looking west across the outlet of the drop structure, showing good conditions.

Photo 20 Looking east at the slope on the north side of the drop structure, showing generally good conditions at present. Erosional rilling is progressing due to long drainage runs and the lack of vegetation.

Photo 21 Looking northeast along the right downstream groin run-on diversion channel, showing good conditions.

Photo 22 Looking south along the lower runoff collection swale along the left downstream dam toe, showing good conditions of the liner and channel, but near full choking of the culvert immediately south of the toe drain discharge pipes.

BATTLE MOUNTAIN RESOURCES, INC.

October 14, 2022

Mr. Lucas West

Colorado Division of Reclamation, Mining and Safety

1313 Sherman Street, Room 215

Denver, CO 80203

Re: San Luis Project Tailing Dam Q3 2022 Inspection Report, Technical Revision No. 33, Permit No. M-1988-112

Dear Mr. West:

Battle Mountain Resources Inc. (BMRI) is pleased to provide the Q3 2022 San Luis Tailing Dam Inspection Report in accordance with Technical Revision No. 33 to BMRI's Reclamation Permit.

The Inspection was conducted by BMRI Site Manager Mr. David Carino and Site Supervisor Julio Madrid.

Enclosed with the inspection report are photos of the Tailing Impoundment facilities to include the drop structure and the under-drain discharge area. Also included are the Q3 2022 Piezometer Inspection results.

Respectfully,

Julio F. Madrid

Sr. Supervisor Colorado Legacy Sites

(719) 379-0538

cc: Devon Horntvedt

David Carino

2022 Q3 Piezometer Results

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	07/28/2022	72.46	DRY	N/A
P7	07/28/2022	92.50	92.30	0.20
P8	07/28/2022	97.51	96.65	0.86
P9	07/28/2022	72.30	71.94	0.36
P10	07/28/2022	58.30	57.49	0.81
P11	07/28/2022	41.80	41.41	0.39
P12	07/28/2022	41.71	41.65	0.06
P13	07/28/2022	41.34	41.01	0.33
P14	07/28/2022	41.24	DRY	N/A
P15	07/28/2022	41.10	40.87	0.23
Monitoring Well Identification	**Observation Date**	**Piezometer Depth (ft)**	**Depth to Water (ft)**	**Depth of Water (ft)**
P6	08/31/2022	72.46	DRY	N/A
P7	08/31/2022	92.50	DRY	N/A
P8	08/31/2022	97.51	96.65	0.86
P9	08/31/2022	72.30	71.93	0.37
P10	08/31/2022	58.30	57.49	0.81
P11	08/31/2022	41.80	41.40	0.40
P12	08/31/2022	41.71	41.65	0.06
P13	08/31/2022	41.34	41.00	0.34
P14	08/31/2022	41.24	DRY	N/A
P15	08/31/2022	41.10	40.86	0.24
Monitoring Well Identification	**Observation Date**	**Piezometer Depth (ft)**	**Depth to Water (ft)**	**Depth of Water (ft)**
P6	09/29/2022	72.46	DRY	N/A
P7	09/29/2022	92.50	DRY	N/A
P8	09/29/2022	97.51	96.65	0.86
P9	09/29/2022	72.30	71.93	0.37
P10	09/29/2022	58.30	57.48	0.82
P11	09/29/2022	41.80	41.40	0.40
P12	09/29/2022	41.71	41.64	0.07
P13	09/29/2022	41.34	41.00	0.34
P14	09/29/2022	41.24	DRY	N/A
P15	09/29/2022	41.10	40.85	0.25

INSPECTION PERIOD: July thru September 2022 page 1/1

INSPECTOR: David Cariño

DAM: SAN LUIS PROJECT TAILING DAM

AREA INSPECTED	ITEM NO.	CONDITION	YES	NO	OBSERVATIONS	CHECK ACTION NEEDED: MONITOR	INVESTI-GATE	REPAIR
CREST	1	ANY SURFACE CRACKING?		✓				
	2	ANY UNUSUAL LOW AREAS?		✓				
	3	ANY RUTS OR PUDDLES?		✓				
	4	ANY HORIZONTAL OFFSET?		✓				
	5	NEED VEGETATION CONTROL?		✓				
UPSTREAM SLOPE & BEACH AREA	6	ANY SLIDES, SLOUGHS, SCARPS?		✓				
	7	ANY SINKHOLES OR UNUSUAL DEPRESSIONS?		✓				
	8	ANY EROSION ?		✓				
	9	CHANGES AT ABUTMENT CONTACTS?		✓				
	10	NEED VEGETATION CONTROL?		✓				
	11							
DOWNSTREAM SLOPE	12	ANY WET AREAS?		✓				
	13	ANY SLIDES, SLOUGHS, SCARPS?		✓				
	14	CHANGES AT DAM-ABUTMENT CONTACT?		✓				
	15	ANY EROSION?	✓		minor erosion alongthside grass area	✓		
	16	ANY UNUSUAL BULGING OR SLOPE MOVEMENT?		✓				
	17	NEED VEGETATION CONTROL?		✓				
	18							
SEEPAGE COLLECTION AND PUMPBACK SYSTEM	19	IS DRAIN OUTLET CLOGGED OR OBSTRUCTED?		✓				
	20	ARE DRAIN FLOWS MUDDY OR TURBID?		✓				
	21	IS EMBANKMENT WET AROUND DRAIN OUTLET?	✓		minor leakage around piping	✓		
	22	ANY PROBLEMS WITH COLLECTION POND?		✓				
	23	IS PUMPBACK SYSTEM WORKING PROPERLY?	✓					
	24							
DIVERSION CHANNEL AND DROP STRUCTURE	25	ANY EROSION?		✓				
	26	NEED VEGETATION CONTROL?		✓				
	27	ANY DEBRIS IN CHANNELS OR DROP STRUCTURE?		✓				
	28	ANY CRACKS OR DETERIORATION OF CONCRETE?		✓				
	29	ANY CORROSION OF PIPE?		✓				
	30							

ADDITIONAL COMMENTS (REFER TO ITEM NO. IF APPLICABLE):

QUARTERLY INSPECTION SUMMARY

NAME OF DAM:	San Luis Project Tailing Dam			CO DRMS Permit #:	M-1988-112
REPORTING PERIOD:	7/22	thru	9/22	REPORT #:	

INSPECTION ITEMS		PHOTOS
Piezometer Levels	Included in report	NO
Drain Collection and Pumpback System Observations	System working properly	Yes
Seepage/Erosion Observations	Minor erosion on North grain area (down stream)	Yes
Vegetation/Rodent/ Other Maintenance Observations	None	NO
Diversion System Observations	Channel in good condition, No issues	Yes

RECOMMENDATIONS/COMMENTS

INSPECTION AND REPORTING PERSONNEL

NAME	REPRESENTING	TITLE/ROLE
David Cariño	BMRI / Newmont	Site Manager
Julio Madrid	BMRI / Newmont	Site Supervisor

BATTLE MOUNTAIN RESOURCES, INC.

January 10, 2023

Mr. Lucas West

Colorado Division of Reclamation, Mining and Safety

1313 Sherman Street, Room 215

Denver, CO 80203

Re: San Luis Project Tailing Dam Q4 2022 Inspection Report, Technical Revision No. 33, Permit No. M-1988-112

Dear Mr. West:

Battle Mountain Resources Inc. (BMRI) is pleased to provide the Q4 2022 San Luis Tailing Dam Inspection Report in accordance with Technical Revision No. 33 to BMRI's Reclamation Permit.

The Inspection was conducted by BMRI Site Manager Mr. David Carino and Site Supervisor Julio Madrid.

Enclosed with the inspection report are photos of the Tailing Impoundment facilities to include the drop structure and the under-drain discharge area. Also included are the Q4 2022 Piezometer Inspection results.

Respectfully,

Julio F. Madrid

Sr. Supervisor Colorado Legacy Sites

(719) 379-0538

cc: Devon Horntvedt

David Carino

2022

		INSPECTION PERIOD:	October thru December			page	1/1		
		INSPECTOR:	Davids Cariño						
DAM:	SAN LUIS PROJECT TAILING DAM					CHECK ACTION NEEDED			
AREA INSPECTED	ITEM NO.	CONDITION	YES	NO	OBSERVATIONS	MONITOR	INVESTI-GATE	REPAIR	
CREST	1	ANY SURFACE CRACKING?		✓					
	2	ANY UNUSUAL LOW AREAS?		✓					
	3	ANY RUTS OR PUDDLES?		✓					
	4	ANY HORIZONTAL OFFSET?		✓					
	5	NEED VEGETATION CONTROL?		✓					
UPSTREAM SLOPE & BEACH AREA	6	ANY SLIDES, SLOUGHS, SCARPS?		✓					
	7	ANY SINKHOLES OR UNUSUAL DEPRESSIONS?		✓					
	8	ANY EROSION ?		✓					
	9	CHANGES AT ABUTMENT CONTACTS?		✓					
	10	NEED VEGETATION CONTROL?		✓					
	11								
DOWNSTREAM SLOPE	12	ANY WET AREAS?		✓					
	13	ANY SLIDES, SLOUGHS, SCARPS?		✓					
	14	CHANGES AT DAM-ABUTMENT CONTACT?		✓					
	15	ANY EROSION?	✓		minor erosion North side groin area	✓			
	16	ANY UNUSUAL BULGING OR SLOPE MOVEMENT?		✓					
	17	NEED VEGETATION CONTROL?		✓					
	18								
SEEPAGE COLLECTION AND PUMPBACK SYSTEM	19	IS DRAIN OUTLET CLOGGED OR OBSTRUCTED?		✓					
	20	ARE DRAIN FLOWS MUDDY OR TURBID?		✓					
	21	IS EMBANKMENT WET AROUND DRAIN OUTLET?	✓		minor leakage around piping	✓			
	22	ANY PROBLEMS WITH COLLECTION POND?		✓					
	23	IS PUMPBACK SYSTEM WORKING PROPERLY?	✓						
	24								
DIVERSION CHANNEL AND DROP STRUCTURE	25	ANY EROSION?		✓					
	26	NEED VEGETATION CONTROL?		✓					
	27	ANY DEBRIS IN CHANNELS OR DROP STRUCTURE?		✓					
	28	ANY CRACKS OR DETERIORATION OF CONCRETE?		✓					
	29	ANY CORROSION OF PIPE?		✓					
	30								

ADDITIONAL COMMENTS (REFER TO ITEM NO. IF APPLICABLE):

QUARTERLY INSPECTION SUMMARY

NAME OF DAM:	San Luis Project Tailing Dam			CO DRMS Permit #:	M-1988-112
REPORTING PERIOD:	10/22	thru	12/22	REPORT #:	

INSPECTION ITEMS		PHOTOS
Piezometer Levels	Included in report.	No
Drain Collection and Pumpback System Observations	System working properly.	Yes
Seepage/Erosion Observations	Minor erosion on North groin area (down stream).	Yes
Vegetation/Rodent/ Other Maintenance Observations	None	No
Diversion System Observations	Channel in good condition, No issues.	Yes

RECOMMENDATIONS/COMMENTS

INSPECTION AND REPORTING PERSONNEL

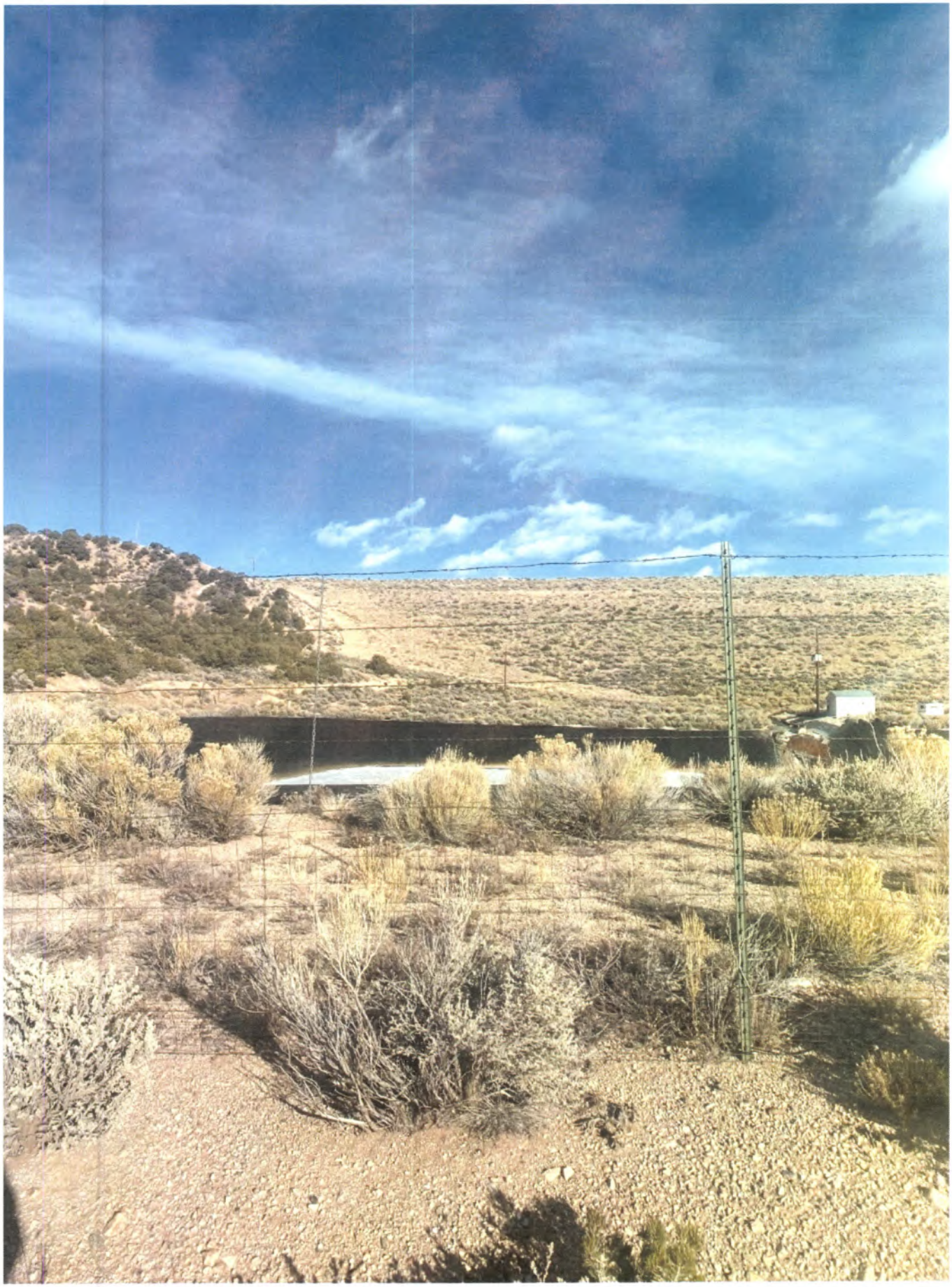
NAME	REPRESENTING	TITLE/ROLE
Davids Cariño	BMRI / Newmont	Site Manager
Julio Madrid	BMRI / Newmont	Site Supervisor

Q4 2022 Piezometer Readings

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	10/31/2022	72.46	DRY	N/A
P7	10/31/2022	92.50	DRY	N/A
P8	10/31/2022	97.51	96.64	0.87
P9	10/31/2022	72.30	71.92	0.38
P10	10/31/2022	58.30	57.48	0.82
P11	10/31/2022	41.80	41.39	0.41
P12	10/31/2022	41.71	41.65	0.06
P13	10/31/2022	41.34	41.00	0.34
P14	10/31/2022	41.24	DRY	N/A
P15	10/31/2022	41.10	40.86	0.24

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	11/30/2022	72.46	DRY	N/A
P7	11/30/2022	92.50	DRY	N/A
P8	11/30/2022	97.51	96.68	0.83
P9	11/30/2022	72.30	71.94	0.36
P10	11/30/2022	58.30	57.47	0.83
P11	11/30/2022	41.80	41.40	0.40
P12	11/30/2022	41.71	41.64	0.07
P13	11/30/2022	41.34	40.99	0.35
P14	11/30/2022	41.24	DRY	N/A
P15	11/30/2022	41.10	40.85	0.25

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	12/30/2022	72.46	DRY	N/A
P7	12/30/2022	92.50	DRY	N/A
P8	12/30/2022	97.51	96.67	0.84
P9	12/30/2022	72.30	71.94	0.36
P10	12/30/2022	58.30	57.48	0.82
P11	12/30/2022	41.80	41.40	0.40
P12	12/30/2022	41.71	41.65	0.06
P13	12/30/2022	41.34	41.00	0.34
P14	12/30/2022	41.24	DRY	N/A
P15	12/30/2022	41.10	40.85	0.25



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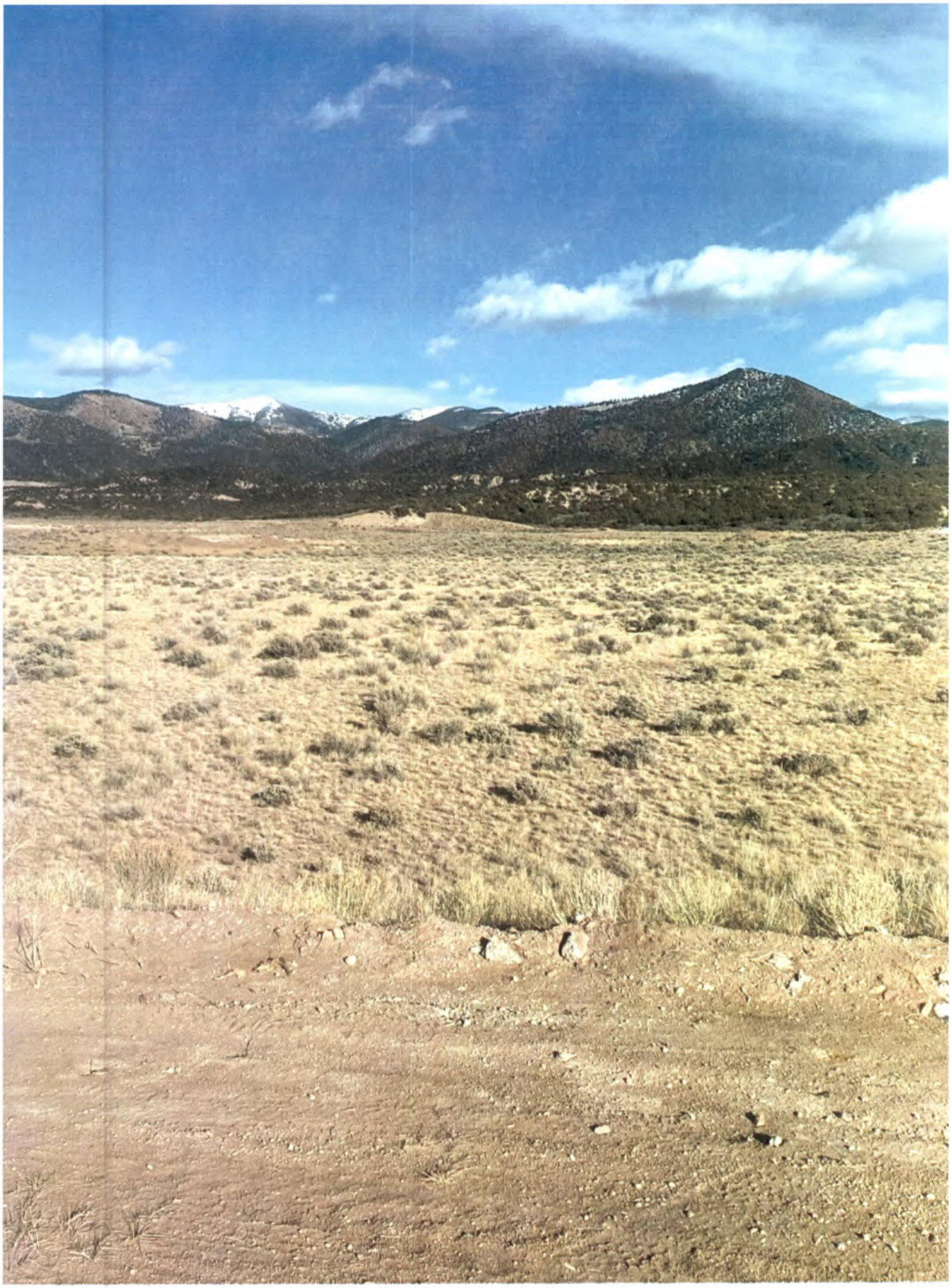
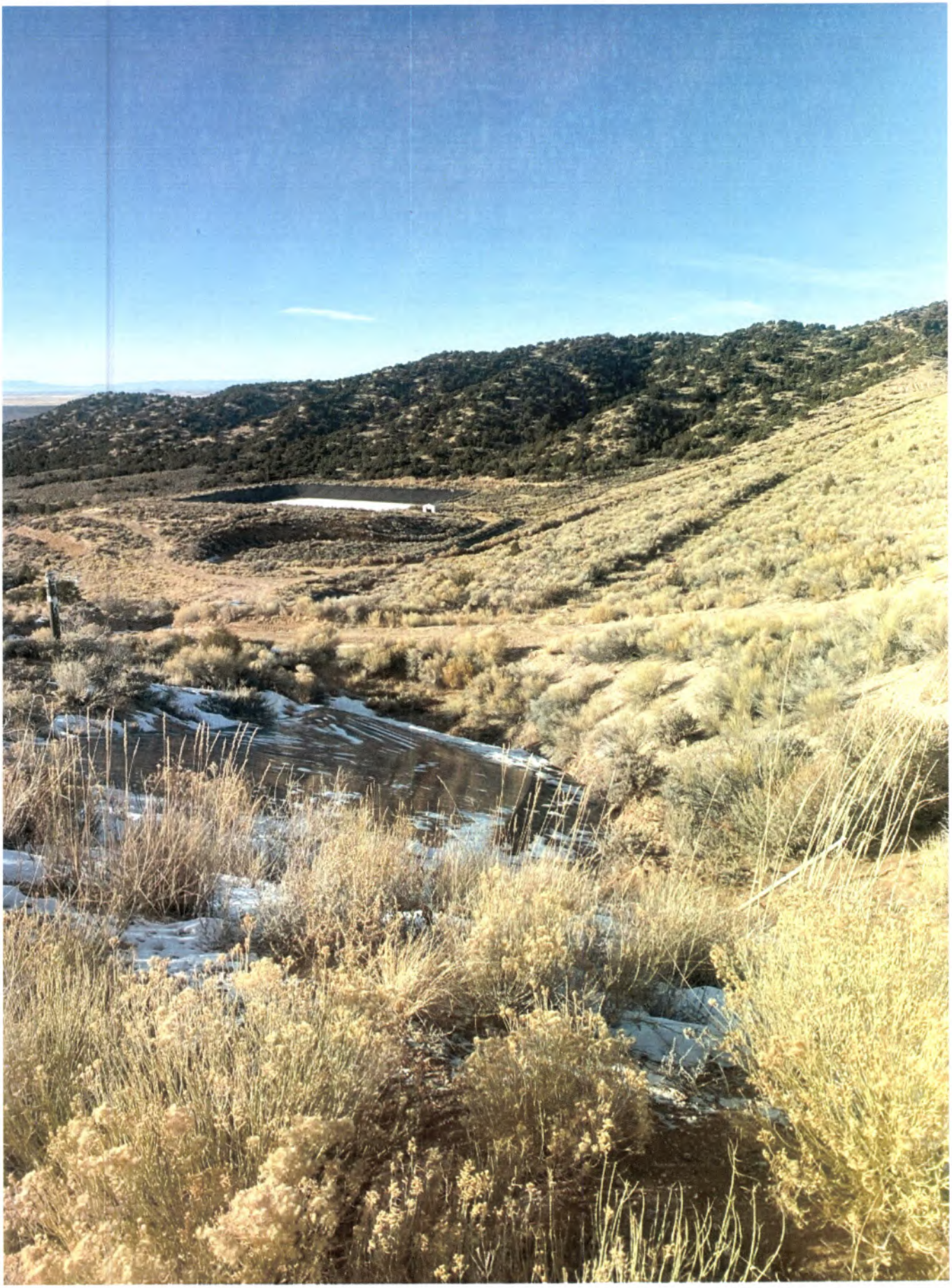
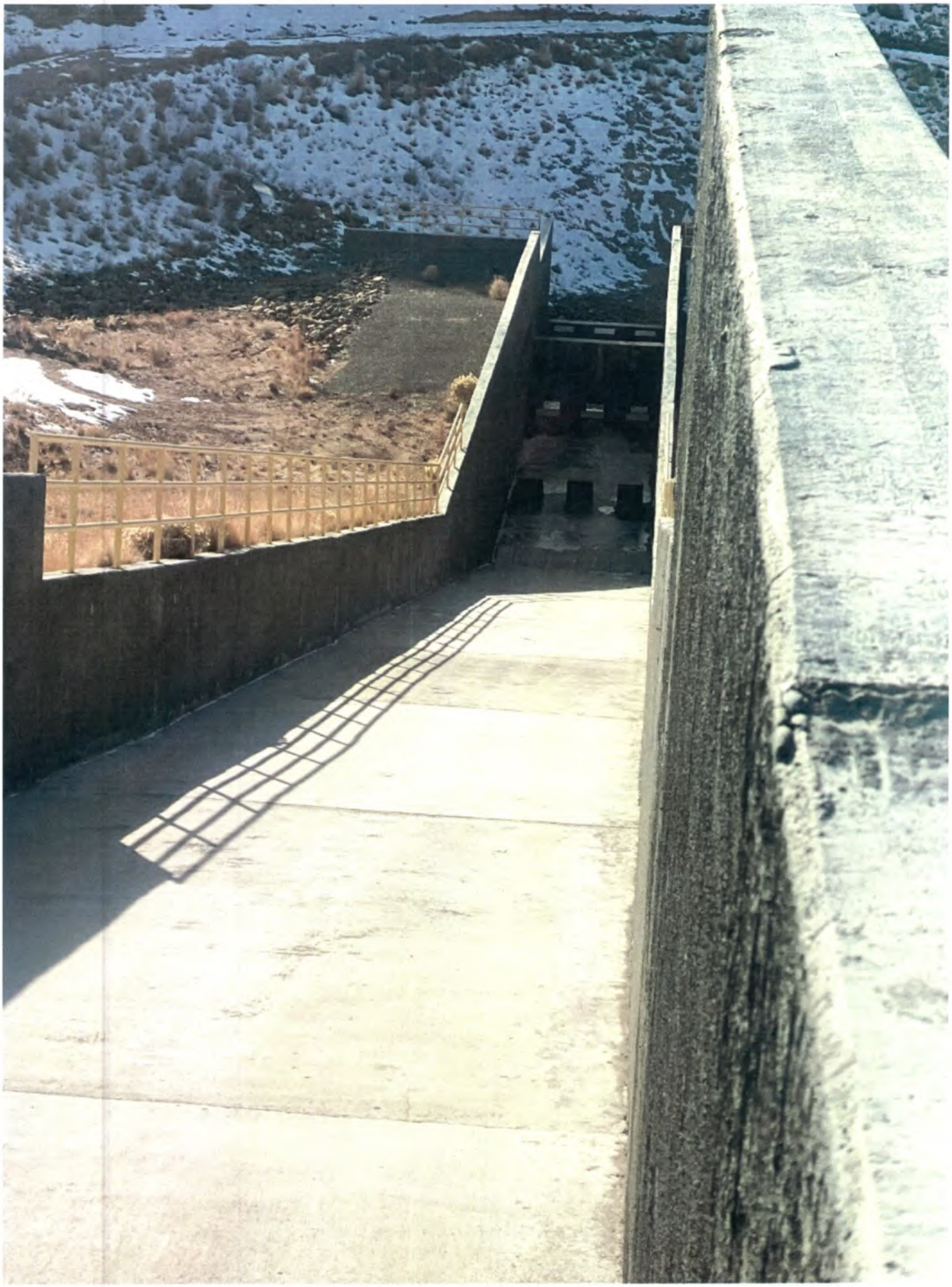
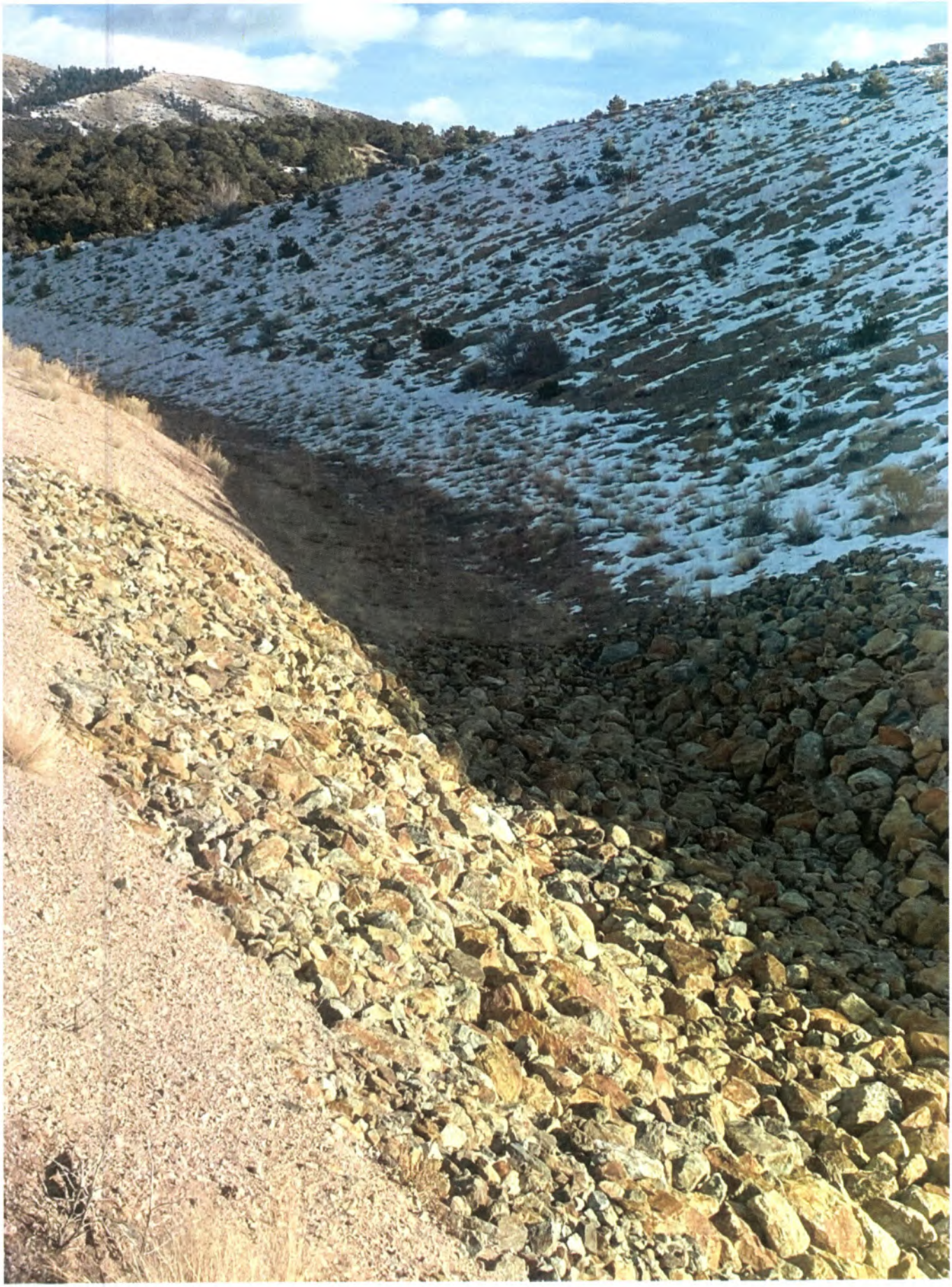








APPENDIX B
MONTHLY REPORTS & MONTHLY AND QUARTERLY SAMPLING RESULTS

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

February 9, 2022

Mr. Lucas J. West
State of Colorado
Colorado Department of Reclamation, Mining, & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: Battle Mountain Resources, Inc.
San Luis Project - M-88-112
January 2022 Monthly Report

Dear Mr. West:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI) "San Luis Project" (M-88-112) for the month of January 2022. Surface and groundwater monitoring and analysis were completed for all the required sites during the month as specified in the TR-32 Quality Assurance and Quality Control (QA/QC) Plan.

Tailing Facility / Leak Detection System

The six lysimeters which are a part of the Lined Tailing Facility (LTF) leak detection system were inspected and verified for proper vacuum and operation. As shown in Table 1, there was no pore space water found to be present in any of the six lysimeter collection pans, therefore, no sampling or laboratory analysis was required.

Table 1 – Monthly Lysimeter Monitoring

Lysimeter Identification	Observation Date	Depth to Water (feet)
LS1R2	01/31/2022	DRY
LS2R2	01/31/2022	DRY
LS3R	01/31/2022	DRY
LD1R2	01/31/2022	DRY
LD2R2	01/31/2022	DRY
LD3R	01/31/2022	DRY

The ten piezometers located on the tailing impoundment main embankment were inspected and measured for depth to water. The depths to water found for each piezometer are shown in Table 2. All piezometers were either dry or contained less than twelve inches of water.

Table 2 – Monthly Piezometer Elevations

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	01/31/2022	72.46	DRY	N/A
P7	01/31/2022	92.50	92.29	0.21
P8	01/31/2022	97.51	96.58	0.93
P9	01/31/2022	72.30	71.93	0.37
P10	01/31/2022	58.30	57.51	0.79
P11	01/31/2022	41.80	41.40	0.40
P12	01/31/2022	41.71	41.65	0.06
P13	01/31/2022	41.34	41.02	0.32
P14	01/31/2022	41.24	DRY	N/A
P15	01/31/2022	41.10	40.87	0.23

The leak detection system at the LTF Collection Pond was inspected January 31, 2022 and 910 gallons were evacuated from the leak detection system and pumped to the LTF. The LTF underdrain system was visually inspected January 31, 2022 and the flow rate was measured to be approximately 28.4 gallons per minute (gpm).

West Pit Waste Water Treatment Plant

During the month of January 2022, the West Pit Waste Water Treatment Plant (WWTP) was operated intermittently (3 to 4 days per week) under Colorado Department of Public Health and Environment (CDPHE) CDPS Permit No. CO0045675 for discharge into the Rito Seco alluvial aquifer. During the month, 6,593,500 gallons (20.2 acre-feet) of treated water was discharged to the Rito Seco and 287,600 gallons (0.88 acre-feet) of water was transferred from the West Pit to the Lined Tailing Facility (LTF). Additionally, no water was reinfiltrated into the West Pit in January.

BMRI performed the monthly visual seepage expression inspections on January 31, 2022 in the historic seepage area identified in Figure 2 of the permit. No seepage expressions were observed in the historic seepage area.

BMRI measured the monthly West Pit backfill, alluvial and monitoring wells as required under in the QA/QC Plan. Measurements obtained for the monthly wells are shown in Table 3.

Table 3 – Monthly and Quarterly Groundwater Depth to Water

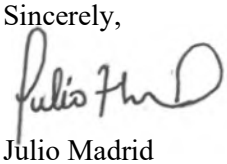
Monitoring Well Identification	Observation Date	Depth to Water (ft)
BF-4	01/31/2022	24.90
BF-5R	01/31/2022	30.83
BF-6	01/31/2022	30.96
M-6	01/31/2022	DRY
M-7	01/31/2022	DRY
M-8	01/31/2022	DRY
M-9	01/31/2022	141.21
M-10	01/31/2022	24.40
M-11R	01/31/2022	38.71
M-12	01/31/2022	174.30
M-13R	01/31/2022	125.51
M-14	01/31/2022	130.34
M-16	01/31/2022	23.80
M-17	01/31/2022	30.29

Table 3 Continued – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
M-18	01/31/2022	26.53
M-19	01/31/2022	24.51
M-21	01/31/2022	18.79
M-22	01/31/2022	17.16
M-23	01/31/2022	43.15
M-24	01/31/2022	25.52
M-26	01/31/2022	14.39
M-31	01/31/2022	38.04
M-32	01/31/2022	46.44
M-33	01/31/2022	48.17
M-34	01/31/2022	19.88

Should you have any questions or comments, please do not hesitate to call me at (719) 379-0538.

Sincerely,



Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Alan Fosdick, Engineering Analytics, Inc.

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

March 8, 2022

Mr. Lucas J. West
State of Colorado
Colorado Department of Reclamation, Mining, & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: Battle Mountain Resources, Inc.
San Luis Project - M-88-112
February 2022 Monthly Report

Dear Mr. West:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI) "San Luis Project" (M-88-112) for the month of February 2022. Surface and groundwater monitoring and analysis were completed for all the required sites during the month as specified in the TR-32 Quality Assurance and Quality Control (QA/QC) Plan.

Tailing Facility / Leak Detection System

The six lysimeters which are a part of the Lined Tailing Facility (LTF) leak detection system were inspected and verified for proper vacuum and operation. As shown in Table 1, there was no pore space water found to be present in any of the six lysimeter collection pans, therefore, no sampling or laboratory analysis was required.

Table 1 – Monthly Lysimeter Monitoring

Lysimeter Identification	Observation Date	Depth to Water (feet)
LS1R2	02/28/2022	DRY
LS2R2	02/28/2022	DRY
LS3R	02/28/2022	DRY
LD1R2	02/28/2022	DRY
LD2R2	02/28/2022	DRY
LD3R	02/28/2022	DRY

The ten piezometers located on the tailing impoundment main embankment were inspected and measured for depth to water. The depths to water found for each piezometer are shown in Table 2. All piezometers were either dry or contained less than twelve inches of water.

Table 2 – Monthly Piezometer Elevations

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	02/28/2022	72.46	DRY	N/A
P7	02/28/2022	92.50	92.27	0.23
P8	02/28/2022	97.51	96.58	0.93
P9	02/28/2022	72.30	71.92	0.38
P10	02/28/2022	58.30	57.46	0.84
P11	02/28/2022	41.80	41.41	0.39
P12	02/28/2022	41.71	41.65	0.06
P13	02/28/2022	41.34	41.02	0.32
P14	02/28/2022	41.24	DRY	N/A
P15	02/28/2022	41.10	40.86	0.24

The leak detection system at the LTF Collection Pond was inspected February 28, 2022 and 890 gallons were evacuated from the leak detection system and pumped to the LTF. The LTF underdrain system was visually inspected February 28, 2022 and the flow rate was measured to be approximately 31.5 gallons per minute (gpm).

West Pit Waste Water Treatment Plant

During the month of February 2022, the West Pit Waste Water Treatment Plant (WWTP) was operated intermittently (3 to 4 days per week) under Colorado Department of Public Health and Environment (CDPHE) CDPS Permit No. CO0045675 for discharge into the Rito Seco alluvial aquifer. During the month, 5,892,400 gallons (18.1 acre-feet) of treated water was discharged to the Rito Seco and 345,100 gallons (1.06 acre-feet) of water was transferred from the West Pit to the Lined Tailing Facility (LTF). Additionally, no water was reinfiltrated into the West Pit in February.

BMRI performed the monthly visual seepage expression inspections on February 28, 2022 in the historic seepage area identified in Figure 2 of the permit. No seepage expressions were observed in the historic seepage area.

BMRI measured the monthly West Pit backfill, alluvial and monitoring wells as required under in the QA/QC Plan. Measurements obtained for the monthly wells are shown in Table 3.

Table 3 – Monthly and Quarterly Groundwater Depth to Water

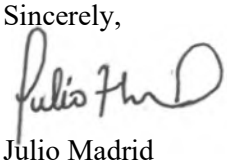
Monitoring Well Identification	Observation Date	Depth to Water (ft)
BF-4	02/28/2022	24.88
BF-5R	02/28/2022	30.80
BF-6	02/28/2022	30.95
M-6	02/28/2022	DRY
M-7	02/28/2022	DRY
M-8	02/28/2022	DRY
M-9	02/28/2022	141.59
M-10	02/28/2022	24.50
M-11R	02/28/2022	39.19
M-12	02/28/2022	174.61
M-13R	02/28/2022	125.83
M-14	02/28/2022	130.66
M-16	02/28/2022	23.83
M-17	02/28/2022	30.32

Table 3 Continued – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
M-18	02/28/2022	26.44
M-19	02/28/2022	24.55
M-21	02/28/2022	18.85
M-22	02/28/2022	17.26
M-23	02/28/2022	43.51
M-24	02/28/2022	26.00
M-26	02/28/2022	14.75
M-31	02/28/2022	38.53
M-32	02/28/2022	48.88
M-33	02/28/2022	48.66
M-34	02/28/2022	19.97

Should you have any questions or comments, please do not hesitate to call me at (719) 379-0538.

Sincerely,



Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Alan Fosdick, Engineering Analytics, Inc.

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

April 8, 2022

Mr. Lucas J. West
State of Colorado
Colorado Department of Reclamation, Mining, & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: Battle Mountain Resources, Inc.
San Luis Project - M-88-112
March 2022 Monthly Report

Dear Mr. West:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI) "San Luis Project" (M-88-112) for the month of March 2022. Surface and groundwater monitoring and analysis were completed for all the required sites during the month as specified in the TR-32 Quality Assurance and Quality Control (QA/QC) Plan.

Tailing Facility / Leak Detection System

The six lysimeters which are a part of the Lined Tailing Facility (LTF) leak detection system were inspected and verified for proper vacuum and operation. As shown in Table 1, there was no pore space water found to be present in any of the six lysimeter collection pans, therefore, no sampling or laboratory analysis was required.

Table 1 – Monthly Lysimeter Monitoring

Lysimeter Identification	Observation Date	Depth to Water (feet)
LS1R2	03/31/2022	DRY
LS2R2	03/31/2022	DRY
LS3R	03/31/2022	DRY
LD1R2	03/31/2022	DRY
LD2R2	03/31/2022	DRY
LD3R	03/31/2022	DRY

The ten piezometers located on the tailing impoundment main embankment were inspected and measured for depth to water. The depths to water found for each piezometer are shown in Table 2. All piezometers were either dry or contained less than twelve inches of water.

Table 2 – Monthly Piezometer Elevations

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	03/31/2022	72.46	DRY	N/A
P7	03/31/2022	92.50	92.29	0.21
P8	03/31/2022	97.51	96.58	0.93
P9	03/31/2022	72.30	71.92	0.38
P10	03/31/2022	58.30	57.48	0.82
P11	03/31/2022	41.80	41.41	0.39
P12	03/31/2022	41.71	41.65	0.06
P13	03/31/2022	41.34	41.01	0.33
P14	03/31/2022	41.24	DRY	N/A
P15	03/31/2022	41.10	40.87	0.23

The leak detection system at the LTF Collection Pond was inspected March 31, 2022 and 830 gallons were evacuated from the leak detection system and pumped to the LTF. The LTF underdrain system was visually inspected March 31, 2022 and the flow rate was measured to be approximately 31.0 gallons per minute (gpm).

West Pit Waste Water Treatment Plant

During the month of March 2022, the West Pit Waste Water Treatment Plant (WWTP) was operated intermittently (3 to 4 days per week) under Colorado Department of Public Health and Environment (CDPHE) CDPS Permit No. CO0045675 for discharge into the Rito Seco alluvial aquifer. During the month, 7,218,800 gallons (22.2 acre-feet) of treated water was discharged to the Rito Seco and 287,000 gallons (0.88 acre-feet) of water was transferred from the West Pit to the Lined Tailing Facility (LTF). Additionally, no water was reinfiltrated into the West Pit in March.

BMRI performed the monthly visual seepage expression inspections on March 31, 2022 in the historic seepage area identified in Figure 2 of the permit. No seepage expressions were observed in the historic seepage area.

BMRI measured the monthly West Pit backfill, alluvial and monitoring wells as required under in the QA/QC Plan. Measurements obtained for the monthly wells are shown in Table 3.

Table 3 – Monthly and Quarterly Groundwater Depth to Water

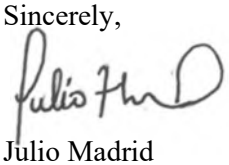
Monitoring Well Identification	Observation Date	Depth to Water (ft)
BF-4	03/31/2022	24.88
BF-5R	03/31/2022	30.82
BF-6	03/31/2022	30.95
M-6	03/31/2022	DRY
M-7	03/31/2022	DRY
M-8	03/31/2022	DRY
M-9	03/31/2022	141.07
M-10	03/31/2022	24.49
M-11R	03/31/2022	39.46
M-12	03/31/2022	174.11
M-13R	03/31/2022	125.32
M-14	03/31/2022	130.20
M-16	03/31/2022	23.60
M-17	03/31/2022	30.33

Table 3 Continued – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
M-18	03/31/2022	26.14
M-19	03/31/2022	24.11
M-21	03/31/2022	18.64
M-22	03/31/2022	17.25
M-23	03/31/2022	43.74
M-24	03/31/2022	25.81
M-26	03/31/2022	14.62
M-31	03/31/2022	38.77
M-32	03/31/2022	47.97
M-33	03/31/2022	51.90
M-34	03/31/2022	19.73

Should you have any questions or comments, please do not hesitate to call me at (719) 379-0538.

Sincerely,



Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Alan Fosdick, Engineering Analytics, Inc.

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

May 8, 2022

Mr. Lucas J. West
State of Colorado
Colorado Department of Reclamation, Mining, & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: Battle Mountain Resources, Inc.
San Luis Project - M-88-112
April 2022 Monthly Report

Dear Mr. West:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI) "San Luis Project" (M-88-112) for the month of April 2022. Surface and groundwater monitoring and analysis were completed for all the required sites during the month as specified in the TR-32 Quality Assurance and Quality Control (QA/QC) Plan.

Tailing Facility / Leak Detection System

The six lysimeters which are a part of the Lined Tailing Facility (LTF) leak detection system were inspected and verified for proper vacuum and operation. As shown in Table 1, there was no pore space water found to be present in any of the six lysimeter collection pans, therefore, no sampling or laboratory analysis was required.

Table 1 – Monthly Lysimeter Monitoring

Lysimeter Identification	Observation Date	Depth to Water (feet)
LS1R2	04/27/2022	DRY
LS2R2	04/27/2022	DRY
LS3R	04/27/2022	DRY
LD1R2	04/27/2022	DRY
LD2R2	04/27/2022	DRY
LD3R	04/27/2022	DRY

The ten piezometers located on the tailing impoundment main embankment were inspected and measured for depth to water. The depths to water found for each piezometer are shown in Table 2. All piezometers were either dry or contained less than twelve inches of water.

Table 2 – Monthly Piezometer Elevations

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	04/27/2022	72.46	DRY	N/A
P7	04/27/2022	92.50	92.29	0.21
P8	04/27/2022	97.51	96.58	0.93
P9	04/27/2022	72.30	71.93	0.37
P10	04/27/2022	58.30	57.47	0.83
P11	04/27/2022	41.80	41.40	0.40
P12	04/27/2022	41.71	41.66	0.05
P13	04/27/2022	41.34	41.02	0.32
P14	04/27/2022	41.24	DRY	N/A
P15	04/27/2022	41.10	40.87	0.23

The leak detection system at the LTF Collection Pond was inspected April 27, 2022 and 840 gallons were evacuated from the leak detection system and pumped to the LTF. The LTF underdrain system was visually inspected April 27, 2022 and the flow rate was measured to be approximately 32.0 gallons per minute (gpm).

West Pit Waste Water Treatment Plant

During the month of April 2022, the West Pit Waste Water Treatment Plant (WWTP) was operated intermittently (3 to 4 days per week) under Colorado Department of Public Health and Environment (CDPHE) CDPS Permit No. CO0045675 for discharge into the Rito Seco alluvial aquifer. During the month, 6,329,500 gallons (19.4 acre-feet) of treated water was discharged to the Rito Seco and 358,000 gallons (1.10 acre-feet) of water was transferred from the West Pit to the Lined Tailing Facility (LTF). Additionally, no water was reinfiltrated into the West Pit in April.

BMRI performed the monthly visual seepage expression inspections on April 28, 2022 in the historic seepage area identified in Figure 2 of the permit. No seepage expressions were observed in the historic seepage area.

BMRI measured the monthly West Pit backfill, alluvial and monitoring wells as required under in the QA/QC Plan. Measurements obtained for the monthly wells are shown in Table 3.

Table 3 – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
BF-4	04/28/2022	24.80
BF-5R	04/28/2022	30.73
BF-6	04/28/2022	30.85
M-6	04/28/2022	DRY
M-7	04/28/2022	DRY
M-8	04/28/2022	DRY
M-9	04/28/2022	141.35
M-10	04/28/2022	24.37
M-11R	04/28/2022	39.27
M-12	04/28/2022	174.39
M-13R	04/28/2022	125.61
M-14	04/28/2022	130.46
M-16	04/28/2022	23.17
M-17	04/28/2022	29.92

Table 3 Continued – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
M-18	04/28/2022	25.22
M-19	04/28/2022	25.53
M-21	04/28/2022	18.23
M-22	04/28/2022	16.91
M-23	04/28/2022	43.63
M-24	04/28/2022	25.67
M-26	04/28/2022	14.46
M-31	04/28/2022	38.60
M-32	04/28/2022	49.60
M-33	04/28/2022	51.77
M-34	04/28/2022	19.52

Should you have any questions or comments, please do not hesitate to call me at (719) 379-0538.

Sincerely,

Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Alan Fosdick, Engineering Analytics, Inc.

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

June 8, 2022

Mr. Lucas J. West
State of Colorado
Colorado Department of Reclamation, Mining, & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: Battle Mountain Resources, Inc.
San Luis Project - M-88-112
May 2022 Monthly Report

Dear Mr. West:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI) "San Luis Project" (M-88-112) for the month of May 2022. Surface and groundwater monitoring and analysis were completed for all the required sites during the month as specified in the TR-32 Quality Assurance and Quality Control (QA/QC) Plan.

Tailing Facility / Leak Detection System

The six lysimeters which are a part of the Lined Tailing Facility (LTF) leak detection system were inspected and verified for proper vacuum and operation. As shown in Table 1, there was no pore space water found to be present in any of the six lysimeter collection pans, therefore, no sampling or laboratory analysis was required.

Table 1 – Monthly Lysimeter Monitoring

Lysimeter Identification	Observation Date	Depth to Water (feet)
LS1R2	05/31/2022	DRY
LS2R2	05/31/2022	DRY
LS3R	05/31/2022	DRY
LD1R2	05/31/2022	DRY
LD2R2	05/31/2022	DRY
LD3R	05/31/2022	DRY

The ten piezometers located on the tailing impoundment main embankment were inspected and measured for depth to water. The depths to water found for each piezometer are shown in Table 2. All piezometers were either dry or contained less than twelve inches of water.

Table 2 – Monthly Piezometer Elevations

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	05/31/2022	72.46	DRY	N/A
P7	05/31/2022	92.50	92.28	0.22
P8	05/31/2022	97.51	96.64	0.87
P9	05/31/2022	72.30	71.94	0.36
P10	05/31/2022	58.30	57.49	0.81
P11	05/31/2022	41.80	41.39	0.41
P12	05/31/2022	41.71	41.65	0.06
P13	05/31/2022	41.34	41.01	0.33
P14	05/31/2022	41.24	DRY	N/A
P15	05/31/2022	41.10	40.87	0.23

The leak detection system at the LTF Collection Pond was inspected May 31, 2022 and 870 gallons were evacuated from the leak detection system and pumped to the LTF. The LTF underdrain system was visually inspected May 31, 2022 and the flow rate was measured to be approximately 32.0 gallons per minute (gpm).

West Pit Waste Water Treatment Plant

During the month of May 2022, the West Pit Waste Water Treatment Plant (WWTP) was operated intermittently (3 to 4 days per week) under Colorado Department of Public Health and Environment (CDPHE) CDPS Permit No. CO0045675 for discharge into the Rito Seco alluvial aquifer. During the month, 7,167,700 gallons (22.0 acre-feet) of treated water was discharged to the Rito Seco and 390,500 gallons (1.20 acre-feet) of water was transferred from the West Pit to the Lined Tailing Facility (LTF). Additionally, no water was reinfiltrated into the West Pit in May.

BMRI performed the monthly visual seepage expression inspections on May 31, 2022 in the historic seepage area identified in Figure 2 of the permit. No seepage expressions were observed in the historic seepage area.

BMRI measured the monthly West Pit backfill, alluvial and monitoring wells as required under in the QA/QC Plan. Measurements obtained for the monthly wells are shown in Table 3.

Table 3 – Monthly and Quarterly Groundwater Depth to Water

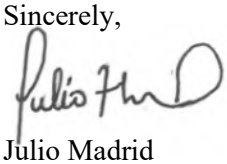
Monitoring Well Identification	Observation Date	Depth to Water (ft)
BF-4	05/31/2022	24.90
BF-5R	05/31/2022	30.79
BF-6	05/31/2022	30.92
M-6	05/31/2022	DRY
M-7	05/31/2022	DRY
M-8	05/31/2022	DRY
M-9	05/31/2022	141.43
M-10	05/31/2022	24.54
M-11R	05/31/2022	39.18
M-12	05/31/2022	174.58
M-13R	05/31/2022	125.85
M-14	05/31/2022	130.91
M-16	05/31/2022	22.78
M-17	05/31/2022	29.95

Table 3 Continued – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
M-18	05/31/2022	25.85
M-19	05/31/2022	23.33
M-21	05/31/2022	18.35
M-22	05/31/2022	17.02
M-23	05/31/2022	43.65
M-24	05/31/2022	25.64
M-26	05/31/2022	14.50
M-31	05/31/2022	39.51
M-32	05/31/2022	46.44
M-33	05/31/2022	48.65
M-34	05/31/2022	19.49

Should you have any questions or comments, please do not hesitate to call me at (719) 379-0538.

Sincerely,



Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Alan Fosdick, Engineering Analytics, Inc.

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

July 6, 2022

Mr. Lucas J. West
State of Colorado
Colorado Department of Reclamation, Mining, & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: Battle Mountain Resources, Inc.
San Luis Project - M-88-112
June 2022 Monthly Report

Dear Mr. West:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI) "San Luis Project" (M-88-112) for the month of June 2022. Surface and groundwater monitoring and analysis were completed for all the required sites during the month as specified in the TR-32 Quality Assurance and Quality Control (QA/QC) Plan.

Tailing Facility / Leak Detection System

The six lysimeters which are a part of the Lined Tailing Facility (LTF) leak detection system were inspected and verified for proper vacuum and operation. As shown in Table 1, there was no pore space water found to be present in any of the six lysimeter collection pans, therefore, no sampling or laboratory analysis was required.

Table 1 – Monthly Lysimeter Monitoring

Lysimeter Identification	Observation Date	Depth to Water (feet)
LS1R2	06/30/2022	DRY
LS2R2	06/30/2022	DRY
LS3R	06/30/2022	DRY
LD1R2	06/30/2022	DRY
LD2R2	06/30/2022	DRY
LD3R	06/30/2022	DRY

The ten piezometers located on the tailing impoundment main embankment were inspected and measured for depth to water. The depths to water found for each piezometer are shown in Table 2. All piezometers were either dry or contained less than twelve inches of water.

Table 2 – Monthly Piezometer Elevations

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	06/30/2022	72.46	DRY	N/A
P7	06/30/2022	92.50	92.30	0.20
P8	06/30/2022	97.51	96.62	0.89
P9	06/30/2022	72.30	71.93	0.37
P10	06/30/2022	58.30	57.48	0.82
P11	06/30/2022	41.80	41.41	0.39
P12	06/30/2022	41.71	41.65	0.06
P13	06/30/2022	41.34	41.01	0.33
P14	06/30/2022	41.24	DRY	N/A
P15	06/30/2022	41.10	40.87	0.23

The leak detection system at the LTF Collection Pond was inspected June 30, 2022 and 890 gallons were evacuated from the leak detection system and pumped to the LTF. The LTF underdrain system was visually inspected June 30, 2022 and the flow rate was measured to be approximately 32.0 gallons per minute (gpm).

West Pit Waste Water Treatment Plant

During the month of June 2022, the West Pit Waste Water Treatment Plant (WWTP) was operated intermittently (3 to 4 days per week) under Colorado Department of Public Health and Environment (CDPHE) CDPS Permit No. CO0045675 for discharge into the Rito Seco alluvial aquifer. During the month, 8,090,700 gallons (24.8 acre-feet) of treated water was discharged to the Rito Seco and 410,200 gallons (1.26 acre-feet) of water was transferred from the West Pit to the Lined Tailing Facility (LTF). Additionally, no water was reinfiltrated into the West Pit in June.

BMRI performed the monthly visual seepage expression inspections on June 30, 2022 in the historic seepage area identified in Figure 2 of the permit. No seepage expressions were observed in the historic seepage area.

BMRI measured the monthly West Pit backfill, alluvial and monitoring wells as required under in the QA/QC Plan. Measurements obtained for the monthly wells are shown in Table 3.

Table 3 – Monthly and Quarterly Groundwater Depth to Water

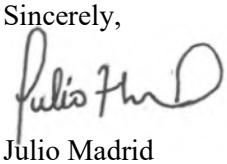
Monitoring Well Identification	Observation Date	Depth to Water (ft)
BF-4	06/30/2022	24.85
BF-5R	06/30/2022	30.79
BF-6	06/30/2022	30.91
M-6	06/30/2022	DRY
M-7	06/30/2022	DRY
M-8	06/30/2022	DRY
M-9	06/30/2022	141.33
M-10	06/30/2022	24.52
M-11R	06/30/2022	39.00
M-12	06/30/2022	174.43
M-13R	06/30/2022	125.70
M-14	06/30/2022	130.54
M-16	06/30/2022	22.80
M-17	06/30/2022	29.86

Table 3 Continued – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
M-18	06/30/2022	24.62
M-19	06/30/2022	23.19
M-21	06/30/2022	18.18
M-22	06/30/2022	16.98
M-23	06/30/2022	43.50
M-24	06/30/2022	25.55
M-26	06/30/2022	14.42
M-31	06/30/2022	38.37
M-32	06/30/2022	46.30
M-33	06/30/2022	48.43
M-34	06/30/2022	19.62

Should you have any questions or comments, please do not hesitate to call me at (719) 379-0538.

Sincerely,



Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Alan Fosdick, Engineering Analytics, Inc.

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

August 8, 2022

Mr. Lucas J. West
State of Colorado
Colorado Department of Reclamation, Mining, & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: Battle Mountain Resources, Inc.
San Luis Project - M-88-112
July 2022 Monthly Report

Dear Mr. West:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI) "San Luis Project" (M-88-112) for the month of July 2022. Surface and groundwater monitoring and analysis were completed for all the required sites during the month as specified in the TR-32 Quality Assurance and Quality Control (QA/QC) Plan.

Tailing Facility / Leak Detection System

The six lysimeters which are a part of the Lined Tailing Facility (LTF) leak detection system were inspected and verified for proper vacuum and operation. As shown in Table 1, there was no pore space water found to be present in any of the six lysimeter collection pans, therefore, no sampling or laboratory analysis was required.

Table 1 – Monthly Lysimeter Monitoring

Lysimeter Identification	Observation Date	Depth to Water (feet)
LS1R2	07/28/2022	DRY
LS2R2	07/28/2022	DRY
LS3R	07/28/2022	DRY
LD1R2	07/28/2022	DRY
LD2R2	07/28/2022	DRY
LD3R	07/28/2022	DRY

The ten piezometers located on the tailing impoundment main embankment were inspected and measured for depth to water. The depths to water found for each piezometer are shown in Table 2. All piezometers were either dry or contained less than twelve inches of water.

Table 2 – Monthly Piezometer Elevations

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	07/28/2022	72.46	DRY	N/A
P7	07/28/2022	92.50	92.30	0.20
P8	07/28/2022	97.51	96.65	0.86
P9	07/28/2022	72.30	71.94	0.36
P10	07/28/2022	58.30	57.49	0.81
P11	07/28/2022	41.80	41.41	0.39
P12	07/28/2022	41.71	41.65	0.06
P13	07/28/2022	41.34	41.01	0.33
P14	07/28/2022	41.24	DRY	N/A
P15	07/28/2022	41.10	40.87	0.23

The leak detection system at the LTF Collection Pond was inspected July 28, 2022 and 880 gallons were evacuated from the leak detection system and pumped to the LTF. The LTF underdrain system was visually inspected July 28, 2022 and the flow rate was measured to be approximately 33.0 gallons per minute (gpm).

West Pit Waste Water Treatment Plant

During the month of July 2022, the West Pit Waste Water Treatment Plant (WWTP) was operated intermittently (3 to 4 days per week) under Colorado Department of Public Health and Environment (CDPHE) CDPS Permit No. CO0045675 for discharge into the Rito Seco alluvial aquifer. During the month, 7,455,200 gallons (22.9 acre-feet) of treated water was discharged to the Rito Seco and 395,000 gallons (1.21 acre-feet) of water was transferred from the West Pit to the Lined Tailing Facility (LTF). Additionally, no water was reinfiltrated into the West Pit in July.

BMRI performed the monthly visual seepage expression inspections on July 28, 2022 in the historic seepage area identified in Figure 2 of the permit. No seepage expressions were observed in the historic seepage area.

BMRI measured the monthly West Pit backfill, alluvial and monitoring wells as required under in the QA/QC Plan. Measurements obtained for the monthly wells are shown in Table 3.

Table 3 – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
BF-4	07/28/2022	24.90
BF-5R	07/28/2022	30.83
BF-6	07/28/2022	30.97
M-6	07/28/2022	DRY
M-7	07/28/2022	DRY
M-8	07/28/2022	DRY
M-9	07/28/2022	141.42
M-10	07/28/2022	24.32
M-11R	07/28/2022	38.61
M-12	07/28/2022	174.57
M-13R	07/28/2022	125.79
M-14	07/28/2022	130.60
M-16	07/28/2022	22.96
M-17	07/28/2022	30.10

Table 3 Continued – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
M-18	07/28/2022	24.95
M-19	07/28/2022	23.41
M-21	07/28/2022	18.10
M-22	07/28/2022	16.80
M-23	07/28/2022	43.12
M-24	07/28/2022	25.26
M-26	07/28/2022	14.31
M-31	07/28/2022	37.94
M-32	07/28/2022	41.71
M-33	07/28/2022	48.59
M-34	07/28/2022	19.92

Should you have any questions or comments, please do not hesitate to call me at (719) 379-0538.

Sincerely,

Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Alan Fosdick, Engineering Analytics, Inc.

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

September 8, 2022

Mr. Lucas J. West
State of Colorado
Colorado Department of Reclamation, Mining, & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: Battle Mountain Resources, Inc.
San Luis Project - M-88-112
August 2022 Monthly Report

Dear Mr. West:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI) "San Luis Project" (M-88-112) for the month of August 2022. Surface and groundwater monitoring and analysis were completed for all the required sites during the month as specified in the TR-32 Quality Assurance and Quality Control (QA/QC) Plan.

Tailing Facility / Leak Detection System

The six lysimeters which are a part of the Lined Tailing Facility (LTF) leak detection system were inspected and verified for proper vacuum and operation. As shown in Table 1, there was no pore space water found to be present in any of the six lysimeter collection pans, therefore, no sampling or laboratory analysis was required.

Table 1 – Monthly Lysimeter Monitoring

Lysimeter Identification	Observation Date	Depth to Water (feet)
LS1R2	08/31/2022	DRY
LS2R2	08/31/2022	DRY
LS3R	08/31/2022	DRY
LD1R2	08/31/2022	DRY
LD2R2	08/31/2022	DRY
LD3R	08/31/2022	DRY

The ten piezometers located on the tailing impoundment main embankment were inspected and measured for depth to water. The depths to water found for each piezometer are shown in Table 2. All piezometers were either dry or contained less than twelve inches of water.

Table 2 – Monthly Piezometer Elevations

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	08/31/2022	72.46	DRY	N/A
P7	08/31/2022	92.50	DRY	N/A
P8	08/31/2022	97.51	96.65	0.86
P9	08/31/2022	72.30	71.93	0.37
P10	08/31/2022	58.30	57.49	0.81
P11	08/31/2022	41.80	41.40	0.40
P12	08/31/2022	41.71	41.65	0.06
P13	08/31/2022	41.34	41.00	0.34
P14	08/31/2022	41.24	DRY	N/A
P15	08/31/2022	41.10	40.86	0.24

The leak detection system at the LTF Collection Pond was inspected August 31, 2022 and 870 gallons were evacuated from the leak detection system and pumped to the LTF. The LTF underdrain system was visually inspected August 31, 2022 and the flow rate was measured to be approximately 32.5 gallons per minute (gpm).

West Pit Waste Water Treatment Plant

During the month of August 2022, the West Pit Waste Water Treatment Plant (WWTP) was operated intermittently (3 to 4 days per week) under Colorado Department of Public Health and Environment (CDPHE) CDPS Permit No. CO0045675 for discharge into the Rito Seco alluvial aquifer. During the month, 9,676,000 gallons (29.7 acre-feet) of treated water was discharged to the Rito Seco and 762,500 gallons (2.34 acre-feet) of water was transferred from the West Pit to the Lined Tailing Facility (LTF). Additionally, no water was reinfiltrated into the West Pit in August.

BMRI performed the monthly visual seepage expression inspections on August 31, 2022 in the historic seepage area identified in Figure 2 of the permit. No seepage expressions were observed in the historic seepage area.

BMRI measured the monthly West Pit backfill, alluvial and monitoring wells as required under in the QA/QC Plan. Measurements obtained for the monthly wells are shown in Table 3.

Table 3 – Monthly and Quarterly Groundwater Depth to Water

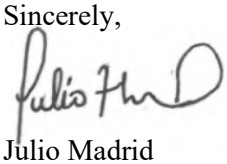
Monitoring Well Identification	Observation Date	Depth to Water (ft)
BF-4	08/31/2022	24.90
BF-5R	08/31/2022	30.79
BF-6	08/31/2022	30.89
M-6	08/31/2022	DRY
M-7	08/31/2022	DRY
M-8	08/31/2022	DRY
M-9	08/31/2022	141.38
M-10	08/31/2022	24.21
M-11R	08/31/2022	38.43
M-12	08/31/2022	174.47
M-13R	08/31/2022	125.73
M-14	08/31/2022	130.58
M-16	08/31/2022	21.84
M-17	08/31/2022	29.14

Table 3 Continued – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
M-18	08/31/2022	25.28
M-19	08/31/2022	23.81
M-21	08/31/2022	17.95
M-22	08/31/2022	16.48
M-23	08/31/2022	42.73
M-24	08/31/2022	25.01
M-26	08/31/2022	14.37
M-31	08/31/2022	37.79
M-32	08/31/2022	43.81
M-33	08/31/2022	46.81
M-34	08/31/2022	19.75

Should you have any questions or comments, please do not hesitate to call me at (719) 379-0538.

Sincerely,



Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Alan Fosdick, Engineering Analytics, Inc.

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

October 7, 2022

Mr. Lucas J. West
State of Colorado
Colorado Department of Reclamation, Mining, & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: Battle Mountain Resources, Inc.
San Luis Project - M-88-112
September 2022 Monthly Report

Dear Mr. West:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI) "San Luis Project" (M-88-112) for the month of September 2022. Surface and groundwater monitoring and analysis were completed for all the required sites during the month as specified in the TR-32 Quality Assurance and Quality Control (QA/QC) Plan.

Tailing Facility / Leak Detection System

The six lysimeters which are a part of the Lined Tailing Facility (LTF) leak detection system were inspected and verified for proper vacuum and operation. As shown in Table 1, there was no pore space water found to be present in any of the six lysimeter collection pans, therefore, no sampling or laboratory analysis was required.

Table 1 – Monthly Lysimeter Monitoring

Lysimeter Identification	Observation Date	Depth to Water (feet)
LS1R2	09/29/2022	DRY
LS2R2	09/29/2022	DRY
LS3R	09/29/2022	DRY
LD1R2	09/29/2022	DRY
LD2R2	09/29/2022	DRY
LD3R	09/29/2022	DRY

The ten piezometers located on the tailing impoundment main embankment were inspected and measured for depth to water. The depths to water found for each piezometer are shown in Table 2. All piezometers were either dry or contained less than twelve inches of water.

Table 2 – Monthly Piezometer Elevations

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	09/29/2022	72.46	DRY	N/A
P7	09/29/2022	92.50	DRY	N/A
P8	09/29/2022	97.51	96.65	0.86
P9	09/29/2022	72.30	71.93	0.37
P10	09/29/2022	58.30	57.48	0.82
P11	09/29/2022	41.80	41.40	0.40
P12	09/29/2022	41.71	41.64	0.07
P13	09/29/2022	41.34	41.00	0.34
P14	09/29/2022	41.24	DRY	N/A
P15	09/29/2022	41.10	40.85	0.25

The leak detection system at the LTF Collection Pond was inspected September 29, 2022 and 830 gallons were evacuated from the leak detection system and pumped to the LTF. The LTF underdrain system was visually inspected September 29, 2022 and the flow rate was measured to be approximately 33.0 gallons per minute (gpm).

West Pit Waste Water Treatment Plant

During the month of September 2022, the West Pit Waste Water Treatment Plant (WWTP) was operated intermittently (3 to 4 days per week) under Colorado Department of Public Health and Environment (CDPHE) CDPS Permit No. CO0045675 for discharge into the Rito Seco alluvial aquifer. During the month, 8,565,900 gallons (26.3 acre-feet) of treated water was discharged to the Rito Seco and 476,400 gallons (1.46 acre-feet) of water was transferred from the West Pit to the Lined Tailing Facility (LTF). Additionally, no water was reinfiltrated into the West Pit in September.

BMRI performed the monthly visual seepage expression inspections on September 29, 2022 in the historic seepage area identified in Figure 2 of the permit. No seepage expressions were observed in the historic seepage area.

BMRI measured the monthly West Pit backfill, alluvial and monitoring wells as required under in the QA/QC Plan. Measurements obtained for the monthly wells are shown in Table 3.

Table 3 – Monthly and Quarterly Groundwater Depth to Water

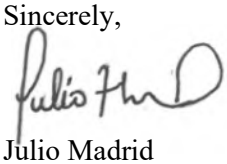
Monitoring Well Identification	Observation Date	Depth to Water (ft)
BF-4	09/29/2022	24.85
BF-5R	09/29/2022	30.83
BF-6	09/29/2022	31.06
M-6	09/29/2022	DRY
M-7	09/29/2022	DRY
M-8	09/29/2022	DRY
M-9	09/29/2022	141.44
M-10	09/29/2022	24.19
M-11R	09/29/2022	38.57
M-12	09/29/2022	174.59
M-13R	09/29/2022	125.83
M-14	09/29/2022	130.93
M-16	09/29/2022	21.35
M-17	09/29/2022	28.97

Table 3 Continued – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
M-18	09/29/2022	25.32
M-19	09/29/2022	23.81
M-21	09/29/2022	17.67
M-22	09/29/2022	16.45
M-23	09/29/2022	42.83
M-24	09/29/2022	25.15
M-26	09/29/2022	14.63
M-31	09/29/2022	39.93
M-32	09/29/2022	43.93
M-33	09/29/2022	46.49
M-34	09/29/2022	20.01

Should you have any questions or comments, please do not hesitate to call me at (719) 379-0538.

Sincerely,



Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Alan Fosdick, Engineering Analytics, Inc.

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

November 9, 2022

Mr. Lucas J. West
State of Colorado
Colorado Department of Reclamation, Mining, & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: Battle Mountain Resources, Inc.
San Luis Project - M-88-112
October 2022 Monthly Report

Dear Mr. West:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI) "San Luis Project" (M-88-112) for the month of October 2022. Surface and groundwater monitoring and analysis were completed for all the required sites during the month as specified in the TR-32 Quality Assurance and Quality Control (QA/QC) Plan.

Tailing Facility / Leak Detection System

The six lysimeters which are a part of the Lined Tailing Facility (LTF) leak detection system were inspected and verified for proper vacuum and operation. As shown in Table 1, there was no pore space water found to be present in any of the six lysimeter collection pans, therefore, no sampling or laboratory analysis was required.

Table 1 – Monthly Lysimeter Monitoring

Lysimeter Identification	Observation Date	Depth to Water (feet)
LS1R2	10/31/2022	DRY
LS2R2	10/31/2022	DRY
LS3R	10/31/2022	DRY
LD1R2	10/31/2022	DRY
LD2R2	10/31/2022	DRY
LD3R	10/31/2022	DRY

The ten piezometers located on the tailing impoundment main embankment were inspected and measured for depth to water. The depths to water found for each piezometer are shown in Table 2. All piezometers were either dry or contained less than twelve inches of water.

Table 2 – Monthly Piezometer Elevations

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	10/31/2022	72.46	DRY	N/A
P7	10/31/2022	92.50	DRY	N/A
P8	10/31/2022	97.51	96.64	0.87
P9	10/31/2022	72.30	71.92	0.38
P10	10/31/2022	58.30	57.48	0.82
P11	10/31/2022	41.80	41.39	0.41
P12	10/31/2022	41.71	41.65	0.06
P13	10/31/2022	41.34	41.00	0.34
P14	10/31/2022	41.24	DRY	N/A
P15	10/31/2022	41.10	40.86	0.24

The leak detection system at the LTF Collection Pond was inspected October 31, 2022 and 850 gallons were evacuated from the leak detection system and pumped to the LTF. The LTF underdrain system was visually inspected October 31, 2022 and the flow rate was measured to be approximately 32.5 gallons per minute (gpm).

West Pit Waste Water Treatment Plant

During the month of October 2022, the West Pit Waste Water Treatment Plant (WWTP) was operated intermittently (3 to 4 days per week) under Colorado Department of Public Health and Environment (CDPHE) CDPS Permit No. CO0045675 for discharge into the Rito Seco alluvial aquifer. During the month, 8,808,700 gallons (27.0 acre-feet) of treated water was discharged to the Rito Seco and 377,000 gallons (1.16 acre-feet) of water was transferred from the West Pit to the Lined Tailing Facility (LTF). Additionally, no water was reinfiltrated into the West Pit in October.

BMRI performed the monthly visual seepage expression inspections on October 31, 2022 in the historic seepage area identified in Figure 2 of the permit. No seepage expressions were observed in the historic seepage area.

BMRI measured the monthly West Pit backfill, alluvial and monitoring wells as required under in the QA/QC Plan. Measurements obtained for the monthly wells are shown in Table 3.

Table 3 – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
BF-4	10/31/2022	24.82
BF-5R	10/31/2022	30.81
BF-6	10/31/2022	30.86
M-6	10/31/2022	DRY
M-7	10/31/2022	DRY
M-8	10/31/2022	DRY
M-9	10/31/2022	141.25
M-10	10/31/2022	24.14
M-11R	10/31/2022	38.59
M-12	10/31/2022	174.41
M-13R	10/31/2022	125.48
M-14	10/31/2022	130.48
M-16	10/31/2022	21.34
M-17	10/31/2022	28.89

Table 3 Continued – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
M-18	10/31/2022	25.48
M-19	10/31/2022	23.79
M-21	10/31/2022	17.33
M-22	10/31/2022	15.99
M-23	10/31/2022	42.79
M-24	10/31/2022	25.09
M-26	10/31/2022	14.64
M-31	10/31/2022	37.98
M-32	10/31/2022	44.31
M-33	10/31/2022	44.95
M-34	10/31/2022	20.08

Should you have any questions or comments, please do not hesitate to call me at (719) 379-0538.

Sincerely,

Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Alan Fosdick, Engineering Analytics, Inc.

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

December 7, 2022

Mr. Lucas J. West
State of Colorado
Colorado Department of Reclamation, Mining, & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: Battle Mountain Resources, Inc.
San Luis Project - M-88-112
November 2022 Monthly Report

Dear Mr. West:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI) "San Luis Project" (M-88-112) for the month of November 2022. Surface and groundwater monitoring and analysis were completed for all the required sites during the month as specified in the TR-32 Quality Assurance and Quality Control (QA/QC) Plan.

Tailing Facility / Leak Detection System

The six lysimeters which are a part of the Lined Tailing Facility (LTF) leak detection system were inspected and verified for proper vacuum and operation. As shown in Table 1, there was no pore space water found to be present in any of the six lysimeter collection pans, therefore, no sampling or laboratory analysis was required.

Table 1 – Monthly Lysimeter Monitoring

Lysimeter Identification	Observation Date	Depth to Water (feet)
LS1R2	11/30/2022	DRY
LS2R2	11/30/2022	DRY
LS3R	11/30/2022	DRY
LD1R2	11/30/2022	DRY
LD2R2	11/30/2022	DRY
LD3R	11/30/2022	DRY

The ten piezometers located on the tailing impoundment main embankment were inspected and measured for depth to water. The depths to water found for each piezometer are shown in Table 2. All piezometers were either dry or contained less than twelve inches of water.

Table 2 – Monthly Piezometer Elevations

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	11/30/2022	72.46	DRY	N/A
P7	11/30/2022	92.50	DRY	N/A
P8	11/30/2022	97.51	96.68	0.83
P9	11/30/2022	72.30	71.94	0.36
P10	11/30/2022	58.30	57.47	0.83
P11	11/30/2022	41.80	41.40	0.40
P12	11/30/2022	41.71	41.64	0.07
P13	11/30/2022	41.34	40.99	0.35
P14	11/30/2022	41.24	DRY	N/A
P15	11/30/2022	41.10	40.85	0.25

The leak detection system at the LTF Collection Pond was inspected November 28, 2022 and 860 gallons were evacuated from the leak detection system and pumped to the LTF. The LTF underdrain system was visually inspected November 30, 2022 and the flow rate was measured to be approximately 32.0 gallons per minute (gpm).

West Pit Waste Water Treatment Plant

During the month of November 2022, the West Pit Waste Water Treatment Plant (WWTP) was operated intermittently (3 to 4 days per week) under Colorado Department of Public Health and Environment (CDPHE) CDPS Permit No. CO0045675 for discharge into the Rito Seco alluvial aquifer. During the month, 8,848,800 gallons (27.2 acre-feet) of treated water was discharged to the Rito Seco and 400,900 gallons (1.23 acre-feet) of water was transferred from the West Pit to the Lined Tailing Facility (LTF). Additionally, no water was reinfiltrated into the West Pit in November.

BMRI performed the monthly visual seepage expression inspections on November 30, 2022 in the historic seepage area identified in Figure 2 of the permit. No seepage expressions were observed in the historic seepage area.

BMRI measured the monthly West Pit backfill, alluvial and monitoring wells as required under in the QA/QC Plan. Measurements obtained for the monthly wells are shown in Table 3.

Table 3 – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
BF-4	11/30/2022	24.83
BF-5R	11/30/2022	30.79
BF-6	11/30/2022	30.84
M-6	11/30/2022	DRY
M-7	11/30/2022	DRY
M-8	11/30/2022	DRY
M-9	11/30/2022	141.24
M-10	11/30/2022	24.20
M-11R	11/30/2022	38.87
M-12	11/30/2022	174.39
M-13R	11/30/2022	125.62
M-14	11/30/2022	130.45
M-16	11/30/2022	21.32
M-17	11/30/2022	28.73

Table 3 Continued – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
M-18	11/30/2022	25.61
M-19	11/30/2022	23.91
M-21	11/30/2022	17.62
M-22	11/30/2022	16.17
M-23	11/30/2022	42.86
M-24	11/30/2022	25.18
M-26	11/30/2022	14.98
M-31	11/30/2022	38.24
M-32	11/30/2022	49.08
M-33	11/30/2022	48.35
M-34	11/30/2022	20.21

Should you have any questions or comments, please do not hesitate to call me at (719) 379-0538.

Sincerely,

Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Alan Fosdick, Engineering Analytics, Inc.

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San Luis Project
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(719) 379-0798

January 8, 2023

Mr. Lucas J. West
State of Colorado
Colorado Department of Reclamation, Mining, & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: Battle Mountain Resources, Inc.
San Luis Project - M-88-112
December 2022 Monthly Report

Dear Mr. West:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI) "San Luis Project" (M-88-112) for the month of December 2022. Surface and groundwater monitoring and analysis were completed for all the required sites during the month as specified in the TR-32 Quality Assurance and Quality Control (QA/QC) Plan.

Tailing Facility / Leak Detection System

The six lysimeters which are a part of the Lined Tailing Facility (LTF) leak detection system were inspected and verified for proper vacuum and operation. As shown in Table 1, there was no pore space water found to be present in any of the six lysimeter collection pans, therefore, no sampling or laboratory analysis was required.

Table 1 – Monthly Lysimeter Monitoring

Lysimeter Identification	Observation Date	Depth to Water (feet)
LS1R2	12/29/2022	DRY
LS2R2	12/29/2022	DRY
LS3R	12/29/2022	DRY
LD1R2	12/29/2022	DRY
LD2R2	12/29/2022	DRY
LD3R	12/29/2022	DRY

The ten piezometers located on the tailing impoundment main embankment were inspected and measured for depth to water. The depths to water found for each piezometer are shown in Table 2. All piezometers were either dry or contained less than twelve inches of water.

Table 2 – Monthly Piezometer Elevations

Monitoring Well Identification	Observation Date	Piezometer Depth (ft)	Depth to Water (ft)	Depth of Water (ft)
P6	12/30/2022	72.46	DRY	N/A
P7	12/30/2022	92.50	DRY	N/A
P8	12/30/2022	97.51	96.67	0.84
P9	12/30/2022	72.30	71.94	0.36
P10	12/30/2022	58.30	57.48	0.82
P11	12/30/2022	41.80	41.40	0.40
P12	12/30/2022	41.71	41.65	0.06
P13	12/30/2022	41.34	41.00	0.34
P14	12/30/2022	41.24	DRY	N/A
P15	12/30/2022	41.10	40.85	0.25

The leak detection system at the LTF Collection Pond was inspected December 29, 2022 and 880 gallons were evacuated from the leak detection system and pumped to the LTF. The LTF underdrain system was visually inspected December 29, 2022 and the flow rate was measured to be approximately 32.0 gallons per minute (gpm).

West Pit Waste Water Treatment Plant

During the month of December 2022, the West Pit Waste Water Treatment Plant (WWTP) was operated intermittently (3 to 4 days per week) under Colorado Department of Public Health and Environment (CDPHE) CDPS Permit No. CO0045675 for discharge into the Rito Seco alluvial aquifer. During the month, 8,334,700 gallons (25.6 acre-feet) of treated water was discharged to the Rito Seco and 636,700 gallons (1.95 acre-feet) of water was transferred from the West Pit to the Lined Tailing Facility (LTF). Additionally, no water was reinfiltrated into the West Pit in November.

BMRI performed the monthly visual seepage expression inspections on December 29, 2022 in the historic seepage area identified in Figure 2 of the permit. No seepage expressions were observed in the historic seepage area.

BMRI measured the monthly West Pit backfill, alluvial and monitoring wells as required under in the QA/QC Plan. Measurements obtained for the monthly wells are shown in Table 3.

Table 3 – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
BF-4	12/30/2022	24.86
BF-5R	12/30/2022	30.83
BF-6	12/30/2022	30.90
M-6	12/30/2022	DRY
M-7	12/30/2022	DRY
M-8	12/30/2022	DRY
M-9	12/30/2022	141.13
M-10	12/30/2022	24.28
M-11R	12/30/2022	39.08
M-12	12/30/2022	174.33
M-13R	12/30/2022	125.54
M-14	12/30/2022	130.40
M-16	12/30/2022	21.69
M-17	12/30/2022	29.26

Table 3 Continued – Monthly and Quarterly Groundwater Depth to Water

Monitoring Well Identification	Observation Date	Depth to Water (ft)
M-18	12/30/2022	26.85
M-19	12/30/2022	24.93
M-21	12/30/2022	17.97
M-22	12/30/2022	16.49
M-23	12/30/2022	43.09
M-24	12/30/2022	25.38
M-26	12/30/2022	15.03
M-31	12/30/2022	38.42
M-32	12/30/2022	43.47
M-33	12/30/2022	47.66
M-34	12/30/2022	20.48

Should you have any questions or comments, please do not hesitate to call me at (719) 379-0538.

Sincerely,

Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Alan Fosdick, Engineering Analytics, Inc.

Monthly Water Quality Data for Tailings 2022			Sample Date					
Analyte	Analysis Method	Units	1/31/2022	2/28/2022	3/31/2022	04/272022	5/31/2022	6/29/2022
Arsenic, total	M200.8 ICP-MS	mg/L	0.00096	0.00092	B 0.00062	B 0.00062	0.00172	0.00105
Calcium, total	M200.7 ICP	mg/L	499			594		
Copper, total	M200.7 ICP	mg/L	0.107			0.065		
Iron, total	M200.7 ICP	mg/L	0.708			1.76		
Sodium, total	M200.7 ICP	mg/L	1380			1150		
Zinc, total	M200.7 ICP	mg/L	<0.02			U <0.02		
					L72320	L72821	L73592	L74303

Monthly Water Quality Data for Tailings 2022 (Cont)			Sample Date					
Analyte	Analysis Method	Units	7/28/2022	8/31/2022	9/29/2022	10/31/2022	11/28/2022	12/28/2022
Arsenic, total	M200.8 ICP-MS	mg/L	0.00113	0.00128	B 0.00048	B 0.00115	B 0.00064	B 0.00046
Calcium, total	M200.7 ICP	mg/L	429			521		
Copper, total	M200.7 ICP	mg/L	0.134			0.085		
Iron, total	M200.7 ICP	mg/L	0.689			0.952		
Sodium, total	M200.7 ICP	mg/L	1710			1280		
Zinc, total	M200.7 ICP	mg/L	U <0.02			<0.02		

Definitions:

B Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated

H Analysis exceeded method hold time. pH is a field test with an immediate hold time

L Target analytte 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

Quarterly Water Quality Data for M-12 2022			2/14/2022	4/12/2022	7/26/2022	10/18/2022
Analyte	Analysis Method	Units				
Aluminum, dissolved	M200.7 ICP	mg/L	U <0.05	U <0.05	U <0.05	U <0.05
Arsenic, dissolved	M200.8 ICP-MS	mg/L	U <0.0002	B 0.00027	U <0.0002	B 0.00031
Barium, dissolved	M200.7 ICP	mg/L	0.145	0.15	0.155	0.149
Bicarbonate as CaCO3	SM2320B - Titration	mg/L	149	146	150	163
Cadmium, dissolved	M200.8 ICP-MS	mg/L	0.000292	0.000278	0.000271	0.000333
Calcium, total	M200.7 ICP	mg/L	51.4	52.5	49.9	52.1
Carbonate as CaCO3	SM2320B - Titration	mg/L	U <2	U <2	U <2	U <2
Chloride	M300 - Ion Chromat	mg/L	20.8	20.6	H 20.5	19.7
Chromium, dissolved	M200.8 ICP-MS	mg/L	B 0.00066	B 0.00071	B 0.00063	B 0.00071
Copper, dissolved	M200.8 ICP-MS	mg/L	U <0.0008	U <0.0008	U <0.0008	0.00053
Cyanide WAD	SM4500-CN I,E-Colori	mg/L	U <0.003	U <0.003	U <0.003	U <0.003
Fluoride	M300.0 - Ion Chromat	mg/L	0.296	0.302	H 0.307	0.303
Gross Alpha	M900.0	pCi/L	7.4	9.4	8.6	7.2
Gross Beta	M900.0	pCi/L	4.6	1.5	3	7.3
Hardness as CaCO3 (total)	SM2340B - Calculation	mg/L	163	165	158	166
Hydroxide as CaCO3	SM2320B - Titration	mg/L	U <2	U <2	U <2	U <2
Iron, dissolved	M200.7 ICP	mg/L	U <0.06	U <0.06	U <0.06	U <0.06
Lead, dissolved	M200.8 ICP-MS	mg/L	0.00101	0.00092	0.00094	0.00115
Magnesium, total	M200.7 ICP	mg/L	8.43	8.5	8.06	8.83
Manganese, dissolved	M200.7 ICP	mg/L	U <0.01	U <0.01	U <0.01	U <0.01
Mercury, dissolved	M245.1 CVAA	mg/L	U <0.0002	U <0.0002	U <0.0002	U <0.0002
Nickel, dissolved	M200.8 ICP-MS	mg/L	U <0.0004	U <0.0004	U <0.0004	U <0.004
Potassium, total	M200.7 ICP	mg/L	2.01	1.99	2.07	2.01
Residue, Filterable (TDS)	SM2540C	mg/L	216	230	238	212
Selenium, dissolved	M200.8 ICP-MS	mg/L	0.00139	0.00163	0.00149	0.00177
Silica, total	M200.7 ICP	mg/L	19.3	19.7	17.3	22.8
Silver, dissolved	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001	U <0.0001	U <0.0001
Sodium, total	M200.7 ICP	mg/L	13.7	13.7	13.2	13.7
Sulfate	M300.0 -	mg/L	9.63	13.1	H 10.4	8.11
Total Alkalinity	SM2320B - Titration	mg/L	149	146	150	163
Zinc, dissolved	M200.8 ICP-MS	mg/L	0.405	0.351	0.348	0.517

Definitions:

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 analytte 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

Quarterly Water Quality Data for M13R 2022			2/14/2022	4/12/2022	7/26/2022	10/18/2022
Analyte	Analysis Method	Units				
Aluminum, dissolved	M200.7 ICP	mg/L	U <0.05	U <0.05	U <0.05	U <0.05
Arsenic, dissolved	M200.8 ICP-MS	mg/L	B 0.00043	B 0.00057	B 0.00050	B 0.00068
Barium, dissolved	M200.7 ICP	mg/L	0.123	0.124	0.13	0.126
Bicarbonate as CaCO3	SM2320B - Titration	mg/L	337	337	317	322
Cadmium, dissolved	M200.8 ICP-MS	mg/L	B 0.000198	B 0.000220	B 0.000186	B 0.000248
Calcium, total	M200.7 ICP	mg/L	90.7	93.4	90.9	93.7
Carbonate as CaCO3	SM2320B - Titration	mg/L	U <2	U <2	U <2	U <2
Chloride	M300 - Ion Chromat	mg/L	3.86	3.76	H 3.62	3.54
Chromium, dissolved	M200.8 ICP-MS	mg/L	U <0.0005	U <0.0005	U <0.0005	U <0.0005
Copper, dissolved	M200.8 ICP-MS	mg/L	U <0.0008	B 0.00098	B 0.00085	B 0.00132
Cyanide WAD	SM4500-CN I,E-Colori	mg/L	U <0.003	U <0.003	U <0.003	U <0.003
Fluoride	M300.0 - Ion Chromat	mg/L	0.362	0.386	H 0.392	0.381
Gross Alpha	M900.0	pCi/L	36	26	42	41
Gross Beta	M900.0	pCi/L	19	17	7.5	18
Hardness as CaCO3 (total)	SM2340B - Calculation	mg/L	288	294	286	297
Hydroxide as CaCO3	SM2320B - Titration	mg/L	U <2	U <2	U <2	U <2
Iron, dissolved	M200.7 ICP	mg/L	U <0.06	U <0.06	U <0.06	U <0.06
Lead, dissolved	M200.8 ICP-MS	mg/L	0.00072	0.00071	0.00069	0.00078
Magnesium, total	M200.7 ICP	mg/L	15	14.7	14.4	15.4
Manganese, dissolved	M200.7 ICP	mg/L	U <0.01	U <0.01	U <0.01	U <0.01
Mercury, dissolved	M245.1 CVAA	mg/L	U <0.0002	U <0.0002	U <0.0002	U <0.0002
Nickel, dissolved	M200.8 ICP-MS	mg/L	U <0.0004	U <0.0004	U <0.0004	U <0.0004
Potassium, total	M200.7 ICP	mg/L	1.47	1.43	1.53	1.51
Residue, Filterable (TDS)	SM2540C	mg/L	372	376	388	374
Selenium, dissolved	M200.8 ICP-MS	mg/L	0.00559	0.00686	0.00649	0.00769
Silica, total	M200.7 ICP	mg/L	24.9	24.5	24.6	27.2
Silver, dissolved	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001	U <0.0001	U <0.0001
Sodium, total	M200.7 ICP	mg/L	32.3	33.1	31.9	32.3
Sulfate	M300.0 -	mg/L	14.8	18.2	H 15.2	14.5
Total Alkalinity	SM2320B - Titration	mg/L	337	337	317	322
Zinc, dissolved	M200.8 ICP-MS	mg/L	0.516	0.602	0.483	0.681

Definitions:

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 analytte 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

Monthly Water Quality Data for M-14 2022 (Jan-Jun)			1/18/2022	2/15/2022	3/31/2022	4/25/2022	5/26/2022	6/28/2022
Analyte	Analysis Method	Units						
Aluminum, dissolved	M200.7 ICP	mg/L	U <0.05	U <0.05	U <0.05	B 0.071	U <0.05	U <0.05
Arsenic, dissolved	M200.8 ICP-MS	mg/L	B 0.00074	B 0.00060	B 0.00068	B 0.00058	B 0.00056	B 0.00062
Barium, dissolved	M200.7 ICP	mg/L	0.371	0.371	0.381	0.39	0.396	0.379
Cadmium, dissolved	M200.8 ICP-MS	mg/L	B 0.000103	B 0.000064	U <0.00005	U <0.00005	U <0.00005	B 0.000076
Calcium, total	M200.7 ICP	mg/L	199	194	195	197	193	194
Carbonate as CaCO3	SM2320B - Titration	mg/L	U <2	U <2	U <2	U <2	U <2	U <2
Chloride	M300 - Ion Chromat	mg/L	8.98	8.94	8.96	9.06	H 9.11	B 7.54
Chromium, dissolved	M200.8 ICP-MS	mg/L	B 0.00093	B 0.00088	0.00206	0.00275	B 0.00113	B 0.00077
Copper, dissolved	M200.8 ICP-MS	mg/L	B 0.00100	B 0.00097	B 0.00084	U <0.0008	U <0.0008	B 0.00152
Cyanide WAD	SM4500-CN I,E-Colori	mg/L	U <0.003	U <0.003	U <0.003	B 0.0056	U <0.003	U <0.003
Fluoride	M300.0 - Ion Chromat	mg/L	0.419	0.407	0.413	0.408	0.402	U <0.5
Gross Alpha	M900.0	pCi/L	150	140	95	120	150	130
Gross Beta	M900.0	pCi/L	77	87	46	41	94	89
Hardness as CaCO3 (total)	SM2340B - Calculation	mg/L	623	610	609	616	603	606
Hydroxide as CaCO3	SM2320B - Titration	mg/L	U <2	U <2	U <2	U <2	U <2	U <2
Iron, dissolved	M200.7 ICP	mg/L	U <0.06	U <0.06	U <0.06	B 0.063	U <0.06	U <0.06
Lead, dissolved	M200.8 ICP-MS	mg/L	B 0.00024	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001
Magnesium, total	M200.7 ICP	mg/L	30.5	30.4	29.6	30.2	29.5	29.6
Manganese, dissolved	M200.7 ICP	mg/L	U <0.01	U <0.01	U <0.01	B 0.012	U <0.01	U <0.01
Mercury, dissolved	M245.1 CVAA	mg/L	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002
Nickel, dissolved	M200.8 ICP-MS	mg/L	0.00122	0.0016	0.00389	0.00677	0.00186	0.0015
Potassium, total	M200.7 ICP	mg/L	2.03	2.12	1.98	2.09	2.08	1.9
Residue, Filterable (TDS)	SM2540C	mg/L	802	700	706	702	716	706
Selenium, dissolved	M200.8 ICP-MS	mg/L	0.00302	0.00243	0.00286	0.00225	0.0026	0.00271
Silica, total	M200.7 ICP	mg/L	28.7	29.1	29.8	25.3	24.7	28.8
Silver, dissolved	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001
Sodium, total	M200.7 ICP	mg/L	32.1	31.4	31.1	31.5	30.7	30.8
Sulfate	M300.0 -	mg/L	27	25.9	30.5	31.2	28.6	23.5
Total Alkalinity	SM2320B - Titration	mg/L	616	657	641	608	631	612
Zinc, dissolved	M200.8 ICP-MS	mg/L	U <0.006	U <0.006	U <0.006	U <0.006	U <0.006	U <0.006

Monthly Water Quality Data for M-14 2022 (Jul-Dec)			7/19/2022	8/29/2022	9/13/2022	10/19/2022	11/16/2022	12/12/2022
Analyte	Analysis Method	Units						
Aluminum, dissolved	M200.7 ICP	mg/L	U <0.05	U <0.05	U <0.05	U <0.05	U <0.05	U <0.05
Arsenic, dissolved	M200.8 ICP-MS	mg/L	B 0.00063	B 0.00073	B 0.00062	B 0.00090	B 0.00068	0.0103
Barium, dissolved	M200.7 ICP	mg/L	0.382	0.384	0.385	0.372	0.391	0.384
Cadmium, dissolved	M200.8 ICP-MS	mg/L	U <0.00005	B 0.000152	B 0.000065	U <0.00005	U <0.00005	U <0.00005
Calcium, total	M200.7 ICP	mg/L	195	198	204	198	196	193
Carbonate as CaCO3	SM2320B - Titration	mg/L	U <2	U <2	U <2	U <2	U <2	U <2
Chloride	M300 - Ion Chromat	mg/L	8.89	B 7.61	B 10.9	8.68	H 8.71	B 12.4
Chromium, dissolved	M200.8 ICP-MS	mg/L	B 0.00121	B 0.00082	0.00379	B 0.00144	0.00471	B 0.00054
Copper, dissolved	M200.8 ICP-MS	mg/L	B 0.00158	0.0025	B 0.00165	B 0.00138	B 0.00100	0.00205
Cyanide WAD	SM4500-CN I,E-Colori	mg/L	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	UH <0.006
Fluoride	M300.0 - Ion Chromat	mg/L	0.351	B 0.592	U <0.5	0.393	H 0.387	U <0.5
Gross Alpha	M900.0	pCi/L	160	140	140	120	120	170
Gross Beta	M900.0	pCi/L	47	65	79	61	42	70
Hardness as CaCO3 (total)	SM2340B - Calculation	mg/L	608	620	639	623	620	610
Hydroxide as CaCO3	SM2320B - Titration	mg/L	U <2	U <2	U <2	U <2	U <2	U <2
Iron, dissolved	M200.7 ICP	mg/L	U <0.06	U <0.06	U <0.06	U <0.06	U <0.06	U <0.06
Lead, dissolved	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	B 0.00014
Magnesium, total	M200.7 ICP	mg/L	29.4	30.6	315	31.3	31.6	31
Manganese, dissolved	M200.7 ICP	mg/L	U <0.01	U <0.01	U <0.01	U <0.01	U <0.01	U <0.01
Mercury, dissolved	M245.1 CVAA	mg/L	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002
Nickel, dissolved	M200.8 ICP-MS	mg/L	0.00251	0.00325	0.00846	0.00345	0.0111	0.00133
Potassium, total	M200.7 ICP	mg/L	2.05	2.1	2.12	2.18	2.14	2.16
Residue, Filterable (TDS)	SM2540C	mg/L	696	708	694	712	728	704
Selenium, dissolved	M200.8 ICP-MS	mg/L	0.00291	0.00253	0.00278	0.00308	0.00299	0.00077
Silica, total	M200.7 ICP	mg/L	26.8	25.2	29.7	29	29.3	28.5
Silver, dissolved	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001
Sodium, total	M200.7 ICP	mg/L	30.9	31.5	32.7	30.9	31.5	30.8
Sulfate	M300.0 -	mg/L	21.8	B 19.6	B 16.5	25.3	26.5	B 14.6
Total Alkalinity	SM2320B - Titration	mg/L	602	625	614	608	649	620
Zinc, dissolved	M200.8 ICP-MS	mg/L	U <0.006	U <0.006	U <0.006	B 0.0084	B 0.0095	B 0.0130

Definitions:

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 analytte 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

Quarterly Water Quality Data for M-9 2022			2/14/2022	4/12/2022	7/26/2022	10/18/2022
Analyte	Analysis Method	Units				
Aluminum, dissolved	M200.7 ICP	mg/L	U <0.05	U <0.05	U <0.05	U <0.05
Arsenic, dissolved	M200.8 ICP-MS	mg/L	B 0.00096	0.00128	0.00101	0.0012
Barium, dissolved	M200.7 ICP	mg/L	0.114	0.117	0.122	0.12
Bicarbonate as CaCO3	SM2320B - Titration	mg/L	312	295	275	284
Cadmium, dissolved	M200.8 ICP-MS	mg/L	B 0.000240	B 0.000242	0.000294	B 0.000245
Calcium, total	M200.7 ICP	mg/L	85.2	87.6	84.7	90.1
Carbonate as CaCO3	SM2320B - Titration	mg/L	U <2	U <2	U <2	U <2
Chloride	M300 - Ion Chromat	mg/L	3.98	3.6	H 3.43	3.4
Chromium, dissolved	M200.8 ICP-MS	mg/L	U <0.0005	U <0.0005	U <0.0005	U <0.0005
Copper, dissolved	M200.8 ICP-MS	mg/L	0.00417	0.00395	0.0039	0.00549
Cyanide WAD	SM4500-CN I,E-Colori	mg/L	U <0.003	U <0.003	U <0.003	U <0.003
Fluoride	M300.0 - Ion Chromat	mg/L	B 0.231	0.252	H 0.254	B 0.245
Gross Alpha	M900.0	pCi/L	9.8	7.1	9	12
Gross Beta	M900.0	pCi/L	4.4	5.1	5.7	6.2
Hardness as CaCO3 (total)	SM2340B - Calculation	mg/L	265	271	263	282
Hydroxide as CaCO3	SM2320B - Titration	mg/L	U <2	U <2	U <2	U <2
Iron, dissolved	M200.7 ICP	mg/L	U <0.06	U <0.06	U <0.06	U <0.06
Lead, dissolved	M200.8 ICP-MS	mg/L	0.00051	0.00066	0.00059	0.00061
Magnesium, total	M200.7 ICP	mg/L	12.8	12.7	12.5	13.8
Manganese, dissolved	M200.7 ICP	mg/L	U <0.01	U <0.01	U <0.01	U <0.01
Mercury, dissolved	M245.1 CVAA	mg/L	U <0.0002	U <0.0002	U <0.0002	U <0.0002
Nickel, dissolved	M200.8 ICP-MS	mg/L	U <0.0004	U <0.0004	U <0.0004	U 0.0004
Potassium, total	M200.7 ICP	mg/L	1.72	1.74	1.78	1.73
Residue, Filterable (TDS)	SM2540C	mg/L	358	348	350	338
Selenium, dissolved	M200.8 ICP-MS	mg/L	0.00331	0.00387	0.00377	0.0043
Silica, total	M200.7 ICP	mg/L	26.5	26.3	24.8	29.6
Silver, dissolved	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001	U <0.0001	U <0.0001
Sodium, total	M200.7 ICP	mg/L	25.6	26	25.2	26.2
Sulfate	M300.0 -	mg/L	16.4	21	H 17.1	11.8
Total Alkalinity	SM2320B - Titration	mg/L	312	295	275	284
Zinc, dissolved	M200.8 ICP-MS	mg/L	0.333	0.349	0.332	0.405

Definitions:

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 analytte 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

Quarterly Water Quality Data for Ranch Well 2022			Ranch Well	
			2/22/2022	8/30/2022
Analyte	Analysis Method	Units		
Aluminum, total	M200.7 ICP	mg/L	0.454	U <0.05
Arsenic, total	M200.8 ICP-MS	mg/L	B 0.0004	U 0.00027
Barium, total	M200.7 ICP	mg/L	0.0642	B 0.0704
Boron, total	M200.7ICP	mg/L	U <0.03	U <0.03
Cadmium, total	M200.8 ICP-MS	mg/L	U <0.00005	U <0.00005
Chromium, total	M200.8 ICP-MS	mg/L	U <0.02	U <0.02
Copper, total	M200.7 ICP	mg/L	U <0.01	U <0.01
Cyanide WAD	SM4500-CN I,E-Colori	mg/L	U <0.003	U <0.003
Flouride	M300.0 - Ion Chromat	mg/L	0.352	0.398
Iron, total	M200.7 ICP	mg/L	0.53	U <0.06
Lead, total	M200.8 ICP-MS	mg/L	U <0.03	U <0.03
Manganese, total	M200.7 ICP	mg/L	B 0.011	U <0.01
Mercury, total	M245.1 CVAA	mg/L	U <0.0002	U <0.0002
Molybdenum, total	M200.7 ICP	mg/L	U <0.02	U <0.02
Nickel, total	M200.8 ICP-MS	mg/L	U <0.008	U <0.008
Selenium, total	M200.8 ICP-MS	mg/L	B 0.00013	U <0.0001
Silver, total	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001
Zinc, total	M200.8 ICP-MS	mg/L	U <0.02	U <0.02

Definitions:

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 analytte 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

Quarterly Water Quality Data for San Luis Town Well 2022			San Luis Town Well	
			2/22/2022	8/30/2022
Analyte	Analysis Method	Units		
Aluminum, total	M200.7 ICP	mg/L	U <0.05	U <0.05
Arsenic, total	M200.8 ICP-MS	mg/L	B 0.00024	B 0.00028
Barium, total	M200.7 ICP	mg/L	0.041	0.0413
Boron, total	M200.7ICP	mg/L	U <0.03	U <0.03
Cadmium, total	M200.8 ICP-MS	mg/L	U <0.00005	U <0.00005
Chromium, total	M200.8 ICP-MS	mg/L	U <0.02	U <0.02
Copper, total	M200.7 ICP	mg/L	U <0.01	U <0.01
Cyanide WAD	SM4500-CN I,E-Colori	mg/L	U <0.003	U <0.003
Flouride	M300.0 - Ion Chromat	mg/L	0.388	0.434
Iron, total	M200.7 ICP	mg/L	U <0.06	B 0.066
Lead, total	M200.8 ICP-MS	mg/L	U <0.03	U <0.03
Manganese, total	M200.7 ICP	mg/L	U <0.01	U <0.01
Mercury, total	M245.1 CVAA	mg/L	U <0.0002	U <0.0002
Molybdenum, total	M200.7 ICP	mg/L	U <0.02	U <0.02
Nickel, total	M200.8 ICP-MS	mg/L	U <0.008	U <0.008
Selenium, total	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001
Silver, total	M200.8 ICP-MS	mg/L	U <0.0001	U <0.000
Zinc, total	M200.8 ICP-MS	mg/L	U <0.02	U <0.02

Definitions:

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 analytte 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

Quarterly Water Quality Data for WD-1 2022			2/22/2022	5/10/2022	8/30/2022	11/15/2022
Analyte	Analysis Method	Units				
Arsenic, total	M200.8 ICP-MS	mg/L	B 0.00029	B 0.00055	B 0.00051	B 0.00029
Copper, total	M200.8 ICP-MS	mg/L	B 0.00091	B 0.00100	B 0.00096	U <0.0008
Cyanide WAD	SM4500-CN I,E-Colori	mg/L	U <0.003	U <0.003	U <0.003	U <0.003
Flouride	SM4500F-C	mg/L	0.72	0.68	0.64	0.57
Iron, total	M200.7 ICP	mg/L	1.13	1.13	0.679	0.81
Manganese, dissolved	M200.7 ICP	mg/L	0.121	0.092	B 0.017	B 0.040
Sulfate	D516-02/-07/-11 - TU	mg/L	21.7	10.3	B 4.8	14.5
Zinc	M200.7 ICP	mg/L	U <0.02	U <0.02	U <0.02	U <0.02

Definitions:

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 analytte 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

Quarterly Water Quality Data for RS-1 2022			Sample Date			
ANALYTE	METHOD	UNITS	1/4/2022	4/6/2022	7/5/2022	10/3/2022
Aluminum, potentially dissolved	M200.8 ICP-MS	mg/L	B 0.0115	0.0329	0.0319	0.356
Arsenic, total	M200.8 ICP-MS	mg/L	U <0.0002	U <0.0002	U <0.0002	B 0.00068
Bicarbonate as CaCO3	SM2320B - Titration	mg/L	65.5	62.6	54.2	50.6
Cadmium, potentially dissolved	M200.8 ICP-MS	mg/L	U <0.00005	U <0.00005	B 0.0001	U <0.00005
Calcium, dissolved	M200.7 ICP	mg/L	16.2	15.7	15.5	12.7
Carbonate as CaCO3	SM2320B - Titration	mg/L	U <2	U <2	U <2	U <2
Chloride	SM4500Cl-E	mg/L	B1.25	**B** 1.35	B 0.95	B 1.58
Chromium, dissolved	M200.8 ICP-MS	mg/L	U <0.0005	U <0.0005	U <0.0005	U <0.0005
Copper, potentially dissolved	M200.8 ICP-MS	mg/L	U <0.0008	U <0.0008	U <0.0008	0.00255
Fluoride	SM4500F-C	mg/L	0.47	0.56	0.38	B 0.33
Gross Alpha	M900.0	pCi/L	4	3.5	2.2	5.6
Gross Beta	M900.0	pCi/L	-15	1.8	2.1	7.2
Hardness as CaCO3 (dissolved)	SM2340B - Calculatio	mg/L	57	55	54	45
Hydroxide as CaCO3	SM2320B - Titration	mg/L	U <2	U <2	U <2	U <2
Iron, dissolved	M200.7 ICP	mg/L	U <0.06	B 0.063	B 0.115	B 0.13
Iron, total recoverable	M200.7 ICP	mg/L	B0.13	0.306	0.398	3.32
Lead, potentially dissolved	M200.8 ICP-MS	mg/L	U <0.0001	B 0.00011	B 0.00028	0.00216
Magnesium, dissolved	M200.7 ICP	mg/L	3.99	3.8	3.75	3.21
Manganese, dissolved	M200.7 ICP	mg/L	B0.016	U <0.01	B 0.022	B 0.014
Manganese, total recoverable	M200.7 ICP	mg/L	U <0.02	B 0.021	B 0.034	0.181
Mercury, total	M245.1 CVAA	mg/L	U <0.0002	U <0.0002	U <0.0002	U <0.0002
Nickel, dissolved	M200.8 ICP-MS	mg/L	B 0.00043	U <0.0004	U <0.0004	U <0.0004
Nitrogen, ammonia	M350.1 Auto Salicyla	mg/L	U <0.05	U <0.05	U <0.05	U <0.05
Oil and Grease	1664A/B - Gravimetri	mg/L	U <2.1	U <1.8	no data	U <2
Potassium, total	M200.7 ICP	mg/L	B0.65	B 0.79	B 0.63	1.49
Residue, Non-Filterable (TSS) @105C	SM2540D	mg/L	U <5	U <5	BH 5	62
Selenium, dissolved	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001	U <0.0001	B 0.00012
Silica, total	M200.7 ICP	mg/L	12.6	11.8	11.3	16.8
Silver, potentially dissolved	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001	U <0.0001	U <0.0001
Sodium, total	M200.7 ICP	mg/L	3.34	3.43	3.22	3.11
Sulfate	M300.0 - Ion Chromat	mg/L	4.3	5.56	2.96	B 1.49
Total Alkalinity	SM2320B - Titration	mg/L	65.5	62.6	54.2	50.6
Zinc, potentially dissolved	M200.8 ICP-MS	mg/L	U <0.006	U <0.006	U <0.006	B 0.0074

Definitions:

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

U The material was analyzed for but was not detected above the level of the associated value

Monthly Water Quality Data for RS-2 2022			Sample Date											
ANALYTE	Method	Units	1/4/2022	2/1/2022	3/1/2022	4/6/2022	5/4/2022	6/1/2022	7/5/2022	8/1/2022	9/1/2022	10/3/2022	11/1/2022	12/5/2022
Aluminum, dissolved	M200.7 ICP	mg/L	U <0.05	U <0.05	U <0.05	U <0.05	U <0.05	U <0.05	B 0.061	U <0.05	U <0.05	U <0.05	U <0.05	U <0.05
Aluminum, potentially dissolved	M200.8 ICP-MS	mg/L	B 0.0268			0.0841			0.0928			0.0908		
Aluminum, total	M200.7 ICP	mg/L	B 0.116	B 0.12	0.59	0.53	0.395	B 0.194	0.727	0.421	0.371	0.61	0.061	**B** 0.245
Arsenic, dissolved	M200.8 ICP-MS	mg/L	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002
Arsenic, total	M200.8 ICP-MS	mg/L	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	B 0.0002	B 0.00032	B 0.00027	B 0.00028	B 0.00022	U <0.0002	U <0.0002
Barium, dissolved	M200.7 ICP	mg/L	0.0262	B 0.0261	B 0.0269	B 0.0182	B 0.0229	B 0.0237	B 0.0334	B 0.021	B 0.0222	B 0.02	B 0.0221	B 0.0217
Barium, total	M200.7 ICP	mg/L	B 0.0275	B 0.0277	B 0.032	0.0352	B 0.0264	B 0.0239	0.0384	B 0.0288	B 0.024	B 0.0299	B 0.0241	B 0.0217
Bicarbonate as CaCO3	SM2320B - Titratio	mg/L	70.6	51.7	71.2	57	54.7	51.6	61.3	55.4	47.8	57.5	48.7	56.4
Boron, dissolved	M200.7 ICP	mg/L	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03
Boron, total	M200.7 ICP	mg/L	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03	U <0.03
Cadmium, dissolved	M200.8 ICP-MS	mg/L	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005
Cadmium, potentially dissolved	M200.8 ICP-MS	mg/L	U <0.00005			U <0.00005			U <0.00005			U <0.00005		
Cadmium, total	M200.8 ICP-MS	mg/L	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005	U <0.00005
Calcium, dissolved	M200.7 ICP	mg/L	17.6	16.1	16.4	15.1	14.9	14.4	17.6	15.1	13.7	14.1	13.2	15.6
Calcium, total	M200.7 ICP	mg/L	17.7	16.4	16.4	15.6	15.5	14.9	17.5	15.7	13.9	14.5	13.3	15.1
Carbon, total organic (TOC)	SM5310B	mg/L	B 1.5	B 1.4	B 1.6	B 1.6	B 2.5	B 1.8	B 3	B 4.4	B 2.6	B 2.5	B 1.3	B 1.2
Carbonate as CaCO3	SM2320B - Titratio	mg/L	U <2	U <2	U <2	U <2	U <2	U <2	U <2	U <2	U <2	U <2	U <2	U <2
Chloride	SM4500Cl-E	mg/L	B 1.57			3.25			B 1.36			B 1.47		
Chloride	M300.0 - Ion Chron	mg/L	4.42	2.31	2.23	2.62	B 1.35	H 3.97	B 0.56	B 0.44	B 0.73	B 0.76	4.36	**B** 0.86
Chromium, dissolved	M200.8 ICP-MS	mg/L	U <0.0005	U <0.0005	U <0.0005	U <0.0005	U <0.0005	U <0.0005	U <0.0005	U <0.0005	U <0.0005	U <0.0005	U <0.0005	U <0.0005
Chromium, total	M200.8 ICP-MS	mg/L	U <0.0005	U <0.0005	B 0.00106	U <0.0005	U <0.0005	U <0.0005	U <0.0005	B 0.00057	U <0.0005	U <0.0005	U <0.0005	U <0.0005
Copper, dissolved	M200.8 ICP-MS	mg/L	U <0.0008	U <0.0008	U <0.0008	U <0.0008	U <0.0008	U <0.0008	U <0.0008	0.0104	U <0.0008	U <0.0008	U <0.0008	U <0.0008
Copper, potentially dissolved	M200.8 ICP-MS	mg/L	U <0.0008			U <0.0008			B 0.00128			B 0.00094		
Copper, total	M200.8 ICP-MS	mg/L	U <0.0008	B 0.0008	B 0.00111	B 0.00133	B 0.00135	U <0.0008	B 0.00173	B 0.00129	B 0.00175	B 0.00119	U <0.0008	U <0.0008
Cyanide, total	M335.4 - Colorimet	mg/L	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	B 0.0038	U <0.003	U <0.003	B 0.0041	U <0.003	U <0.003	U <0.003
Cyanide, WAD	SM4500-CN I,E-Col	mg/L	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003
Fluoride	SM4500F-C	mg/L	0.64	0.83	0.95	0.77	0.72	0.82	0.47	0.35	0.41	0.48	0.89	0.51
Gross Alpha	M900.0	pCi/L	0.12			6.2			1.9			1.8		
Gross Beta	M900.0	pCi/L	-20			0.79			6.6			5.3		
Hardness as CaCO3 (dissolved)	SM2340B - Calculat	mg/L	62	58	64	55	54	52	62	52	48	50	50	56
Hydroxide as CaCO3	SM2320B - Titratio	mg/L	U <2	U <2	U <2	U <2	U <2	U <2	U <2	U <2	U <2	U <2	U <2	U <2
Iron, dissolved	M200.7 ICP	mg/L	B 0.107	B 0.1	B 0.113	B 0.137	0.165	0.265	0.401	0.239	0.216	0.167	0.16	B 0.138
Iron, total	M200.7 ICP	mg/L	0.305	0.294	0.812	0.74	0.643	0.567	1.41	0.803	0.673	0.907	0.272	0.537
Iron, total recoverable	M200.7 ICP	mg/L	0.363			0.636			1.48			0.845		
Lead, dissolved	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	B 0.00013	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001
Lead, potentially dissolved	M200.8 ICP-MS	mg/L	B0.0001			B 0.00032			0.00052			B 0.00044		
Lead, total	M200.8 ICP-MS	mg/L	B 0.00011	B 0.00012	B 0.00032	B 0.00036	B 0.00032	B 0.00026	0.00064	B 0.00038	B 0.00039	0.00057	U <0.0001	B 0.00026
Magnesium, dissolved	M200.7 ICP	mg/L	4.38	4.29	5.67	4.11	3.96	3.93	4.27	3.54	3.4	3.51	4.02	4.05
Magnesium, total	M200.7 ICP	mg/L	4.4	4.3	4.32	4.14	4.1	4.03	4.17	3.7	3.56	3.82	4.12	4.07
Manganese, dissolved	M200.7 ICP	mg/L	B 0.03	B 0.026	B 0.028	B 0.013	B 0.021	B 0.025	B 0.028	B 0.018	B 0.018	B 0.015	B 0.018	B 0.025
Manganese, total	M200.7 ICP	mg/L	B 0.038	B 0.036	0.068	0.06	B 0.049	B 0.043	0.175	0.055	B 0.041	0.068	B 0.024	B 0.049
Manganese, total recoverable	M200.7 ICP	mg/L	B 0.038			B 0.049			0.17			0.062		
Mercury, dissolved	M245.1 CVAA	mg/L	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002
Mercury, total	M245.1 CVAA	mg/L	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002	U <0.0002
Nickel, dissolved	M200.8 ICP-MS	mg/L	U <0.0004	U <0.008	U <0.008	U <0.0004	U <0.008	U <0.008	U <0.0004	U <0.008	U <0.008	U <0.0004	U <0.008	U <0.008
Nickel, total	M200.7 ICP	mg/L	U <0.008	U <0.008	U <0.008	U <0.008	U <0.008	U <0.008	U <0.008	U <0.008	U <0.008	U <0.008	U <0.008	U <0.008
Nitrate/Nitrite as N	M353.2 - H2SO4 pr	mg/L	B 0.045	B 0.044	B 0.041	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	B 0.035	U <0.02	U <0.02	B 0.082
Nitrogen, ammonia	M350.1 Auto Salicy	mg/L	U <0.05	U <0.05	U <0.05	U <0.05	B 0.053	U <0.05	U <0.05	U <0.05	U <0.05	U <0.05	U <0.05	U <0.05
Oil and Grease	1664A/B - Gravime	mg/L	U <2			U <1.8			No Data			U <2		
Potassium, total	M200.7 ICP	mg/L	B 0.75	1.05	1.24	1.11	1.24	1.14	B 0.96	B 0.98	B 0.9	1.27	1.13	1.01
Residue, Filterable (TDS) @180C	SM2540C	mg/L	82	102	96	92	86	100	92	94	76	78	96	80
Residue, Non-Filterable (TSS) @105C	SM2540D	mg/L	U <5	U <5	B 14	B 8	B 8	U <5	H 23	B 5	B 9	B 13	U <5	B 12
Selenium, dissolved	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001
Selenium, total	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	B 0.00011	U <0.0001	U <0.0001	U <0.0001	U <0.0001
Silica, total	M200.7 ICP	mg/L	13.3	9.3	12.3	12	12.8	11.3	13.2	13	10	13	11.9	12.9
Silver, dissolved	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001
Silver, potentially dissolved	M200.8 ICP-MS	mg/L	U <0.0001			U <0.0001			U <0.0001			U <0.0001		
Silver, total	M200.8 ICP-MS	mg/L	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001	U <0.0001
Sodium, total	M200.7 ICP	mg/L	4.32	7.71	6.18	8.54	5.04	10.2	4.09	3.55	3.78	3.62	11	4.03
Sulfate	M300.0 - Ion Chron	mg/L	6.63	16.4	15.5	16.1	7.61	16	3.42	H 2.32	3.08	2.21	16.6	4.33
Total Alkalinity	SM2320B - Titratio	mg/L	70.6	51.7	71.2	57	54.7	51.6	61.3	55.4	47.8	57.5	48.7	56.4
Zinc, dissolved	M200.7 ICP	mg/L	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02
Zinc, potentially dissolved	M200.8 ICP-MS	mg/L	U <0.006			U <0.006			U <0.006			B 0.0064		
Zinc, total	M200.7 ICP	mg/L	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02	U <0.02

Definitions:

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

U The material was analyzed for but was not detected above the level of the associated value

Monthly Water Quality Data for RS-5 2022			Sample Date											
ANALYTE	METHOD	UNITS	1/4/2022	2/1/2022	3/1/2022	4/6/2022	5/4/2022	6/1/2022	7/5/2022	8/1/2022	9/1/2022	10/3/2022	11/1/2022	12/5/2022
Aluminum, potentially dissolved	M200.8 ICP-MS	mg/L	0.0243			0.0782			0.0428			0.0667		
Arsenic, total	M200.8 ICP-MS	mg/L	B 0.00022			B 0.00025			B 0.00057			B 0.00046		
Bicarbonate as CaCO3	SM2320B - Titration	mg/L	91.1			72			84.8			79.4		
Cadmium, potentially dissolved	M200.8 ICP-MS	mg/L	U <0.00005			U <0.00005			U <0.00005			U <0.00005		
Calcium, dissolved	M200.7 ICP	mg/L	25.5			21.3			25.2			21.2		
Carbonate as CaCO3	SM2320B - Titration	mg/L	U <2			U <2			U <2			U <2		
Chloride	SM4500Cl-E	mg/L	2.91			3.56			2.97			2.75		
Chromium, dissolved	M200.8 ICP-MS	mg/L	U <0.0005			U <0.0005			U <0.0005			U <0.0005		
Copper, potentially dissolved	M200.8 ICP-MS	mg/L	U <0.0008			U <0.0008			B 0.00084			B 0.0009		
Cyanide, WAD	SM4500-CN I,E-Colori	mg/L	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003	U <0.003
Fluoride	SM4500F-C	mg/L	0.74			0.77			0.68			0.57		
Gross Alpha	M900.0	pCi/L	0.46			2.5			2.4			1.7		
Gross Beta	M900.0	pCi/L	-15			1.6			3.7			4.6		
Hardness as CaCO3 (dissolved)	SM2340B - Calculatio	mg/L	85			72			84			71		
Hydroxide as CaCO3	SM2320B - Titration	mg/L	U <2			U <2			U <2			U <2		
Iron, dissolved	M200.7 ICP	mg/L	0.269	0.207	0.213	0.269	0.365	0.495	0.589	0.393	0.403	0.374	0.425	0.394
Iron, total recoverable	M200.7 ICP	mg/L	0.664	0.635	1.18	0.896	0.752	1.17	1.25	1.15	0.761	1.09	0.952	0.742
Lead, potentially dissolved	M200.8 ICP-MS	mg/L	B 0.00011			B 0.00035			B 0.00025			B 0.00031		
Magnesium, dissolved	M200.7 ICP	mg/L	5.28			4.47			5.08			4.48		
Manganese, dissolved	M200.7 ICP	mg/L	0.168	0.156	0.181	0.124	0.065	0.121	0.084	B 0.043	B 0.048	0.053	0.058	0.125
Manganese, total recoverable	M200.7 ICP	mg/L	0.175	0.168	0.215	0.142	0.081	0.142	0.115	0.063	0.052	0.068	0.074	0.135
Mercury, total	M245.1 CVAA	mg/L	U <0.0002			U <0.0002			U <0.0002			U <0.0002		
Nickel, dissolved	M200.8 ICP-MS	mg/L	U <0.0004			U <0.0004			B 0.00045			U <0.0004		
Nitrogen, ammonia	M350.1 Auto Salicyla	mg/L	U <0.05			U <0.05			U <0.05			U <0.05		
Oil and Grease	1664A/B - Gravimetri	mg/L	U <2			U <1.8			No Data			U <2		
Potassium, total	M200.7 ICP	mg/L	1.06			1.19			1.19			1.61		
Residue, Non-Filterable (TSS) @10	SM2540D	mg/L	U <5			B 6			B 11			B 7		
Selenium, dissolved	M200.8 ICP-MS	mg/L	U <0.0001			U <0.0001			U <0.0001			U <0.0001		
Silica, total	M200.7 ICP	mg/L	14.7			14.3			13.5			13.2		
Silver, potentially dissolved	M200.8 ICP-MS	mg/L	U <0.0002			U <0.0002			U <0.0002			U <0.0002		
Sodium, total	M200.7 ICP	mg/L	6.72			8.12			7.17			6.26		
Sulfate	M300.0 - Ion Chromat	mg/L	12.7	13.3	15.7	18.4	13.2	6.52	6.23	H 4.92	9.15	6.37	9.75	14.1
Total Alkalinity	SM2320B - Titration	mg/L	91.1			72			84.8			79.4		
Zinc, potentially dissolved	M200.8 ICP-MS	mg/L	U <0.006			U <0.006			U <0.006			B 0.0129		

Definitions:

B Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated

H Analysis exceeded method hold time. pH is a field test with an immediate hold time

L Target analytte 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

Monthly Water Quality Data for M-19 2022			Sample Date						
ANALYTE	METHOD	UNITS	1/5/2022	2/1/2022	3/1/2022	4/7/2022	5/4/2022	6/1/2022	7/5/2022
Calcium, total	M200.7 ICP	mg/L	22.3	22.4	21.1	21.1	20	19.8	17.8
Copper, dissolved	M200.8 ICP-MS	mg/L	B 0.00099	B 0.00105	B 0.00097	B 0.0009	B 0.00087	U <0.0008	B 0.00092
Fluoride	M300.0 - Ion Chr	mg/L	0.87	0.868	0.861	0.853	0.794	0.748	0.693
Iron, dissolved	M200.7 ICP	mg/L	B 0.148	B 0.135	B 0.147	0.163	B 0.125	B 0.089	0.208
Manganese, dissolved	M200.7 ICP	mg/L	0.24	0.237	0.264	0.237	0.144	0.119	0.082
Residue, Filterable (TDS) @180C	SM2540C	mg/L	96	96	102	84	102	98	100
Sulfate	M300.0 - Ion Chr	mg/L	9.11	8.06	8.74	9.71	12.5	10.7	11.6

Monthly Water Quality Data for M-19 2022			Sample Date				
ANALYTE	METHOD	UNITS	8/1/2022	9/1/2022	10/3/2022	11/1/2022	12/5/2022
Calcium, total	M200.7 ICP	mg/L	19.3	17.6	20.3	18.3	18.6
Copper, dissolved	M200.8 ICP-MS	mg/L	0.00617	0.00226	B 0.00165	B 0.00131	B 0.00136
Fluoride	M300.0 - Ion Chr	mg/L	H 0.826	0.803	0.832	0.819	0.811
Iron, dissolved	M200.7 ICP	mg/L	B 0.072	0.727	0.468	B 0.105	B 0.086
Manganese, dissolved	M200.7 ICP	mg/L	0.055	0.197	0.181	0.056	B 0.049
Residue, Filterable (TDS) @180C	SM2540C	mg/L	102	100	98	92	104
Sulfate	M300.0 - Ion Chr	mg/L	H 11.4	5.78	6.42	7.63	7.48

Definitions:

B Analyte concentration detected at a value between MDL and PQL. The associated value is an

H Analysis exceeded method hold time. pH is a field test with an immediate hold time

L Target analytte 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

Monthly Water Quality Data for M-22 in 2022			Sample Date					
ANALYTE	METHOD	UNITS	1/5/2022	2/1/2022	3/1/2022	4/7/2022	5/4/2022	6/1/2022
Calcium, total	mg/L	M200.7 ICP	32.1	32.5	31.6	32.8	32.3	31.8
Copper, dissolved	mg/L	M200.8 ICP-MS	U <0.0008	U <0.0008	U <0.0008	U <0.0008	U <0.0008	U <0.0008
Fluoride	mg/L	M300.0 - Ion Chromat	1.39	1.39	1.38	1.42	1.4	1.35
Iron, dissolved	mg/L	M200.7 ICP	B 0.063	B 0.071	B 0.07	U <0.06	B 0.074	B 0.063
Manganese, dissolved	mg/L	M200.7 ICP	0.371	0.359	0.375	0.386	0.372	0.367
Residue, Filterable (TDS) (	mg/L	SM2540C	134	136	146	134	142	128
Sulfate	mg/L	M300.0 - Ion Chromat	10.9	10	10.9	12.5	12.2	10.8

Monthly Water Quality Data for M-22 in 2022			Sample Date					
ANALYTE	METHOD	UNITS	7/5/2022	8/1/2022	9/1/2022	10/3/2022	11/1/2022	12/5/2022
Calcium, total	mg/L	M200.7 ICP	31.4	32.4	31.5	33.9	29	28.4
Copper, dissolved	mg/L	M200.8 ICP-MS	U <0.0008	0.00203	U <0.0008	U <0.0008	U <0.0008	U <0.0008
Fluoride	mg/L	M300.0 - Ion Chromat	1.24	H 1.36	1.24	1.3	1.18	1.3
Iron, dissolved	mg/L	M200.7 ICP	U <0.06	U <0.06	B 0.085	B 0.143	0.137	0.101
Manganese, dissolved	mg/L	M200.7 ICP	0.356	0.373	0.362	0.364	0.295	0.351
Residue, Filterable (TDS) (	mg/L	SM2540C	144	134	134	146	128	136
Sulfate	mg/L	M300.0 - Ion Chromat	10.8	H 9.91	9.01	7.93	7.47	8.2

Definitions:

B Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated

H Analysis exceeded method hold time. pH is a field test with an immediate hold time

L Target analytte 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

Monthly Water Quality Data for M-24 in 2022			Sample Date					
ANALYTE	METHOD	UNITS	1/5/2022	2/1/2022	3/1/2022	4/7/2022	5/4/2022	6/1/2022
Calcium, total	mg/L	M200.7 ICP	88.3	87.4	81.7	84.2	84	84.2
Copper, dissolved	mg/L	M200.8 ICP-MS	U <0.0008	U <0.0008	U <0.0008	U <0.0008	U <0.0008	U <0.0008
Fluoride	mg/L	M300.0 - Ion Chromat	0.792	B 0.882	0.812	0.747	0.804	B 0.827
Iron, dissolved	mg/L	M200.7 ICP	4.53	4.45	4.43	4.3	4.36	4.44
Manganese, dissolved	mg/L	M200.7 ICP	0.942	0.927	0.916	0.899	0.903	0.9
Residue, Filterable (TDS) @180C	mg/L	SM2540C	438	442	428	406	436	418
Sulfate	mg/L	M300.0 - Ion Chromat	167	145	153	160	169	143

Monthly Water Quality Data for M-24 in 2022			Sample Date					
ANALYTE	METHOD	UNITS	7/5/2022	8/1/2022	9/1/2022	10/3/2022	11/1/2022	12/5/2022
Calcium, total	mg/L	M200.7 ICP	84.1	86.7	80.6	86	81.5	78.3
Copper, dissolved	mg/L	M200.8 ICP-MS	U <0.0008	U <0.0008	U <0.0008	U <0.0008	U <0.0008	U <0.0008
Fluoride	mg/L	M300.0 - Ion Chromat	0.758	H 0.796	B 0.763	B 0.638	B 0.834	B 0.808
Iron, dissolved	mg/L	M200.7 ICP	4.49	4.57	4.31	4.44	4.31	4.18
Manganese, dissolved	mg/L	M200.7 ICP	0.901	0.93	0.878	0.919	0.893	0.875
Residue, Filterable (TDS) @180C	mg/L	SM2540C	430	418	414	408	410	404
Sulfate	mg/L	M300.0 - Ion Chromat	146	h 145	138	140	140	134

Definitions:

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 analytte 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

Monthly Water Quality Data for Tailings 2022			Sample Date											
ANALYTE	METHOD	UNITS	1/5/2022	2/1/2022	3/1/2022	4/7/2022	5/4/2022	6/1/2022	7/5/2022	10/3/2022	8/1/2022	9/1/2022	11/1/2022	12/5/2022
Aluminum, dissolved	M200.7 ICP	mg/L	U <0.05						U <0.05	U <0.05				
Arsenic, dissolved	M200.8 ICP-MS	mg/L	U <0.0002						U <0.0002	U <0.0002				
Barium, dissolved	M200.7 ICP	mg/L	0.0513						0.0417	0.0487				
Bicarbonate as CaCO3	SM2320B - Titration	mg/L	190						155	158				
Cadmium, dissolved	M200.7 ICP	mg/L	U <0.008						U <0.008	U <0.008				
Calcium, total	M200.7 ICP	mg/L	95.2	69.5	79.8	96.2	70.3	70.4	73	83.3	77.9	76.9	77.1	75.7
Carbonate as CaCO3	SM2320B - Titration	mg/L	U <2						U <2	U <2				
Chloride	M300.0 - Ion Chromat	mg/L	4.49						B 2.54	B 2.39				
Chromium, dissolved	M200.7 ICP	mg/L	U <0.2						U <0.2	U <0.2				
Copper, dissolved	M200.8 ICP-MS	mg/L	B 0.00086	B 0.00097	B 0.00104	B 0.00105	B 0.00098	U <0.0008	U <0.0008	U <0.0008	U <0.0008	U <0.0008	B 0.00089	B 0.00105
Copper, dissolved	M200.7 ICP	mg/L	U <0.01						U <0.01	U <0.01				
Cyanide, WAD	SM4500-CN I,E-Colori	mg/L	U <0.003						U <0.003	U <0.003				
Fluoride	M300.0 - Ion Chromat	mg/L	0.957	0.915	0.887	0.875	0.933	B 0.876	B 0.831	B 0.873	H 0.867	B 0.812	0.828	0.842
Gross Alpha	M900.0	pCi/L	-1.3						1.7	1.1				
Gross Beta	M900.0	pCi/L	-15						3.7	1.7				
Hardness as CaCO3 (total)	SM2340B - Calculatio	mg/L	303						230	267				
Hydroxide as CaCO3	SM2320B - Titration	mg/L	U <2						U <2	U <2				
Iron, dissolved	M200.7 ICP	mg/L	U <0.06	U <0.06	U <0.06	U <0.06	U <0.06	U <0.06	U <0.06	U <0.06	U <0.06	U <0.06	U <0.06	U <0.06
Lead, dissolved	M200.7 ICP	mg/L	U <0.03						U <0.03	U <0.03				
Magnesium, total	M200.7 ICP	mg/L	16.4						12	14.3				
Manganese, dissolved	M200.7 ICP	mg/L	0.301	0.177	0.241	0.308	0.172	0.155	0.128	0.116	0.121	0.119	0.101	0.137
Mercury, dissolved	M245.1 CVAA	mg/L	U <0.0002						U <0.0002	U <0.0002				
Nickel, dissolved	M200.8 ICP-MS	mg/L	U <0.0004						U <0.0004	U <0.0004				
Potassium, total	M200.7 ICP	mg/L	2.59						2.13	2.51				
Residue, Filterable (TDS) @180C	SM2540C	mg/L	416	336	368	412	314	302	328	342	338	342	340	340
Selenium, dissolved	M200.8 ICP-MS	mg/L	B 0.00015						B 0.00014	B 0.0001				
Silica, total	M200.7 ICP	mg/L	16.8						14.2	17.2				
Silver, dissolved	M200.8 ICP-MS	mg/L	U <0.0001						U <0.0001	U <0.0001				
Sodium, total	M200.7 ICP	mg/L	20.1						13.6	14.9				
Sulfate	M300.0 - Ion Chromat	mg/L	U <0.4	87.3	121	154	94.6	79	91	101	H 96.7	99.5	108	105
Total Alkalinity	SM2320B - Titration	mg/L	190						155	158				
Zinc, dissolved	M200.7 ICP	mg/L	U <0.02						U <0.02	U <0.02				

Definitions:

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 analytte 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

Monthly Water Quality Data for M-26 2022			Sample Date			
ANALYTE	METHOD	UNITS	1/10/2022	4/11/2022	7/25/2022	10/17/2022
Calcium, total	M200.7 ICP	mg/L	32.6	U <0.1	31.7	32.2
Copper, dissolved	M200.8 ICP-MS	mg/L	0.00607	U <0.0008	U <0.0008	U <0.0008
Fluoride	M300.0 - Ion Chromat	mg/L	H 0.799	0.796	H 0.768	0.784
Iron, dissolved	M200.7 ICP	mg/L	0.445	0.413	0.448	0.42
Manganese, dissolved	M200.7 ICP	mg/L	0.316	0.305	0.321	0.322
Residue, Filterable (TDS) @180C	SM2540C	mg/L	142	146	144	134
Sulfate	M300.0 - Ion Chromat	mg/L	H 7.45	9.85	H 9.33	7.91

Monthly Water Quality Data for M-22 in 2022			Sample Date			
ANALYTE	METHOD	UNITS	1/10/2022	4/11/2022	7/25/2022	10/17/2022
Calcium, total	M200.7 ICP	mg/L	43.7	42.3	42.6	42.4
Copper, dissolved	M200.8 ICP-MS	mg/L	U <0.0008	U <0.0008	U <0.0008	U <0.0008
Fluoride	M300.0 - Ion Chromat	mg/L	H 1.38	1.35	1.33	1.35
Iron, dissolved	M200.7 ICP	mg/L	0.335	0.297	0.377	0.331
Manganese, dissolved	M200.7 ICP	mg/L	0.166	0.168	0.169	0.164
Residue, Filterable (TDS) @180C	SM2540C	mg/L	186	194	190	174
Sulfate	M300.0 - Ion Chromat	mg/L	H 32.3	35	30.3	26.8

Monthly Water Quality Data for M-16 in 2022			Sample Date			
ANALYTE	METHOD	UNITS	1/10/2022	4/11/2022	7/25/2022	10/17/2022
Calcium, total	M200.7 ICP	mg/L	18.8	17.8	9.53	17.3
Copper, dissolved	M200.8 ICP-MS	mg/L	0.00276	U <0.0008	U <0.0008	B 0.00093
Fluoride	M300.0 - Ion Chromat	mg/L	H 0.6	0.59	0.581	0.597
Iron, dissolved	M200.7 ICP	mg/L	B 0.067	U <0.06	B 0.085	B 0.068
Manganese, dissolved	M200.7 ICP	mg/L	U <0.01	U <0.01	U <0.01	U <0.01
Residue, Filterable (TDS) @180C	SM2540C	mg/L	106	92	86	86
Sulfate	M300.0 - Ion Chromat	mg/L	H 10.1	9.38	8.9	7.26

Definitions:

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 analytte 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

Monthly Water Quality Data for M-34 in 2022

			Sample Date			
ANALYTE	METHOD	UNITS	1/10/2022	4/11/2022	7/25/2022	10/25/2022
Aluminum, dissolved	M200.7 ICP	mg/L	U <0.05		U <0.05	U <0.05
Arsenic, dissolved	M200.8 ICP-MS	mg/L	U <0.0002		U <0.0002	U <0.0002
Barium, dissolved	M200.7 ICP	mg/L	0.0409		0.0429	0.0425
Bicarbonate as CaCO3	SM2320B - Titration	mg/L	81.3		70.1	87.5
Cadmium, dissolved	M200.7 ICP	mg/L	U <0.008		U <0.008	U <0.008
Calcium, total	M200.7 ICP	mg/L	21.2	21.7	22.1	22.3
Carbonate as CaCO3	SM2320B - Titration	mg/L	U <2		U <2	U <2
Chloride	M300.0 - Ion Chromat	mg/L	2.22		H 2.13	2.11
Chromium, dissolved	M200.7 ICP	mg/L	U <0.02		U <0.02	U <0.02
Copper, dissolved	M200.7 ICP	mg/L	U <0.01	U <0.0008	U <0.01	U <0.01
Cyanide, WAD	SM4500-CN I,E-Colori	mg/L	U <0.003		U <0.003	U <0.003
Fluoride	M300.0 - Ion Chromat	mg/L	H 0.501	0.49	H 0.485	0.468
Gross Alpha	M900.0	pCi/L	1.2		1.5	3.2
Gross Beta	M900.0	pCi/L	0.5		1.4	3.7
Hardness as CaCO3 (total)	SM2340B - Calculatio	mg/L	74		76	78
Hydroxide as CaCO3	SM2320B - Titration	mg/L	U <2		U <2	U <2
Iron, dissolved	M200.7 ICP	mg/L	U <0.06	U <0.06	U <0.06	U <0.06
Lead, dissolved	M200.7 ICP	mg/L	U <0.03		U <0.03	U <0.03
Magnesium, total	M200.7 ICP	mg/L	5.17		5.05	5.45
Manganese, dissolved	M200.7 ICP	mg/L	0.208	0.206	0.221	0.216
Mercury, dissolved	M245.1 CVAA	mg/L	U <0.0002		U <0.0002	U <0.0002
Nickel, dissolved	M200.8 ICP-MS	mg/L	U <0.0004		U <0.0004	B 0.00041
Potassium, total	M200.7 ICP	mg/L	B 0.79		1.02	B 0.88
Residue, Filterable (TDS) @180C	SM2540C	mg/L	112	118	116	H 134
Selenium, dissolved	M200.8 ICP-MS	mg/L	U <0.0001		U <0.0001	U <0.0001
Silica, total	M200.7 ICP	mg/L	14.8		15.8	15.7
Silver, dissolved	M200.8 ICP-MS	mg/L	U <0.0001		U <0.0001	U <0.0001
Sodium, total	M200.7 ICP	mg/L	7.75		7.72	7.6
Sulfate	M300.0 - Ion Chromat	mg/L	H 15.4	17.9	H 17	16.9
Total Alkalinity	SM2320B - Titration	mg/L	81.3		70.1	87.5
Zinc, dissolved	M200.7 ICP	mg/L	U <0.02		U <0.02	U <0.02

Definitions:

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H Analysis exceeded method hold time. pH is a field test with an immediate hold time

L Target analytte 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

Monthly Water Quality Data for M-10 2022			Sample Date			
ANALYTE	METHOD	UNITS	1/10/2022	4/11/2022	7/25/2022	10/20/2022
Aluminum, dissolved	M200.7 ICP	mg/L	U <0.05		U <0.05	U <0.05
Arsenic, dissolved	M200.8 ICP-MS	mg/L	U <0.0002		U <0.0002	U <0.0002
Barium, dissolved	M200.7 ICP	mg/L	0.123		0.126	0.125
Bicarbonate as CaCO3	SM2320B - Titration	mg/L	226		209	221
Cadmium, dissolved	M200.7 ICP	mg/L	U <0.008		U <0.008	U <0.008
Calcium, total	M200.7 ICP	mg/L	70.6	73.5	71.1	73.1
Carbonate as CaCO3	SM2320B - Titration	mg/L	B 10.4		U <2	U <2
Chloride	M300.0 - Ion Chromat	mg/L	3.11		H 3.05	2.97
Chromium, dissolved	M200.7 ICP	mg/L	U <0.02		U <0.02	U <0.02
Copper, dissolved	M200.7 ICP	mg/L	U <0.01	U <0.0008	U <0.01	U <0.01
Cyanide, WAD	SM4500-CN I,E-Colori	mg/L	U <0.003		U <0.003	U <0.003
Fluoride	M300.0 - Ion Chromat	mg/L	H 0.963	0.959	H 0.93	0.919
Gross Alpha	M900.0	pCi/L	1.7		0.27	-0.11
Gross Beta	M900.0	pCi/L	5.4		1.5	4.3
Hardness as CaCO3 (total)	SM2340B - Calculatio	mg/L	217		214	223
Hydroxide as CaCO3	SM2320B - Titration	mg/L	U <2		U <2	U <2
Iron, dissolved	M200.7 ICP	mg/L	1.11	1.04	1.01	1.17
Lead, dissolved	M200.7 ICP	mg/L	U <0.03		U <0.03	U <0.03
Magnesium, total	M200.7 ICP	mg/L	9.84		8.96	9.86
Manganese, dissolved	M200.7 ICP	mg/L	0.826	0.819	0.858	0.867
Mercury, dissolved	M245.1 CVAA	mg/L	U <0.0002		U <0.0002	U <0.0002
Nickel, dissolved	M200.8 ICP-MS	mg/L	U <0.0004		U <0.0004	U <0.0004
Potassium, total	M200.7 ICP	mg/L	1.64		1.73	1.67
Residue, Filterable (TDS) @180C	SM2540C	mg/L	312	306	312	H 316
Selenium, dissolved	M200.8 ICP-MS	mg/L	U <0.0001		U <0.0001	U <0.0001
Silica, total	M200.7 ICP	mg/L	28.8		26.3	29.5
Silver, dissolved	M200.8 ICP-MS	mg/L	U <0.0001		U <0.0001	U <0.0001
Sodium, total	M200.7 ICP	mg/L	22.1		20.9	21.2
Sulfate	M300.0 - Ion Chromat	mg/L	H 33.1	36.7	H 33.4	33.4
Total Alkalinity	SM2320B - Titration	mg/L	236		209	221
Zinc, dissolved	M200.7 ICP	mg/L	U <0.02		U <0.02	U <0.02

Definitions:

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L Target analytte 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

Monthly Water Quality Data for Col. 2022			Sample Date			
ANALYTE	METHOD	UNITS	1/31/2022	4/27/2022	7/28/2022	10/31/2022
Calcium, total	M200.7 ICP	mg/L	523	543	526	522
Copper, total	M200.8 ICP-MS	mg/L	U <0.0008	U <0.0008	U <0.0008	U <0.0008
Cyanide, WAD	SM4500-CN I,E-Colori	mg/L	0.0128	0.0115	B 0.0032	H 0.0301
Iron, total	M200.7 ICP	mg/L	29.9	31.7	30.6	40.8
Sodium, total	M200.7 ICP	mg/L	1000	973	946	953
Zinc, total	M200.7 ICP	mg/L	U <0.02	U <0.02	U <0.02	U <0.02

Monthly Water Quality Data for LD 2022			Sample Date			
ANALYTE	METHOD	UNITS	1/31/2022	4/27/2022	7/28/2022	10/31/2022
Calcium, total	M200.7 ICP	mg/L	520	527	511	490
Copper, total	M200.8 ICP-MS	mg/L	0.045	0.052	0.0493	0.0645
Cyanide, WAD	SM4500-CN I,E-Colori	mg/L	U <0.003	B 0.0031	B 0.0032	U <0.003
Iron, total	M200.7 ICP	mg/L	B 0.068	U <0.06	B 0.076	U <0.06
Sodium, total	M200.7 ICP	mg/L	1050	1000	1000	994
Zinc, total	M200.7 ICP	mg/L	U <0.02	U <0.02	U <0.02	U <0.02

Definitions:

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 analytte 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

APPENDIX C
DMR's, BMP, and WET Testing Reports

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

April 26, 2022

Colorado Department of Public Health and Environment
Water Quality Control Division
Attn: WQDC-B2 – DMR Receipt
4300 Cherry Creek Drive
Denver, CO 80246-1530

Re: Battle Mountain Resources, Inc.
San Luis Project - San Luis, Colorado
First Quarter 2022 – DMR's, BMP and WET Testing Reports
CDPHE CDPS Permit No. CO0045675

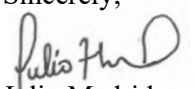
Dear Sir or Madame:

Please find the enclosed Battle Mountain Resources, Inc. "San Luis Project" (Permit No. CO0045675) Colorado Department of Public Health and Environment-Colorado Discharge Permit System (CDPS) Best Management Practices (BMP) report for permitted outfall 002 for the first quarter 2022. The quarterly BMP report provides the required data associated with groundwater well elevations, the quarterly potentiometric surface map and groundwater well chemistry.

In addition, the first quarter 2022 Discharge Monitoring Reports (DMRs) were submitted for each of the permitted water treatment plant discharges in the NetDMR System and the WET Testing Reports were attached to the appropriate DMR submittal in NetDMR. These permitted discharges consist of water treatment plant Discharge Numbers 001-A and 001-B. During the quarter, the maximum 30-day average flow was 0.23 million gallons of water discharged per day, therefore the applicable permit criteria for the reporting period is associated with discharge number 001-B.

Should any questions arise or if I can be of any assistance providing clarification, please call me at (719) 379-0538.

Sincerely,



Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Tim Runnells, Engineering Analytics
Alan Fosdick, Engineering Analytics

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

April 26, 2022

Colorado Department of Public Health and Environment
Water Quality Control Division
Attn: WQDC-B2 – DMR Receipt
4300 Cherry Creek Drive
Denver, CO 80246-1530

Re: Battle Mountain Resources, Inc.
San Luis Project
First Quarter 2022 BMP Report
CDPHE CDPS Permit No. CO0045675

Dear Sir or Madame:

In accordance with and compliance of the permit limitations and permit terms and conditions contained in Part I, Section 5 Discharge Point 002: (Permit Limitations, Best Management Practices, and Schedule of Compliance of the *State of Colorado Authorization to Discharge Under the Colorado Discharge Permit System*, Battle Mountain Resources, Inc. submits the following *Quarterly Best Management Practices Report.*

In accordance with the Water Quality Control Commission Regulations for Effluent Limitations, Section 62.4, and the Colorado Discharge Permit System Regulations, Sections 61.8(2), 61.8(3)(n), and 61.8(3)(r), 5 C.C.R. 1002-61, the permittee shall continue to implement the following limitations, compliance schedules, and Best Management Practices (BMPs).

The attainment of applicable water quality standards will be implemented and evaluated through the application of the following limitations, compliance schedules, and BMPs that are designed to monitor and control the groundwater quality and quantity discharging from the West Pit to the Rito Seco alluvial aquifer.

Specifically, the limitations, compliance schedules, and BMPs are those activities that address contaminated groundwater that may flow into the Rito Seco. This includes: (1) the potential flow of the affected groundwater from the West Pit that, in the past, manifested itself in the formation of the surface seeps along the arroyo sidewall of the Rito Seco, and (2) the plume of affected groundwater within the Rito Seco alluvial aquifer downgradient of the West Pit that flows along the naturally occurring hydraulic gradient and that may flow into the Rito Seco. The activities will include the following specific requirements:

1) The elevation of the groundwater table in the vicinity of the West Pit shall be measured on a weekly basis at the following locations: (i) the West Pit backfill wells BF-4 and BF-5 and (ii) the Rito Seco alluvial wells M-16 and M-20, as shown in Figure 3 of the permit, for purposes of determining the performance of the "pump and treat" system that regulates the flow and quality of the groundwater in the seepage front. The permittee shall

also determine on a quarterly basis the elevations of the groundwater table at BF-3, BF-4, BF-5, BF-6, M-11R, M-16, M-17, M-18, M-19, M-20, M-21, M-22, M-23, M-24, M-25, M-26, M-27, M-28, M-29, M-30, M-31, M-32, and M-33 for the purpose of developing a groundwater potentiometric map as monitoring confirmation of the groundwater flow direction. The quarterly data regarding depth to groundwater and groundwater potentiometric surface map will be submitted to the WQCD with the BMP report as described.

Compliance Action Taken: *Battle Mountain Resources, Inc. measured the weekly West Pit backfill and alluvial wells as required under Paragraph 1 of the specific requirements. Measurements obtained for the weekly West Pit backfill wells (BF-4 and BF-5R) and alluvial wells (M-16 and M-20) are shown in Table 1. The quarterly groundwater elevations required under Paragraph 1 were also measured and are shown in Table 2. A potentiometric surface map, developed by Engineering Analytics, is shown in Figure 1. The groundwater table elevations and potentiometric map confirm that the groundwater flow gradient during the first quarter of 2022 was from the Rito Seco to the West Pit. No corrective action is required under Paragraph 1 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 1 – Weekly Groundwater Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)
BF-4	01/05/2022	8579.26
	01/12/2022	8579.22
	01/19/2022	8579.24
	01/26/2022	8579.25
	02/02/2022	8579.30
	02/09/2022	8578.22
	02/16/2022	8579.27
	02/23/2022	8579.31
	03/02/2022	8579.30
	03/09/2022	8579.29
	03/16/2022	8579.28
	03/23/2022	8579.35
	03/30/2022	8579.30
BF-5R	01/05/2022	8579.07
	01/12/2022	8579.03
	01/19/2022	8579.05
	01/26/2022	8579.07
	02/02/2022	8579.07
	02/09/2022	8579.02
	02/16/2022	8579.08
	02/23/2022	8579.08
	03/02/2022	8579.08
	03/09/2022	8579.11
	03/16/2022	8579.10
	03/23/2022	8579.12
	03/30/2022	8579.08

Table 1 – Weekly Groundwater Elevations (continued)

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)
M-16	01/05/2022	8600.79
	01/12/2022	8600.65
	01/19/2022	8600.59
	01/26/2022	8600.58
	02/02/2022	8600.58
	02/09/2022	8600.56
	02/16/2022	8600.54
	02/23/2022	8600.53
	03/02/2022	8600.54
	03/09/2022	8600.56
	03/16/2022	8600.66
	03/23/2022	8600.71
	03/30/2022	8600.77
M-20	01/05/2022	8579.63
	01/12/2022	8579.99
	01/19/2022	8579.97
	01/26/2022	8579.97
	02/02/2022	8579.94
	02/09/2022	8579.88
	02/16/2022	8579.87
	02/23/2022	8579.91
	03/02/2022	8579.94
	03/09/2022	8580.01
	03/16/2022	8580.02
	03/23/2022	8580.06
	03/30/2022	8580.20

Table 2 – Quarterly Groundwater Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)
BF-3	01/31/2022	8578.01
BF-4	01/31/2022	8579.28
BF-5R	01/31/2022	8579.05
BF-6	01/31/2022	8578.98
M-11R	01/31/2022	8550.73
M-16	01/31/2022	8600.57
M-17	01/31/2022	8586.60
M-18	01/31/2022	8579.73
M-19	01/31/2022	8580.53
M-20	01/31/2022	8579.95
M-21	01/31/2022	8576.79
M-22	01/31/2022	8572.51
M-23	01/31/2022	8556.03
M-24	01/31/2022	8559.32
M-25	01/31/2022	8541.03
M-26	01/31/2022	8544.12
M-27	01/31/2022	DRY
M-28	01/31/2022	8579.89
M-29	01/31/2022	8580.83
M-30	01/31/2022	8608.43
M-31	01/31/2022	8550.36
M-32	01/31/2022	8528.83
M-33	01/31/2022	8535.15

2) The weekly groundwater table elevation data shall be tabulated and reported on the quarterly BMP reports, and the data will be used to evaluate compliance with the following permit limitations.

   The groundwater table elevation, based on the average of all measured values for each calendar month in the West Pit backfill groundwater monitoring wells BF-4 and BF-5, must be equal to or lower than an elevation of 8582 feet above sea level (ft. amsl).

Compliance Action Taken: *Battle Mountain Resources, Inc. measured the West Pit backfill monitoring wells (BF-4 and BF-5R) weekly and the measurements are shown in Table 1. The groundwater measurements for wells BF-4 and BF-5R were averaged by calendar month and the results are shown in Table 3. The January, February, March 2022 averages were below the 8582 ft. amsl required in Paragraph 2. No corrective action is required under the Paragraph 2 requirement and schedule compliance monitoring will continue unchanged next quarter.*

Table 3 – Quarterly West Pit Backfill Monthly Average Groundwater Table Elevations

Monitoring Well Identification	Month (2022)	Number of Observations	Average Monthly Groundwater Elevation (ft amsl)
BF-4	January	4	8579.24
	February	4	8579.03
	March	5	8579.30
BF-5R	January	4	8579.06
	February	4	8579.06
	March	5	8579.10

3) If the average monthly groundwater table elevation in the West Pit backfill for any calendar month, measured as described in the above paragraph, is greater than 8582 ft. amsl or the quarterly determination of the groundwater potentiometric surface map indicates that the flow of the groundwater is from the West Pit to the Rito Seco alluvium, the permittee shall verbally communicate such condition to WQCD within 24 hours of the determination of the condition (elevated West Pit backfill table or groundwater flow from the West Pit as indicated by the quarterly groundwater potentiometric surface map) and initiate the following compliance schedule.

   Compliance Action Taken: *Battle Mountain Resources, Inc. measured the West Pit backfill monitoring wells (BF-4 and BF-5R) weekly and the calendar month average groundwater measurement elevations (Table 3) were below the 8582 ft. amsl required in Paragraph 2. The January 31, 2022, potentiometric surface map (Figure 1) shows the groundwater flow gradient was from the Rito Seco alluvium to the West Pit backfill. Therefore, site operations demonstrated the West Pit backfill groundwater level was maintained at or below an elevation of 8582 ft. amsl through the quarter. Therefore, no requirement(s) to initiate actions contained within the schedule of compliance for Section 5.3 is required.*

4) The quality of groundwater in the vicinity of the West Pit shall be monitored on a monthly basis in the Rito Seco alluvial groundwater monitoring wells M-19, M-21, M-24 and M-11R for the purposes of monitoring the changes in the quality of the plume or affected groundwater in the Rito Seco alluvial aquifer. Groundwater quality in these monitoring wells will be analyzed for pH, temperature, total dissolved solids, calcium, sulfate, manganese, fluoride, copper, and iron for the purpose of evaluating the status of the groundwater quality in the downgradient groundwater plume. The groundwater quality data will be summarized and transmitted to the WQCD in the quarterly BMP report required under Part I, Section E.1 of this permit.

   Compliance Action Taken: *Battle Mountain Resources, Inc. collected monthly groundwater samples in the vicinity of the West Pit backfill area from Rito Seco alluvial monitoring wells M-19, M-21, M-24 and M-11R. No corrective action is required under the Paragraph 4 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 4 – Rito Seco Alluvial Groundwater Quality Summary

Analyte	Reporting Units	Sample Date	Monitoring Well Identifier			
			M-11R	M-19	M-21	M-24
pH	SU	01/05/2022	6.98	6.40	6.67	6.75
		02/01/2022	7.09	6.63	6.76	6.79
		03/01/2022	7.13	6.58	6.79	6.92
Temperature	°C	01/05/2022	9.3	8.9	7.4	7.7
		02/01/2022	8.7	8.8	7.8	8.0
		03/01/2022	9.8	9.4	8.5	8.5
Calcium, Total	mg/L	01/05/2022	94.4	22.3	32.1	88.3
		02/01/2022	69.5	22.4	32.5	87.4
		03/01/2022	79.8	21.1	31.6	81.7
Copper, Dissolved	mg/L	01/05/2022	LT 0.002	LT 0.002	LT 0.002	LT 0.002
		02/01/2022	LT 0.002	LT 0.002	LT 0.002	LT 0.002
		03/01/2022	LT 0.002	LT 0.002	LT 0.002	LT 0.002
Fluoride	mg/L	01/05/2022	0.957	0.870	1.39	0.792
		02/01/2022	0.915	0.868	1.39	LT 1.25
		03/01/2022	0.887	0.861	1.38	0.812
Iron, Dissolved	mg/L	01/05/2022	LT 0.15	0.158	LT 0.15	4.47
		02/01/2022	LT 0.15	LT 0.15	LT 0.15	4.45
		03/01/2022	LT 0.15	LT 0.15	LT 0.15	4.43
Manganese, Dissolved	mg/L	01/05/2022	0.298	0.240	0.371	0.934
		02/01/2022	0.177	0.237	0.359	0.927
		03/01/2022	0.241	0.264	0.375	0.916
Sulfate	mg/L	01/05/2022	*	9.09	10.9	167
		02/01/2022	87.3	8.06	10.00	145
		03/01/2022	121	8.74	10.9	153
Total Dissolved Solids	mg/L	01/05/2022	416	96	130	434
		02/01/2022	336	96	136	442
		03/01/2022	368	102	146	428

* = Sample analysis interpretation were determined to be incorrect and the obtained results were inconsistent with historical sulfate data. This sample could not be reanalyzed within holding times and the subsequent month sample was already collected prior to the laboratory reporting, so the sample was not recollected. Results from the February and March sampling events were consistent with previous historical results.

5) The historical seeps were caused by the plume of affected groundwater and may, in the future, also be caused by natural variation in the flow of groundwater in the vicinity of the area where the past seeps occurred. The permittee shall conduct a monthly visual inspection of the area of historical seeps and the permittee shall report any seepage flow that is associated with the area historic seepage expression, as is identified in Figure 2 of the permit. Results of the seep monitoring shall be tabulated and summarized in the quarterly BMP report.

   If these inspections identified the occurrence of seeps, the permittee will be required to communicate verbally to the WQCD within 24 hours of the seepage observation, followed by written notification within 7 calendar days of the seepage observation. Verbal updates will then be provided to the WQCD every second day thereafter until the WQCD has made a determination regarding the status of the West Pit groundwater control system through the implementation of the following compliance schedule.

Compliance Action Taken: *Battle Mountain Resources, Inc. performed monthly visual seepage expression inspections in the historic seepage area identified in Figure 2 of the permit. Visual observations during these inspections are shown in Table 5. No seepage expressions were observed in the historic seepage area during the first quarter of 2022. Therefore, no verbal or written notifications were required and the implementation of the compliance schedule was not required. No corrective action is required under the Paragraph 5 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 5 – Monthly Seepage Expression Inspection Tabulation

Visual Inspection Date	Was Visual Observation of Seepage Determined in the Area of the Historic Seepage Expression	Comments
01/31/2022	No	All Dry
02/28/2022	No	All Dry
03/31/2022	No	All Dry

6) The BMP for the groundwater flow downgradient from the groundwater divide (see section VI.A.2 for the Rationale) that has been developed in the Rito Seco alluvial aquifer consists of a groundwater capture system in conjunction with groundwater table elevation control in the West Pit. The water management plan for the Rito Seco alluvial aquifer consists of pumping two groundwater capture wells (M-32 and M-33) located downgradient of the plume of affected groundwater. This action will allow flushing of constituents in the groundwater of the Rito Seco alluvial aquifer in that portion (plume) of the aquifer affected by previous flow of groundwater from the West Pit. Measurements of the groundwater table elevations will be taken on a weekly basis from M-32 and M-33. This data shall be tabulated and reported for outfall 002 on the quarterly BMP report, and the data will be used to evaluate compliance with the following permit limitation.

   The groundwater table elevation, based on the average of all measured values for each calendar month at M-32 and M-33 in the Rito Seco alluvial aquifer, must be equal to or lower than an elevation of 8540 ft. amsl.

   If the average monthly groundwater table elevations measured in the Rito Seco alluvial aquifer at M-32 and M-33 is greater than 8540 ft. amsl, the permitee shall initiate the following compliance schedule within 24 hours of the determination of groundwater table elevation exceedance.

Compliance Action Taken: *Battle Mountain Resources, Inc. measured the alluvial aquifer monitoring wells (M-32 and M-33) weekly and the resulting elevations are presented in Table 6. The groundwater elevations for wells M-32 and M-33 were averaged by calendar month and the results are shown in Table 6. The January, February, March 2022 averages were below the 8540 ft. amsl required under Paragraph 6. Therefore, site operations were in full compliance of Part I, Section 5.5 and there were no requirements(s) to initiate actions contained within the schedule of compliance for Section 5.5. No corrective action is required under Paragraph 6 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 6 – Weekly/Monthly Rito Seco Alluvial Aquifer Average Groundwater Table Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)	Month (2022)	Average Monthly Groundwater Elevation (ft amsl)
M-32	01/05/2022	8531.25	January	8530.13
	01/12/2022	8531.95		
	01/19/2022	8529.79		
	01/26/2022	8528.82		
	01/31/2022	8528.83		
	02/02/2022	8528.96	February	8527.40
	02/09/2022	8528.94		
	02/16/2022	8526.26		
	02/23/2022	8526.44		
	02/28/2022	8526.39		

Table 6 (Cont) – Weekly/Monthly Rito Seco Alluvial Aquifer Average Groundwater Table Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)	Month (2022)	Average Monthly Groundwater Elevation (ft amsl)
M-32	03/02/2022	8526.45	March	8526.96
	03/09/2022	8526.59		
	03/16/2022	8527.08		
	03/23/2022	8527.03		
	03/30/2022	8527.30		
	03/31/2022	8527.30		
M-33	01/05/2022	8526.46	January	8533.71
	01/12/2022	8536.06		
	01/19/2022	8535.68		
	01/26/2022	8535.20		
	01/31/2022	8535.15		
	02/02/2022	8535.21	February	8534.02
	02/09/2022	8535.00		
	02/16/2022	8532.09		
	02/23/2022	8533.16		
	02/28/2022	8534.66		
	03/02/2022	8535.83	March	8532.54
	03/09/2022	8533.31		
	03/16/2022	8533.78		
	03/23/2022	8529.87		
	03/30/2022	8531.01		
	03/31/2022	8531.42		

7) The water quality of the Rito Seco will be assessed using surface water quality collected at RS-2, as shown in Figure 3. Surface water monitoring in the Rito Seco shall be conducted at RS-2 on a monthly basis and the laboratory analytical results shall be submitted to the WQCD in the quarterly BMP report. Water quality samples collected at RS-2 shall be analyzed for the following constituents: calcium, magnesium, sodium, potassium, ammonia, total dissolved solids, total hardness, pH, total suspended solids, cyanide (WAD and total), bicarbonate, alkalinity, chloride, sulfate, nitrate-nitrite, fluoride and the total and dissolved concentrations of aluminum, arsenic, barium, boron, cadmium, copper, chromium, iron, lead, manganese, mercury, nickel, selenium, silica, silver and zinc. The following compliance schedule shall be implemented in the event that any constituent exceeds the applicable water quality standards for the Rito Seco.

Compliance Action Taken: *Battle Mountain Resources, Inc. collected monthly surface water samples in January, February, March 2022 at location RS-2, as shown in Figure 3 of the permit. Results of analyses performed on these samples are shown in Table 7. The results of the laboratory analytical testing show that the applicable water quality standards were met for the Rito Seco during the months of January, February, March 2022. Site operations were in full compliance of Part I, Section 5.7 and there was no requirement(s) to initiate actions contained within the schedule of compliance for Section 5.7. Scheduled compliance monitoring will continue unchanged next quarter.*

Table 7 – RS-2 Surface Water Quality Results

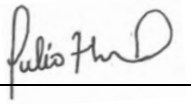
Analyte	Reporting Units	01/04/2022	02/01/2022	03/01/2022
Alkalinity	mg/L as $CaCO_3$	70.6	51.7	71.2
Aluminum, Dissolved	mg/L	LT 0.25	LT 0.25	LT 0.25
Aluminum, Total	mg/L	LT 0.25	LT 0.25	0.590
Ammonia as N	mg/L	LT 0.2	LT 0.2	LT 0.2
Arsenic, Dissolved	mg/L	LT 0.001	LT 0.001	LT 0.001
Arsenic, Total	mg/L	LT 0.001	LT 0.001	LT 0.001
Barium, Dissolved	mg/L	LT 0.035	LT 0.035	LT 0.035
Barium, Total	mg/L	LT 0.035	LT 0.035	LT 0.035
Bicarbonate as CaCO3	mg/L	70.6	51.7	71.2
Boron, Dissolved	mg/L	LT 0.1	LT 0.1	LT 0.1
Boron, Total	mg/L	LT 0.1	LT 0.1	LT 0.1
Cadmium, Dissolved	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Cadmium, Total	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Calcium, Total	mg/L	17.7	16.4	16.4
Carbonate as CaCO3	mg/L	LT 20	LT 20	LT 20
Chloride	mg/L	4.42	2.31	2.23
Chromium, Dissolved	mg/L	LT 0.002	LT 0.002	LT 0.002
Chromium, Total	mg/L	LT 0.002	LT 0.002	LT 0.002
Copper, Dissolved	mg/L	LT 0.002	LT 0.002	LT 0.002
Copper, Total	mg/L	LT 0.002	LT 0.002	LT 0.002
Cyanide, Total	mg/L	LT 0.01	LT 0.01	LT 0.01
Cyanide, WAD	mg/L	LT 0.01	LT 0.01	LT 0.01
Fluoride	mg/L	0.61	0.83	0.95
Hardness as CaCO3	mg/L	62.0	58	64
Iron, Dissolved	mg/L	LT 0.15	LT 0.15	LT 0.15
Iron, Total	mg/L	0.305	0.294	0.812
Lead, Dissolved	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Lead, Total	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Magnesium, Total	mg/L	4.40	4.30	4.32
Manganese, Dissolved	mg/L	LT 0.05	LT 0.05	LT 0.05
Manganese, Total	mg/L	LT 0.05	LT 0.05	0.068
Mercury, Dissolved	mg/L	LT 0.001	LT 0.001	LT 0.001
Mercury, Total	mg/L	LT 0.001	LT 0.001	LT 0.001
Nickel, Dissolved	mg/L	LT 0.001	LT 0.04	LT 0.04
Nickel, Total	mg/L	LT 0.04	LT 0.04	LT 0.04
Nitrate+Nitrite as N	mg/L	LT 0.1	LT 0.1	LT 0.1
pH	SU	7.22	7.25	7.20
Potassium, Total	mg/L	LT 1	1.05	1.24
Selenium, Dissolved	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Selenium, Total	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Silica, Total	mg/L	13.2	9.3	12.3
Silver, Dissolved	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Silver, Total	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Sodium, Total	mg/L	4.32	7.71	6.18
Sulfate	mg/L	6.57	16.4	15.5
Total Dissolved Solids	mg/L	82	102	96
Total Suspended Solids	mg/L	LT 20	LT 20	LT 20
Zinc, Dissolved	mg/L	LT 0.05	LT 0.05	LT 0.05
Zinc, Total	mg/L	LT 0.05	LT 0.05	LT 0.05

8) If any component of the groundwater control system is not performing within the limits set forth in this permit, the permittee will be required to initiate appropriate compliance schedule activities, including the preparation of a response plan, for any and all components of the groundwater control system that do not meet the applicable

requirements. The permittee shall also conduct weekly sampling at RS-2 until such time as the other compliance schedule activity(ies) have been completed.

Compliance Action Taken: *As demonstrated by the information and data presented in this report, all components of the groundwater control system performed within the limits set forth in the permit. Therefore, site operations were in full compliance of Part I, Section 8 and there was no requirement(s) to initiate actions contained within the schedule of compliance for Section 8.*

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is to the best of my knowledge and belief, is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Julio Madrid Signature: 

Date: April 26, 2022

APPROXIMATE SATURATED ALLUVIUM BOUNDARY

M-33 8536.03

M-31 8550.36

M-27 DRY

BF-6 8578.98

M-25 8541.03

M-11R 8550.73

M-23 8556.03

BF-3 8578.01

BF-4 8579.28

WATER TREATMENT FACILITY AND PARKING AREA

BF-5R 8579.05

APPROXIMATE SATURATED ALLUVIUM BOUNDARY

8540

8550

8560

8570

8580

8590

8600

8610

M-26 8544.12

M-32 8534.46

M-24 8559.32

M-22 8572.51

M-21 8576.79

M-20 8579.95

M-19 8580.53

M-18 8579.73

M-28 8579.89

M-29 8580.83

M-30 8608.43

M-17 8586.60

M-16 8600.57

KEY

NORTH

SCALE IN FEET

0 200

GROUND WATER FLOW DIRECTION

8560 LINE OF EQUIPOTENTIAL HYDRAULIC HEAD

M-23 8555.72 WELL NAME / WATER LEVEL

NO	REVISION DESCR.	DATE	BY
A			
B			
C			
1			
2			

ALLUVIAL GROUND WATER POTENTIOMETRIC SURFACE MAP

FIRST QUARTER (JANUARY 2022)

SAN LUIS PROJECT

Bestt Mountain Biosciences, Inc. San Luis, California

ISSUED BY

Engineering Analytics, Inc.

Drawn By:	RDP
Designed By:	AF
Approved By:	AF
Date:	4/24/2022
Project:	21010506
Scale:	1" = 200'
Sheet Number:	1

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

February 4, 2022

Julio Madrid
Battle Mountain Resources, Inc.
P.O. Box 310
San Luis, CO 81152

Dear Julio:

Enclosed is the report for chronic biomonitoring tests performed for Battle Mountain Resources, Inc. on effluent from the 001B outfall. There was no statistically significant toxicity to either test species at any effluent concentration. The effluent passes WET (Whole Effluent Toxicity) testing requirements for this sampling period.

If you have any questions or concerns, please do not hesitate to contact me at (303) 661-9324.

Best regards,

Haley West

Haley West
Laboratory Supervisor
Enclosure(s): Invoice
Report

REPORT OF CHRONIC BIOMONITORING TESTS CONDUCTED FOR BATTLE MOUNTAIN RESOURCES, INC. ON EFFLUENT FROM THE 001B OUTFALL

Prepared for:

Julio Madrid
Battle Mountain Resources, Inc.
P.O. box 310
San Luis, CO 81152

Prepared by:

Haley West
SeaCrest Group
500 S Arthur Ave. Suite 450
Louisville, Colorado 80027-3065
(303) 661-9324

February 4, 2022

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LIST OF TABLES

Chronic Toxicity Test Summary

Test:	7-day static renewal using *Ceriodaphnia dubia* 7-day static renewal using fathead minnow *(Pimephales promelas)*
Client:	Battle Mountain Resources, Inc.
Test Procedure Followed:	*Ceriodaphnia dubia*: EPA/821/R-02-013. Method 1002.0 (2002) fathead minnow: EPA/821/R-02-013. Method 1000.0 (2002)
Sample Number:	422030.B
Dilution Water:	moderately hard laboratory reconstituted water
Test Organism Source:	SeaCrest Group
Reference Toxicant:	Sodium Chloride

Sample	Time of Collection	Date of Collection	Time of Receipt	Date of Receipt
Effluent 1	0600	01-24-2022	1100	01-24-2022
Effluent 2	0600	01-26-2022	1150	01-26-2022
Effluent 3	0600	01-28-2022	1130	01-28-2022

	Ceriodaphnia dubia	fathead minnow
Test Initiation Time	1600	1500
Test Initiation Date	01-24-2022	01-24-2022
Test Completion Time	1700	1400
Test Completion Date	01-30-2022	01-31-2022

Abstract with Results

Test Concentrations:	Control (0%), 13%, 26%, 52%, 76%, 100%
Number of Organisms/Concentration:	10 for *Ceriodaphnia dubia* 40 for fathead minnow
Replicates at each Concentration:	10 for *Ceriodaphnia dubia* 4 for fathead minnow

	Ceriodaphnia dubia	**fathead minnow**
Test vessel size/Exposure volume	30ml/15ml	500ml/200ml
Sub-lethal NOEL/IC25	100%/>100%	100%/>100%
Pass/Fail Status	**PASS**	**PASS**
Temperature Range (°C)	24.1 – 25.9	24.1 – 25.4
Dissolved Oxygen Range (mg/L)	6.8 – 8.2	4.8 – 8.6
pH Range	7.4 – 8.1	7.3 – 8.2

	Control (*Cerio*/FHM)	**Effluent Sample**
Hardness (mg/L as $CaCO_3$)	96/88	43/52/61
Alkalinity (mg/L as $CaCO_3$)	63/64	14/15/13
Total residual chlorine (mg/L)	<0.01	<0.01
Total ammonia (mg/L as NH_3)	<0.03	0.06/0.05/0.07

INTRODUCTION

Biomonitoring provides an effective means by which the toxicity of discharges from municipal, industrial, and mining operations can be tested. Among the advantages of biomonitoring is the ability to test complex effluents containing a broad range of contaminants. Biomonitoring, when used in conjunction with chemical analyses, can generate data capable of identifying a much wider range of contaminants.

The Colorado Water Quality Control Division requires certain NPDES permittees to perform acute and/or chronic biomonitoring tests. The chronic test measures significant differences in lethality and in reproduction (*Ceriodaphnia dubia*) or growth (fathead minnow – *Pimephales promelas*) between control and effluent-exposed organisms.

The present report discusses the results of chronic biomonitoring tests conducted on effluent from the Battle Mountain Resources, Inc. 001B discharge. These tests were conducted in accordance with EPA and State of Colorado procedures in January 2022.

MATERIALS AND METHODS

Sample Collection

Two or three gallons of the effluent were collected on three separate dates as specified in Permit CO-0045675. Samples were delivered chilled to the SeaCrest lab where they were held at 0-6°C. Chain of custody forms showing sample collection and laboratory arrival times are included (Appendix 1).

Dilution Water

Laboratory reconstituted water was used as both the dilution water source and the control for the tests. Reconstituted water for the *Ceriodaphnia dubia* test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, potassium chloride, and sodium selenate to deionized water. Reconstituted water for the fathead minnow test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, and potassium chloride to deionized water.

Test Organisms

The biomonitoring test used *Ceriodaphnia dubia,* cultured in the SeaCrest laboratory. The organisms are cultured in brood culture boards from which individual females are monitored for survival and reproduction for periods of up to two weeks. Neonates less than 24-hours old, released from third or subsequent broods of eight or more within an 8-hour period, are collected from the brood chambers and used in tests. The animals are fed daily with a mixture of Yeast, Cereal Leaves, and Trout Chow (YCT), produced in-house. This is supplemented with cultured green algae *(Selenastrum capricornutum)* provided by Aquatic Biosystems.

Less than one-day-old fathead minnow, cultured in the laboratory, were also used in the test. Adult fish are maintained in 10-gallon aquaria where females deposit their eggs on the under-surface of split PVC pipe sections. The eggs are collected daily and transferred to aerated containers where they hatch after three to four days. The larval fish are fed newly hatched brine shrimp *(Artemia* sp.) at least twice per day.

In-house organisms are tested monthly in a reference toxicant test using sodium chloride to monitor overall health and test reproducibility (Appendix 4).

Test Procedures

Upon receipt at the lab, samples were analyzed for alkalinity, ammonia, chlorine, conductivity, dissolved oxygen, hardness, and pH.

Methods used in chemical analysis

Alkalinity	EPA 310.2	Hach 8203	I-2030-85.2
Ammonia	SM4500-NH_3, C-E1997	ASTM D1426-08	
Chlorine	SM4500-Cl D	Hach 10026	
Conductivity	SM2510		
Dissolved Oxygen	SM4500-O	Electrode: G-2001	Winkler (QC): B-F-2001
Hardness	SM2340 B or C	Hach 8213	
pH	SM4500-H+ B-2000		

The test followed procedures in EPA[3] and CDPHE[4] guidelines. Exposure concentrations included control (0%), 13%, 26%, 52%, 76%, and 100% mixtures, diluted with moderately hard laboratory reconstituted water.

Individual *Ceriodaphnia dubia* were placed in 30ml plastic containers containing approximately 15ml of exposure medium. Ten replicates at each concentration were used. The animals were fed daily with the YCT mixture and an equal volume of the green algae *(Selenastrum capricornutum)*. The exposure medium was changed daily in each container and the number of young released overnight were counted and recorded. Young were removed from the containers daily and discarded. Routine measurements were made each day of temperature, dissolved oxygen, and pH before and after the water changes.

Fathead minnow were exposed in 500ml plastic cups to which 250ml of media was replaced daily. Four replicates were used at each concentration. Ten fish, less than 24-hours old, were placed in each cup. The fish were monitored daily for survival and fed live brine shrimp at least twice per day. After seven days, the fish were removed from the cups, euthanized with isopropyl alcohol, and then placed in aluminum pans and dried in an oven for a minimum of six hours at 100°C. The pans were then weighed on a five-place analytical balance to determine the average dry weight of the fish from each replicate.

Data Analysis

Data from the tests were analyzed on a personal computer using the CETIS program (developed by Tidepool Scientific Software). Statistical tests used in the analyses are shown in Table 1. Test acceptability was determined using control survival and reproduction/growth criteria, concentration-response relationships, and percent minimum significant differences (USEPA [5,6]).

Table 1. Statistical methods used in testing for significant differences in test parameters.

Variance	Distribution
Bartlett Equality of Variance Test	Shapiro-Wilk W Normality Test

Statistical Difference				
Species	Survival	Growth	Reproduction	IC_{25}
Ceriodaphnia dubia	Fisher Exact/Bonferroni-Holm Test	N/A	Steel Many-One Rank Sum Test	ICp
fathead minnow	Steel Many-One Rank Sum Test	Dunnett Multiple Comparison Test	N/A	ICp

RESULTS

Ceriodaphnia dubia Test Results

Test results for the *Ceriodaphnia dubia* are summarized in Table 2 and provided on the data sheets located in Appendix 2. Survival was 90% in the 100% effluent and ranged from 90% - 100% in the remaining effluent concentrations. Control survival was 100%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL (No Observed Effect Level) for lethality was 100% and the LC_{25} (Lethal Concentration 25) for lethality was >100%.

Average number of neonates was 14.7 in the 100% effluent concentration and ranged from 11.8 – 14.9 in the remaining effluent concentrations. Average number of neonates in the control was 15.7 for statistical analyses and test acceptability criteria. No statistically significant differences in the number of neonates were found between the control and any effluent concentration. The NOEL for reproduction was 100% and the IC_{25} (Inhibition Concentration 25) for reproduction was >100%.

Table 2. Summary of *Ceriodaphnia dubia* test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Mean Neonates	Min.	Max.	Significant Difference	
					Lethality	Reprod.
Control (0%)	100	15.7	9	20		
13%	90	11.8	0	17		
26%	100	14.3	9	18		
52%	100	13.3	9	22		
76%	90	14.9	0	24		
100%	90	14.7	0	21		

Fathead Minnow Test Results

Fathead minnow results are summarized in Table 3 and are provided on data sheets in Appendix 3. Survival was 100% in the 100% effluent concentration and ranged from 95% - 100% in the remaining effluent concentrations. Control survival was 100%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL for lethality was 100% and the LC_{25} for lethality was >100%.

Average weight in the 100% effluent concentration was 0.462mg and ranged from 0.435mg - 0.479mg per individual in the remaining effluent concentrations. Average weight for the control fish was 0.433mg for statistical analyses and test acceptability criteria. No statistically significant differences for growth were measured in any effluent concentration when compared to the control. The NOEL for growth was 100% and the IC_{25} for growth was >100%.

Table 3. Summary of fathead minnow test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Average Weight (mg)	Min.	Max.	Significant Difference	
					Lethality	Growth
Control (0%)	100	0.433	0.388	0.476		
13%	95	0.474	0.339	0.522		
26%	100	0.474	0.376	0.552		
52%	100	0.435	0.379	0.508		
76%	98	0.479	0.365	0.572		
100%	100	0.462	0.422	0.508		

Test Acceptability

Acceptable control survival (80%) was achieved in both tests. Similarly, *Ceriodaphnia dubia* reproduction (average 15 neonates/organism) and fathead minnow growth (average 0.250mg/test container) in control organisms met required levels. PMSD was within the required limits for an acceptable test (Table 4).

Table 4. PMSD for chronic test parameters.

	fathead minnow growth		*C. dubia* reproduction	
	Lower bound	Upper bound	Lower bound	Upper bound
PMSD	12	30	13	47
(% Minimum significant difference)	27.2		31.0	

DISCUSSION

A failed test for this discharge occurs when there is an NOEL or IC_{25} less than the IWC (Instream Waste Concentration) of 52%. The NOEL represents the highest effluent concentration at which no statistically significant effect is observed. The IC_{25} represents an estimate of the effluent concentration that would cause a 25 percent reduction of a non-quantal biological measurement. A violation for this discharge occurs when both the NOEL and the IC_{25} are less than the IWC. Since neither test species demonstrated statistically significant differences meeting these criteria, the discharge passes WET testing requirements for this sampling period.

REFERENCES

1. **Hach Chemical Company.** 2008. *Hach's Water Analysis Handbook.* Fifth Edition. Hach Chemical Company, Loveland, Colorado. Digital Medium.
2. **APHA/AWWA/WEF.** 1998. *Standard Methods for the Examination of Water and Wastewater.* 20th Edition. American Public Health Association, Washington, D.C.
3. **USEPA.** 2002. *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms.* EPA-821-R-02-013. 335 pp.
4. **CDPHE (Colorado Department of Public Health and Environment).** 1998. *Laboratory Guidelines for Conducting Whole Effluent Toxicity Tests.* Water Quality Control Division.
5. **USEPA.** 2000. *Method of Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 CFR Part 136). EPA/821/B-00/004.
6. **USEPA**. 2000. *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications under the National Pollutant Discharge Elimination System Program.* EPA/833/R-00/003.

Appendix 1 – Chain of Custody with Sample Receipt Forms

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: BMRT
P. O./Project Number: San Luis
Contact: Julio Madrid
Address: P.O. BOX 310 San Luis, CO 81152
Phone # 719-379-0827 E-Mail: David.Curino@Newmont.com
Fax # N/A Sampler: David S. Curino
Report By: [X] Mail [ ] PDF [ ] FAX

Analysis (Check all applicable)

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)				Number of Containers	Total Volume
W.E.T. Test	1/24/22	0600	comp	422030B#1		X															2	2gal

Turnaround Requirements (Analytical Testing Only)

_____ Standard (10 days) _____ 6-9 Day
_____ 3-5 Day _____ 1-2 Day
Requested Report Date:

Test Species: [X] Fathead Minnow [X] Cerio daphnia [ ] Daphnia magna [ ] Daphnia pulex [ ] Other (List Below)

Special Instructions/Comments:

Outfall – 001B

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
David S. Curino	1/24/22 0600	[illegible]	01/24/22 1100				

Battle Mountain Gold Mine NPDES WET Test Log

Treatment System Flow Rate 505 GPM
ISCO Sampling Schedule 100 ml per 10 minutes
Start Sample Program: Time 0600
End Sample Program: Time 0600 Date 1/24/22 Circle One: (M) W F

Sampling Personnel: A. Taylor, R. Lucero, S. Maestas, D. Carmo

~3 Hour Time 0900 Observation good water flow, power on to sampler, sample container on ice

~6 Hour Time 1200 Observation good water flow, power on to sampler, sample container on ice

~9 Hour Time 1500 Observation good water flow, power on to sampler, sample container on ice

~12 Hour Time 1800 Observation good water flow, power on to sampler, sample container on ice

~15 Hour Time 2100 Observation good water flow, Power on to Sampler, Sample Container on ice

~18 Hour Time 2400 Observation good water flow, Power on to Sampler, Sample Container on ice

~21 Hour Time 0300 Observation good water flow, Power on to Sampler, Sample Container on ice

~24 Hour Time 0600 Observation good water flow, Power on to Sampler, Sample Container on ice

Total Volume Collected 4 gallons
Volume sent to lab 2 gallons
[redacted]
Samples packed on ice [X]
Completed COC [X]
Cooler Sealed [X]
~~UPS pick up on time~~ [ ]
BMRI Delivered [X]

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2022

Project # 422 030.B Sample #: 1
Date: 01/24/22 Initials: SW

Samples Were:

1. FedEx UPS Courier (Hand Delivery) (circle one)
   Notes:

2. Chilled to Ship Ambient (Chilled)

3. Cooler Received Broken or Leaking Y (N) NA
   Notes:

4. Sample Received Broken or Leaking Y (N)
   Notes:

5. Received Within 36hr Holding Time (Y) N
   Notes:

6. Aeration necessary Y (N)

7. pH adjustment necessary Y (N)

8. Sample Received at Temperature between 0-6° C . Y N (NA)
   Notes: same day

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: Clear, no visable pm
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
0.30B#1	7.3	7.0	7.9	201

Custody Seals:

1. Present on Outer Package (Y) N
2. Unbroken on Outer Package Y (N) NA
3. Present on Sample Y (N)
4. Unbroken on Sample Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample (Y) N

TJR

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: BMRI

P. O./Project Number: San Luis

Contact: Julio Madrid

Address: P.O. BOX 310 San Luis, Co 81152

Phone # 719-379-0827 E-Mail: David.Carino@Newmont.com

Fax # N/A Sampler: David S Carino

Report By: ☒ Mail ☐ PDF ☐ FAX

Analysis (Check all applicable)

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)				Number of Containers	Total Volume
W.E.T. Test	1/26/22	0600	Comp	422030.8#2		X															2	2gal

Turnaround Requirements
(Analytical Testing Only)

_____ Standard (10 days) _____ 6-9 Day

_____ 3-5 Day _____ 1-2 Day

Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

outfall - 001B

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
David S. Carino	1/26/22 0600		01/26/22 11:50				

Battle Mountain Gold Mine NPDES WET Test Log

Treatment System Flow Rate 480 GPM
ISCO Sampling Schedule 100 ml per 10 minutes
Start Sample Program: Time 0600
End Sample Program: Time 0600 Date 1-26-22 Circle One: M (W) F

Sampling Personnel: R. Lucero, D. Carino, A. Taylor, S. Maestas

~3 Hour Time 0900 Observation good water flow, power on to sampler, Sample Container on ice

~6 Hour Time 1200 Observation good water flow, power on to sampler, Sample Container on ice

~9 Hour Time 1500 Observation good water flow, power on to sampler, Sample Container on ice

~12 Hour Time 1800 Observation good water flow, power on to sampler, sample Container on ice

~15 Hour Time 2100 Observation good water flow, power on to sampler, sample container on ice

~18 Hour Time 2400 Observation good water flow, power on to sampler, sample, container on ice

~21 Hour Time 0300 Observation good water flow, power on to sampler, Sample container on ice

~24 Hour Time 0600 Observation good water flow, power on to sampler Sample container on ice

Total Volume Collected 4 gallons
Samples packed on ice [X]
Completed COC [X]
Cooler Sealed [X]
[redacted]
BMRI Delivered X

Volume sent to lab 2 gallons
[redacted]

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2022

Project # 422 030.B
Date: 01 26 22
Sample #: 2
Initials: JW

Samples Were:

1. FedEx UPS Courier (Hand Delivery) (circle one)
   Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — Y N (NA)
   Notes: same day

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: clear, no visable pm
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
030.B#2	4.0	7.8	7.6	193

Custody Seals:

1. Present on Outer Package — Y (N)
2. Unbroken on Outer Package — Y N (NA)
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — (Y) N

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: BMRI
P. O./Project Number: San Luis
Contact: Julio Madrid
Address: P.O. BOX 310 San Luis, Co 81152
Phone # 719-379-0059 E-Mail: David.Carino@Newmont.com
Fax # N/A Sampler: David S Cariño
Report By: ☒ Mail ☐ PDF ☐ FAX

Analysis (Check all applicable)

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)				Number of Containers	Total Volume
W.E.T. Test	1/28/22	0600	Comp	422030.3#3		X															3	3gal

Turnaround Requirements (Analytical Testing Only)

_____ Standard (10 days) _____ 6-9 Day
_____ 3-5 Day _____ 1-2 Day
Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

Outfall - 001B

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
David S Cariño	1/28/22 0600	D. Thainton	1/28/22 11:30				

Battle Mountain Gold Mine NPDES WET Test Log

Treatment System Flow Rate 510 GPM
ISCO Sampling Schedule 100 ml per 10 minutes
Start Sample Program: Time 0600
End Sample Program: Time 0600 Date 1/28/22 Circle One: M W (F)

Sampling Personnel: S. Maestas, D. Carino, A. Taylor

~3 Hour Time 0900 Observation good water flow, Power on to Sampler, Sample Container on ice

~6 Hour Time 1200 Observation good water flow, Power on to Sampler, Sample Container on ice

~9 Hour Time 1500 Observation good water flow, Power on to Sampler, Sample Container on ice

~12 Hour Time 1800 Observation good water flow, Power on to Sampler, Sample Container on ice

~15 Hour Time 2100 Observation good water flow, Power on to Sampler, Sample Container on ice

~18 Hour Time 2400 Observation good water flow, power on to Sampler, Sample container on ice

~21 Hour Time 0300 Observation good water flow, power on to Sampler, Sample container on ice

~24 Hour Time 0600 Observation good water flow, power on to Sampler, Sample container on ice

Total Volume Collected 4 gallons
Volume sent to lab 3 gallons
Samples packed on ice X
Completed COC X
Cooler Sealed X
~~UPS pick up on time~~ [ ]
BMRI Delivered X

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2022

Project # 422 030.B
Sample #: 3
Date: 012822
Initials: JM

Samples Were:

1. FedEx UPS Courier Hand Delivery (circle one)
   Notes:

2. Chilled to Ship — Ambient Chilled

3. Cooler Received Broken or Leaking — Y N NA
   Notes:

4. Sample Received Broken or Leaking — Y N
   Notes:

5. Received Within 36hr Holding Time — Y N
   Notes:

6. Aeration necessary — Y N

7. pH adjustment necessary — Y N

8. Sample Received at Temperature between 0-6° C . — Y N NA
   Notes: same day sample

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: clear, no visible pm
   Receiving: N/A
   Presence of native species: Y N

Lab #	Temp	D.O.	pH	Cond
030.B43	5.0	8.4	7.4	197

Custody Seals:

1. Present on Outer Package — Y N
2. Unbroken on Outer Package — Y N NA
3. Present on Sample — Y N
4. Unbroken on Sample — Y N NA

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — Y N

TJR

Appendix 2 – Data Sheets for the *Ceriodaphnia dubia* Test

WET TEST REPORT FORM – CHRONIC

Permittee: Battle Mountain Resources, Inc.

Permit No.: CO-0045675

Outfall: 001B – IWC: 52%

Test Type: Routine ☒ Accelerated ☐ Screen ☐

Test Species: *Ceriodaphnia dubia*

Test Start Time	Test Start Date	Test End Time	Test End Date
1600	01-24-2022	1700	01-30-2022

Test Results	Lethality/TCP3B	Reproduction/TKP3B
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	13%	26%	52%	76%	100%
Exposed organisms	10	10	10	10	10	10
Survival for day 1	10	10	10	10	10	10
Survival for day 2	10	9	10	10	10	10
Survival for day 3	10	9	10	10	9	9
Survival for day 4	10	9	10	10	9	9
Survival for day 5	10	9	10	10	9	9
Survival for day 6	10	9	10	10	9	9
Mean 3 Brood Total	15.7	11.8	14.3	13.3	14.9	14.7

Hardness (mg/L) – Receiving Water: N/A Effluent: 43/52/61 Recon Water: 96
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 14/15/13 Recon Water: 63
Chlorine (mg/L) – Effluent: <0.01 pH (initial/final) – Control: 8.1/7.9 100%: 7.8/8.0
Total Ammonia as NH_3 (mg/L) - Effluent: 0.06/0.05/0.07

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Isabelle Sibley and Julie McKenney

Signature Hailey West *Date* February 4, 2022

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: January 2009

Permittee: BMRI Lab #: 422 030.B Site: 001B
IWC %: 52 Template #: 5 Dilution Water: MH22-002 Sample Date: 012422
Age & Source: cerio 2108 0124 Test Start: 012422 1600 Test End: 013022 1700
Test Conditions:

	0	1	2	3	4	5	6	7	8	Total
(C)	0	0	0	0	5	6	9			20
	0	0	0	3	0	6	5			14
	0	0	0	0	4	5	9			18
	0	0	0	0	4	5	0			9
	0	0	0	0	3	4	5			12
0	0	0	0	0	5	6	8			19
	0	0	0	0	6	5	6			17
	0	0	0	0	5	8	5			18
	0	0	0	0	0	6	7			13
	0	0	0	0	5	6	6			17
DO	7.0	7.2 | 6.9	7.2 | 6.8	7.4 | 6.9	7.4 | 7.0	7.4 | 6.8	8.1			
Temp	25.9	24.1 | 24.1	24.2 | 24.1	24.1 | 24.1	25.0 | 24.1	24.1 | 24.1	24.1			15.7
pH	8.1	8.0 | 8.1	7.9 | 8.1	7.8 | 8.1	7.9 | 8.1	7.9 | 8.1	7.9			
Cond	306	306	326	313	330	314				
(1)	0	0	0	0	5	6	6			17
	0	0	0	0	4	5	4			13
	0	0	0	0	3	6	4			13
	0	0	0	0	3	7	4			14
	0	0	0	0	4	6	5			15
3	0	0	0	0	4	4	0			8
	0	0	0	0	0	5	5			10
	0	0	0 D							0 D
	0	0	0	4	0	4	7			15
	0	0	0	3	0	5	5			13
DO	7.1	7.2 | 7.0	7.2 | 7.0	7.4 | 7.0	7.4 | 7.2	7.4 | 7.2	8.1			
Temp	25.9	24.1 | 24.1	24.2 | 24.1	24.1 | 24.1	25.0 | 24.1	24.1 | 24.1	24.1			11.8
pH	8.1	8.0 | 8.1	7.9 | 8.1	7.7 | 8.0	7.9 | 8.0	7.9 | 8.1	7.9			
Cond	287	289	286	289	278	292				
	0	1	2	3	4	5	6	7	8	Total
(2)	0	0	0	0	3	4	8			15
	0	0	0	3	0	5	4			12
	0	0	0	0	4	5	7			16
	0	0	0	6	0	5	4			9
	0	0	0	0	4	6	6			16
27	0	0	0	0	4	8	6			18
	0	0	0	0	0	6	9			15
	0	0	0	10	5	6	7			18
	0	0	0	84	0	5	3			12
	0	0	0	0	0	5	7			12
DO	7.3	7.2 | 7.1	7.2 | 7.2	7.4 | 7.1	7.4 | 7.4	7.4 | 7.4	8.1			
Temp	25.9	24.1 | 24.1	24.2 | 24.1	24.1 | 24.1	25.0 | 24.1	24.1 | 24.1	24.1			14.3
pH	8.0	8.0 | 8.1	7.9 | 8.0	7.7 | 7.9	7.9 | 7.9	7.9 | 8.0	7.9			
Cond	277	274	299	275	270	280				
(3)	0	0	0	0	5	7 +1	6			13
	0	0	0	0	0	5	4			9
	0	0	0	0	4	5	5			14
	0	0	0	0	3	6	0			9
	0	0	0	0	3	5	5			13
50	0	0	0	0	3	8	11			22
	0	0	0	0	0	7	7			14
	0	0	0	0	4	6	7			17
	0	0	0	0	6	7	5			12
	0	0	0	0	0	6	4			10
DO	7.5	7.2 | 7.2	7.2 | 7.4	7.5 | 7.3	7.8 | 7.6	7.5 | 7.5	8.2			
Temp	25.9	24.1 | 24.1	24.2 | 24.1	24.1 | 24.1	25.0 | 24.1	24.1 | 24.1	24.1			13.3
pH	8.0	8.1 | 8.0	7.8 | 8.0	7.6 | 7.8	7.8 | 7.8	7.8 | 7.9	8.0			
Cond	245	241	249	245	241	255				

HW

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: January 2009

	0	1	2	3	4	5	6	7	8	Total
(4)	0	0	0	0	4	5	4			13
	0	0	0	3	0	6	7			16
	0	0	0	0	4	5	7			16
	0	0	0	0 D						0 D
	0	0	0	0	4	5	8			17
76	0	0	0	0	5	6	13			24
	0	0	0	0	0	7	12			19
	0	0	0	0	3	5	9			17
	0	0	0	0	0	5	7			12
	0	0	0	4	0	4	7			15
DO	7.6	7.2 | 7.3	7.2 | 7.6	7.5 | 7.5	7.5 | 8.0	7.5 | 8.0	8.2			
Temp	25.9	24.1 | 24.1	24.2 | 24.1	24.1 | 24.1	25.0 | 24.1	24.1 | 24.5	24.1			14.9
pH	7.9	8.1 | 8.0	7.8 | 7.8	7.5 | 7.6	7.8 | 7.7	7.8 | 7.8	8.0			
Cond	214	213	221	220	225	227				
(5)	0	0	0	0 D						0 D
	0	0	0	0	0	6	9			15
	0	0	0	0	3	7	5			15
	0	0	0	0	4	8 +1	0			13
100	0	0	0	0	4	6	5			15
	0	0	0	0	3	6	12			21
	0	0	0	0	0	7	7			14
	0	0	0	0	4	8	6			20
	0	0	0	0	0	5	8			13
	0	0	0	4 be	0	7	10			21 be
DO	7.7	7.2 | 7.3	7.2 | 7.8	7.5 | 7.7	7.5 | 8.1	7.5 | 8.2	8.2			
Temp	25.9	24.1 | 24.1	24.2 | 24.1	24.1 | 24.1	25.0 | 24.1	24.1 | 24.5	24.1			14.7
pH	7.8	8.1 | 7.9	7.8 | 7.6	7.5 | 7.4	7.8 | 7.5	7.8 | 7.6	8.0			
Cond	182	183	~~214~~ 193	192	193	201				
Algae	ABS	ABS	ABS	ABS	ABS	ABS				
YCT	2201	2201	2201	2201	2201	2201				
H_2O	1	1	2	2	2	3				
Initials	IS	IS	JM	JM	JM	JM	IS			

	Eff #1	Eff #2	Eff #3	Rec'g #1	Rec'g #2	Rec'g #3	Recon #1	Recon #2	Recon #3
Hardness	43	52	61				96		
Alkalinity	14	15	13				63		
Chlorine	<0.01	<0.01	<0.01				<0.01		
Ammonia	0.06	0.05	0.07				<0.03		

1. Exposure Chamber
   Total Capacity: 30 ml
   Test Solution Surface Area: _____ cm^2
   Test Solution Volume: 15 ml
   Water Depth (constant): _____ cm
   (cyclic): _____ to _____ cm

2. Feeding Schedule
   Not fed: _____
   Fed Irregularly: _____
   Fed Daily: X
   Food Used: YCT, algae

3. Aeration
   #1 None: _____ Before Use: _____ (_____ minutes @ ~100 bubbles/min)
   #2 None: _____ Before Use: _____ (_____ minutes @ ~100 bubbles/min)
   #3 None: _____ Before Use: _____ (_____ minutes @ ~100 bubbles/min)

4. Screened Animal Enclosers
   Not Used: X
   Used: _____ cm diameter

5. Condition/appearance of surviving organisms at end of test (i.e., alive but immobile; loss of orientation; erratic movement; etc.,):
   Active and mobile

6. Comments:

x:y:z = board #:row:column

1	2	3	4	5	6	7	8	9	10
A3	A5	A9	B8	C1	C9	D1	D4	B7	E7

HW

CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **SeaCrest Group**

Analysis ID:	06-3552-6755	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	01 Feb-22 16:39	**Analysis:**	STP 2xK Contingency Tables	**Status Level:**	1
Batch ID:	08-0509-3431	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	24 Jan-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	30 Jan-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	13-0346-6024	**Code:**	422030.B	**Project:**	WET Quarterly Compliance Test (1Q)
Sample Date:	24 Jan-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	24 Jan-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU
Untransformed	C > T	100	>100	n/a	1

Fisher Exact/Bonferroni-Holm Test

Control	vs	Group	Test Stat	P-Type	P-Value	Decision(α:5%)
Dilution Water		13	0.5000	Exact	1.0000	Non-Significant Effect
		26	1.0000	Exact	1.0000	Non-Significant Effect
		52	1.0000	Exact	1.0000	Non-Significant Effect
		76	0.5000	Exact	1.0000	Non-Significant Effect
		100	0.5000	Exact	1.0000	Non-Significant Effect

Data Summary

Conc-%	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
0	D	10	0	10	1	0	0.0%
13		9	1	10	0.9	0.1	10.0%
26		10	0	10	1	0	0.0%
52		10	0	10	1	0	0.0%
76		9	1	10	0.9	0.1	10.0%
100		9	1	10	0.9	0.1	10.0%

CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **SeaCrest Group**

Analysis ID:	04-9879-7945	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	01 Feb-22 16:39	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	08-0509-3431	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	24 Jan-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	30 Jan-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	13-0346-6024	**Code:**	422030.B	**Project:**	WET Quarterly Compliance Test (1Q)
Sample Date:	24 Jan-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	24 Jan-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	681150	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
LC5	58	6.5	n/a	1.724	n/a	15.38
LC10	100	58	n/a	1	n/a	1.724
LC15	>100	n/a	n/a	<1	n/a	n/a
LC20	>100	n/a	n/a	<1	n/a	n/a
LC25	>100	n/a	n/a	<1	n/a	n/a
LC40	>100	n/a	n/a	<1	n/a	n/a
LC50	>100	n/a	n/a	<1	n/a	n/a

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	D	10	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	10/10	1	0.0%
13		10	0.9000	0.0000	1.0000	0.3162	35.14%	10.0%	9/10	0.9667	3.33%
26		10	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	10/10	0.9667	3.33%
52		10	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	10/10	0.9667	3.33%
76		10	0.9000	0.0000	1.0000	0.3162	35.14%	10.0%	9/10	0.9	10.0%
100		10	0.9000	0.0000	1.0000	0.3162	35.14%	10.0%	9/10	0.9	10.0%

CETIS Analytical Report

Test Code/ID: 422030CD / 15-6631-7913

Ceriodaphnia 7-d Survival and Reproduction Test

SeaCrest Group

Analysis ID:	17-2658-2511	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.9.6
Analyzed:	01 Feb-22 16:39	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Batch ID:	08-0509-3431	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	24 Jan-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	30 Jan-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	13-0346-6024	**Code:**	422030.B	**Project:**	WET Quarterly Compliance Test (1Q)
Sample Date:	24 Jan-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	24 Jan-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	100	>100	n/a	1	30.98%

Steel Many-One Rank Sum Test

Control	vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water		13	80	75	3	18	CDF	0.1054	Non-Significant Effect
		26	90	75	3	18	CDF	0.3541	Non-Significant Effect
		52	85.5	75	5	18	CDF	0.2204	Non-Significant Effect
		76	99.5	75	4	18	CDF	0.6816	Non-Significant Effect
		100	105	75	3	18	CDF	0.8333	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	95.2833	19.0567	5	0.8443	0.5244	Non-Significant Effect
Error	1218.9	22.5722	54			
Total	1314.18		59			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	7.395	15.09	0.1929	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9112	0.9459	3.5E-04	Non-Normal Distribution

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	15.7	13.18	18.22	17	9	20	1.116	22.48%	0.00%
13		10	11.8	8.315	15.28	13	0	17	1.541	41.29%	24.84%
26		10	14.3	12.19	16.41	15	9	18	0.9315	20.60%	8.92%
52		10	13.3	10.48	16.12	13	9	22	1.248	29.67%	15.29%
76		10	14.9	10.47	19.33	16	0	24	1.958	41.55%	5.10%
100		10	14.7	10.37	19.03	15	0	21	1.915	41.20%	6.37%

Ceriodaphnia 7-d Survival and Reproduction Test — **SeaCrest Group**

Analysis ID:	04-7763-7571	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.9.6
Analyzed:	01 Feb-22 16:39	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	08-0509-3431	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	24 Jan-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	30 Jan-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	13-0346-6024	**Code:**	422030.B	**Project:**	WET Quarterly Compliance Test (1Q)
Sample Date:	24 Jan-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	24 Jan-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	2005554	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	5.371	2.871	n/a	18.62	n/a	34.84
IC10	10.74	5.741	n/a	9.309	n/a	17.42
IC15	>100	n/a	n/a	<1	n/a	n/a
IC20	>100	n/a	n/a	<1	n/a	n/a
IC25	>100	n/a	n/a	<1	n/a	n/a
IC40	>100	n/a	n/a	<1	n/a	n/a
IC50	>100	n/a	n/a	<1	n/a	n/a

Reproduction Summary

			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	D	10	15.7	9	20	3.529	22.48%	0.0%	15.7	0.0%
13		10	11.8	0	17	4.872	41.29%	24.84%	13.8	12.1%
26		10	14.3	9	18	2.946	20.60%	8.92%	13.8	12.1%
52		10	13.3	9	22	3.945	29.67%	15.29%	13.8	12.1%
76		10	14.9	0	24	6.19	41.55%	5.1%	13.8	12.1%
100		10	14.7	0	21	6.056	41.20%	6.37%	13.8	12.1%

Appendix 3 – Data Sheets for the Fathead Minnow Test

WET TEST REPORT FORM – CHRONIC

Permittee: Battle Mountain Resources, Inc.

Permit No.: CO-0045675

Outfall: 001B – IWC: 52%

Test Type: Routine ☒ Accelerated ☐ Screen ☐

Test Species: fathead minnow

Test Start Time	Test Start Date	Test End Time	Test End Date
1500	01-24-2022	1400	01-31-2022

Test Results	Lethality/TCP6C	Growth/TKP6C
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	13%	26%	52%	76%	100%
Exposed organisms	40	40	40	40	40	40
Survival for day 1	40	40	40	40	40	40
Survival for day 2	40	40	40	40	40	40
Survival for day 3	40	40	40	40	40	40
Survival for day 4	40	39	40	40	40	40
Survival for day 5	40	39	40	40	39	40
Survival for day 6	40	39	40	40	39	40
Survival for day 7	40	38	40	40	39	40
Mean Dry Wt. (mg)	0.433	0.474	0.474	0.435	0.479	0.462

Hardness (mg/L) – Receiving Water: N/A Effluent: 43/52/61 Recon Water: 88
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 14/15/13 Recon Water: 64
Chlorine (mg/L) – Effluent: <0.01 pH (initial/final) – Control: 8.1/7.9 100%: 7.9/8.0
Total Ammonia as NH_3 (mg/L) - Effluent: 0.06/0.05/0.07

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Shanna Wepman, Haley West, and Daniela Thornton

Signature Haley West *Date* February 4, 2022

SeaCrest Group
Louisville, CO

Fathead Minnow Chronic Benchsheet

Form #: 103a
Effective: January 2009

Client BMRI Site 001B Lab # 422 030.B Sample Date 012422 IWC 52 Dilution H_2O MH22-003

Test Start 012422 - 1500 Test End 013122 1400 Species Info IH 012322 Template Test Conditions

Conc	Read	0	1		2		3		4		5		6		7	0	1	2	3	4	5	6	7	#	Fish & Tare	Tare	Fish Wt mg	Ave wt
0	DO	6.8	5.3	7.0	4.8	6.8	5.4	6.8	5.3	6.8	5.1	6.8	5.2	6.9	5.2	10	10	10	10	10	10	10	10	#1	0.72964	0.72576	0.388	
	Temp	25.4	24.2	24.1	24.1	24.1	24.5	24.4	24.2	24.1	24.1	24.1	24.1	24.1	24.3	10	10	10	10	10	10	10	10	#2	0.72971	0.72848	0.473	
	pH	8.1	7.9	8.1	7.7	8.0	7.5	7.7	7.7	8.1	7.6	8.2	7.9	8.1	7.9	10	10	10	10	10	10	10	10	#3	0.69712	0.69236	0.476	0.433
	Cond	342	342		337		346		331		343		330			10	10	10	10	10	10	10	10	#4	0.70486	0.70091	0.395	
B	DO	6.8	5.2	7.2	4.8	7.2	5.4	7.1	5.3	7.1	5.1		5.2	7.1	5.2	10	10	10	10	10	10	10	10	#5	0.68906	0.68390	0.516	
	Temp	25.4	24.2	24.1	24.1	24.1	24.5	24.4	24.2	24.1	24.1	24.1	24.1	24.1	24.3	10	10	10	10	9	9	9	8	#6	0.70399	0.70060	0.339	
	pH	8.0	7.9	8.0	7.7	87.8	7.5	7.8	7.6	8.1	7.6	8.2	7.9	8.0	7.9	10	10	10	10	10	10	10	10	#7	0.72373	0.71854	0.519	0.474
	Cond	320	326		327		326		315		327		316			10	10	10	10	10	10	10	10	#8	0.70276	0.69754	0.522	
26	DO	6.9	5.1	7.4	4.8	7.6	5.4	7.4	5.4	7.4	5.1		5.1	7.3	5.1	10	10	10	10	10	10	10	10	#9	0.69909	0.69357	0.552	
	Temp	25.4	24.2	24.1	24.1	24.1	24.5	24.4	24.2	24.1	24.1	24.1	24.1	24.1	24.3	10	10	10	10	10	10	10	10	#10	0.70410	0.70034	0.376	
	pH	8.0	7.9	8.1	7.7	7.9	7.5	7.8	7.5	8.0	7.6	8.2	7.8	8.0	7.9	10	10	10	10	10	10	10	10	#11	0.71427	0.70952	0.475	0.474
	Cond	301	300		299		305		298		308		290			10	10	10	10	10	10	10	10	#12	0.70617	0.70123	0.494	
52	DO	6.9	5.0	7.5	4.8	8.0	5.3	7.7	5.5	7.8	5.1		5.1	7.4	5.0	10	10	10	10	10	10	10	10	#13	0.72126	0.71662	0.464	
	Temp	25.4	24.2	24.1	24.1	24.1	24.5	24.4	24.2	24.1	24.1	24.1	24.1	24.1	24.3	10	10	10	10	10	10	10	10	#14	0.71307	0.70928	0.379	
	pH	8.0	7.9	8.1	7.8	7.9	7.6	7.8	7.5	7.9	7.6	8.1	7.8	8.0	8.0	10	10	10	10	10	10	10	10	#15	0.70724	0.70337	0.387	0.435
	Cond	264	255		265		262		243		269		255			10	10	10	10	10	10	10	10	#16	0.70292	0.69784	0.508	
76	DO	7.0	4.9	7.6	4.8	8.4	5.3	8.0	5.6	8.1	5.1		5.0	7.5	4.9	10	10	10	10	10	9	9	9	#17	0.72981	0.72463	0.518	
	Temp	25.4	24.2	24.1	24.1	24.1	24.5	24.4	24.2	24.1	24.1	24.1	24.1	24.1	24.3	10	10	10	10	10	10	10	10	#18	0.71313	0.70948	0.365	
	pH	8.0	7.9	8.0	7.8	7.9	7.6	7.7	7.4	7.6	7.6	8.1	7.7	7.9	8.0	10	10	10	10	10	10	10	10	#19	0.72702	0.72242	0.460	0.479
	Cond	219	223		229		232		228		235		228			10	10	10	10	10	10	10	10	#20	0.71217	0.70645	0.572	
100	DO	7.0	4.8	7.7	4.8	8.6	5.3	8.3	5.6	8.4	5.1	7.3	5.0	7.7	4.9	10	10	10	10	10	10	10	10	#21	0.70857	0.70397	0.460	
	Temp	25.4	24.2	24.1	24.1	24.1	24.5	24.4	24.2	24.1	24.1	24.1	24.1	24.1	24.3	10	10	10	10	10	10	10	10	#22	0.70722	0.70266	0.456	
	pH	7.9	7.9	8.0	7.8	7.8	7.6	7.7	7.3	7.4	7.6	8.0	7.7	7.9	8.0	10	10	10	10	10	10	10	10	#23	0.70485	0.69977	0.508	0.462
	Cond	201	193		209		210		197		215		214			10	10	10	10	10	10	10	10	#24	0.69303	0.68881	0.422	
	DO															10												
	Temp															10												
	pH															10												
	Cond															10												
Initials		SW	SW		SW		HW		HW		DT		SW		HW									pretest	#25	0.71094	0.71518		
Water #		1	1		2		2		3		3		3															
CO_2																												

Condition/appearance of surviving organisms and Comments

active and mobile

	Eff 1	Eff 2	Eff 3	Rcv 1	Rcv 2	Rcv 3	Recon	Recon
Hard	43	52	61				88	
Alk	14	15	13				64	
Chlor	<0.01	<0.01	<0.01				<0.01	
NH_3	0.06	0.05	0.07				<0.03	
NH_3								

Exposure Chamber

Total Capacity:	500 mL
Test Solution Volume:	250 mL
Test Solution Surface Area:	50.24 cm
Water Depth (constant):	6.5 cm
(cyclic):	to cm

Feeding Schedule

Not Fed:
Fed Daily: 2x/day
Fed Irregularly:
(describe):
Food Used: <24hr Artemia

Aeration:

None:
@ ~ 100 bubbles/min
Before Use #1: (minutes
Before Use #2: (minutes
Before Use #3: (minutes

Screened Animal Enclosures

Not Used: x
Used: cm Diameter

Feeding	0	1	2	3	4	5	6	7
AM		✓	✓	✓	✓	✓	✓	✓
Initials		SW	SW	HW	HW	DT	SW	HW
PM	✓	✓	✓	✓	✓	✓	✓	
Initials	SW	SW	SW	HW	HW	DT	SW	

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	18-9079-4950	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	01 Feb-22 16:48	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Batch ID:	03-3416-8276	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	24 Jan-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	31 Jan-22	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	07-8370-6763	**Code:**	422030.B	**Project:**	WET Quarterly Compliance Test (1Q)
Sample Date:	24 Jan-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	24 Jan-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	C > T	100	>100	n/a	1	7.58%

Steel Many-One Rank Sum Test

Control	vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water		13	16	10	1	6	CDF	0.6105	Non-Significant Effect
		26	18	10	1	6	CDF	0.8333	Non-Significant Effect
		52	18	10	1	6	CDF	0.8333	Non-Significant Effect
		76	16	10	1	6	CDF	0.6105	Non-Significant Effect
		100	18	10	1	6	CDF	0.8333	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0207562	0.0041512	5	0.8337	0.5427	Non-Significant Effect
Error	0.0896276	0.0049793	18			
Total	0.110384		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.6439	0.884	2.0E-06	Non-Normal Distribution

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
13		4	0.9500	0.7909	1.0000	1.0000	0.8000	1.0000	0.0500	10.53%	5.00%
26		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
52		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
76		4	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	2.50%
100		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%
13		4	1.336	1.093	1.578	1.412	1.107	1.412	0.07622	11.41%	5.40%
26		4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%
52		4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%
76		4	1.371	1.242	1.501	1.412	1.249	1.412	0.04074	5.94%	2.89%
100		4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%

CETIS Analytical Report

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	04-1116-8871	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	01 Feb-22 16:48	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	03-3416-8276	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	24 Jan-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	31 Jan-22	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	07-8370-6763	**Code:**	422030.B	**Project:**	WET Quarterly Compliance Test (1Q)
Sample Date:	24 Jan-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	24 Jan-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	76956	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
LC5	>100	n/a	n/a	<1	n/a	n/a
LC10	>100	n/a	n/a	<1	n/a	n/a
LC15	>100	n/a	n/a	<1	n/a	n/a
LC20	>100	n/a	n/a	<1	n/a	n/a
LC25	>100	n/a	n/a	<1	n/a	n/a
LC40	>100	n/a	n/a	<1	n/a	n/a
LC50	>100	n/a	n/a	<1	n/a	n/a

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	D	4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	1	0.0%
13		4	0.9500	0.8000	1.0000	0.1000	10.53%	5.0%	38/40	0.985	1.5%
26		4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	0.985	1.5%
52		4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	0.985	1.5%
76		4	0.9750	0.9000	1.0000	0.0500	5.13%	2.5%	39/40	0.985	1.5%
100		4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	0.985	1.5%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
13		1.0000	0.8000	1.0000	1.0000
26		1.0000	1.0000	1.0000	1.0000
52		1.0000	1.0000	1.0000	1.0000
76		0.9000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	04-8004-3575	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.6
Analyzed:	01 Feb-22 16:48	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Batch ID:	03-3416-8276	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	24 Jan-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	31 Jan-22	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	07-8370-6763	**Code:**	422030.B	**Project:**	WET Quarterly Compliance Test (1Q)
Sample Date:	24 Jan-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	24 Jan-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	100	>100	n/a	1	27.20%

Dunnett Multiple Comparison Test

Control vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water	13	-0.8378	2.407	0.118	6	CDF	0.9735	Non-Significant Effect
	26	-0.8429	2.407	0.118	6	CDF	0.9738	Non-Significant Effect
	52	-0.03059	2.407	0.118	6	CDF	0.8422	Non-Significant Effect
	76	-0.9348	2.407	0.118	6	CDF	0.9794	Non-Significant Effect
	100	-0.5824	2.407	0.118	6	CDF	0.9501	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0085178	0.0017036	5	0.3557	0.8719	Non-Significant Effect
Error	0.0862146	0.0047897	18			
Total	0.0947324		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	3.065	15.09	0.6899	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9421	0.884	0.1814	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.433	0.3566	0.5094	0.434	0.388	0.476	0.02401	11.09%	0.00%
13		4	0.474	0.3307	0.6173	0.5175	0.339	0.522	0.04502	18.99%	-9.47%
26		4	0.4742	0.3577	0.5908	0.4845	0.376	0.552	0.03662	15.44%	-9.53%
52		4	0.4345	0.3355	0.5335	0.4255	0.379	0.508	0.0311	14.32%	-0.35%
76		4	0.4788	0.3378	0.6197	0.489	0.365	0.572	0.04428	18.50%	-10.57%
100		4	0.4615	0.4052	0.5178	0.458	0.422	0.508	0.01769	7.67%	-6.58%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.388	0.473	0.476	0.395
13		0.516	0.339	0.519	0.522
26		0.552	0.376	0.475	0.494
52		0.464	0.379	0.387	0.508
76		0.518	0.365	0.46	0.572
100		0.46	0.456	0.508	0.422

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	06-8232-9749	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.6
Analyzed:	01 Feb-22 16:48	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	03-3416-8276	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	24 Jan-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	31 Jan-22	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	07-8370-6763	**Code:**	422030.B	**Project:**	WET Quarterly Compliance Test (1Q)
Sample Date:	24 Jan-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	24 Jan-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	327021	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	n/a	n/a	<1	n/a	n/a
IC10	>100	n/a	n/a	<1	n/a	n/a
IC15	>100	n/a	n/a	<1	n/a	n/a
IC20	>100	n/a	n/a	<1	n/a	n/a
IC25	>100	n/a	n/a	<1	n/a	n/a
IC40	>100	n/a	n/a	<1	n/a	n/a
IC50	>100	n/a	n/a	<1	n/a	n/a

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	D	4	0.433	0.388	0.476	0.04802	11.09%	0.0%	0.4604	0.0%
13		4	0.474	0.339	0.522	0.09003	18.99%	-9.47%	0.4604	0.0%
26		4	0.4742	0.376	0.552	0.07323	15.44%	-9.53%	0.4604	0.0%
52		4	0.4345	0.379	0.508	0.06221	14.32%	-0.35%	0.4582	0.47%
76		4	0.4788	0.365	0.572	0.08855	18.50%	-10.57%	0.4582	0.47%
100		4	0.4615	0.422	0.508	0.03538	7.67%	-6.58%	0.4582	0.47%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.388	0.473	0.476	0.395
13		0.516	0.339	0.519	0.522
26		0.552	0.376	0.475	0.494
52		0.464	0.379	0.387	0.508
76		0.518	0.365	0.46	0.572
100		0.46	0.456	0.508	0.422

Appendix 4 – QA/QC and Reference Toxicant Test Chart

Quality Assurance Check List – Chronic Whole Effluent Toxicity Test

Client:	Battle Mountain Resources, Inc.
SeaCrest Sample No:	422030.B
Species Tested:	*Ceriodaphnia dubia* and fathead minnow

Sample Dates	**Start Date of Test (*Ceriodaphnia dubia*)**	**Start Date of Test (fathead minnow)**
01-24-2022		
01-26-2022		
01-28-2022	01-24-2022	01-24-2022

Sample received in lab properly preserved (0-6°C)?	**N***
Sample received at laboratory within 36 hours of collection?	**Y**
Sample delivered on ice or equivalent?	**Y**
Test initiated within 36-hours of collection?	**Y**
Test protocol conforms to CDPHE guidelines (*Ceriodaphnia dubia)*?	**Y**
Test protocol conforms to CDPHE guidelines (fathead minnow)?	**Y**
Average test temp. ±1°C (*Ceriodaphnia dubia*)?	**Y**
Average test temp. ±1°C (fathead minnow)?	**Y**
DO level ≥4.0mg/L; no super-saturation (*Ceriodaphnia dubia*)?	**Y**
DO level ≥4.0mg/L; no super-saturation (fathead minnow)?	**Y**
Survival in control ≥80% (*Ceriodaphnia dubia*)?	**Y**
Survival in control ≥80% (fathead minnow)?	**Y**
Ceriodaphnia dubia neonates <24-hours old?	**Y**
Fathead minnow larvae <24-hours old?	**Y**
Appropriate reference toxicity test conducted?	**Y**
Reference toxicity test results within the confidence limits for the lab?	**Y**

* Sample #1 was hand delivered at 7.3°C on the same day as sampling.

Author Haley Ulent *Date* February 4, 2022
Position: Laboratory Supervisor

Quality Control [signature] *Date* 4 February 2022

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

METHOD QC

Method	Analyte	Date	LCS (rec)	%REC	%RPD	QC LIMITS
2320 B	Alkalinity - Total	12/3/2021	101.60%	97.86%	3.51%	± 5.00%
2320 B	Alkalinity - Total	12/10/2021	104.00%	101.68%	2.17%	± 5.00%
2320 B	Alkalinity - Total	12/17/2021	104.80%	97.94%	2.85%	± 5.00%
4500 NH_3 D	Ammonia	12/3/2021	98.32%	100.86%	2.50%	± 10.00%
4500 NH_3 D	Ammonia	12/10/2021	100.40%	100.60%	-1.30%	± 10.00%
4500 NH_3 D	Ammonia	12/17/2021	105.00%	100.00%	0.82%	± 10.00%
4500 Cl D	Chlorine	12/29/2021	96.97%	103.13%	0.00%	± 5.00, ± 20.00%
2340 B	Hardness - Total	12/2/2021	103.51%	103.89%	0.98%	± 5.00%
2340 B	Hardness - Total	12/10/2021	102.00%	99.00%	-2.00%	± 5.00%
2340 B	Hardness - Total	12/16/2021	102.00%	101.00%	1.69%	± 5.00%

			LCS (rec)	%REC M1	%REC M2	QC Limits
4500 O	DO - Winkler	12/1/2021	N/A	100.00%	95.77%	± 5.00%
4500 O	DO - Winkler	12/9/2021	N/A	96.77%	95.24%	± 5.00%
4500 O	DO - Winkler	12/16/2021	N/A	98.48%	97.06%	± 5.00%

			Blank	%REC MR S	%RPD	QC Limits
2540 D	Suspended Solids (TTL)	12/2/2021	100.00%	93.40%	0.00%	± 15%
2540 C	Dissolved Solids (TTL)	12/2/2021	99.99%	104.10%	0.00%	± 15%

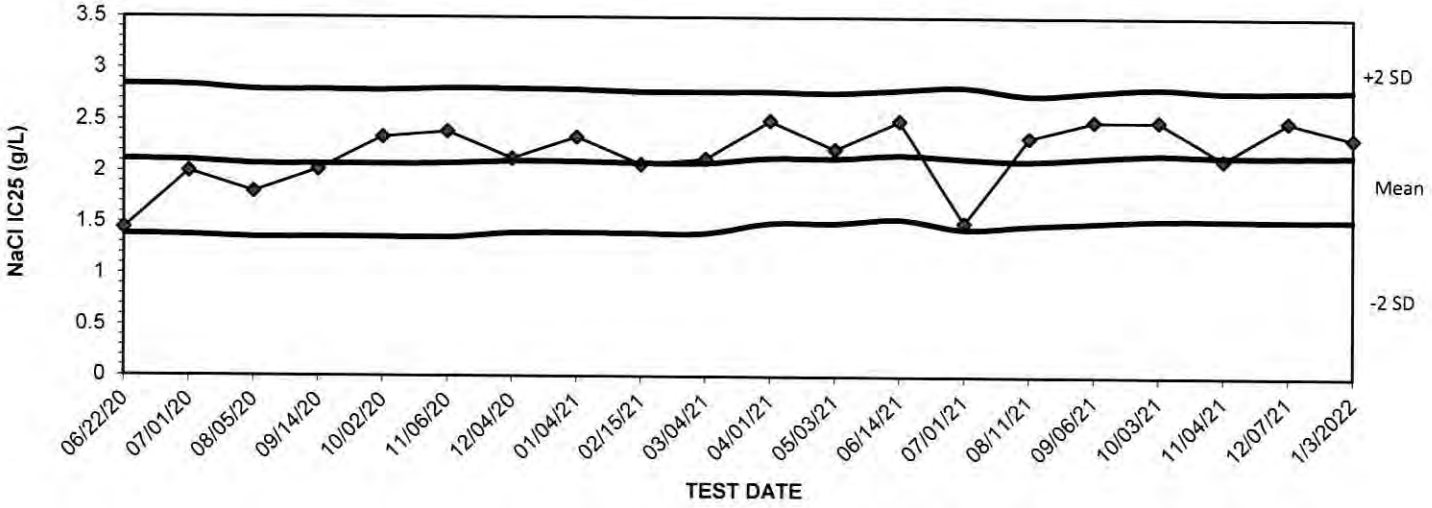
Signature: Haley West

Date: January 3, 2022

Signature:

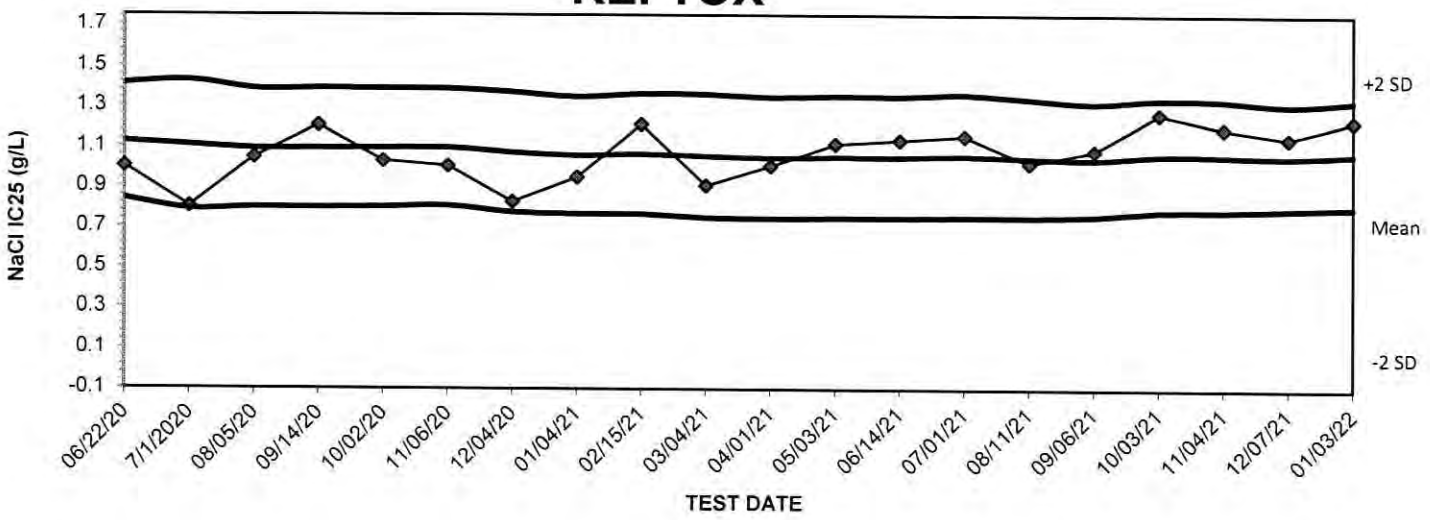
Date: 3 January 2022

CERIODAPHNIA SURVIVAL LC25 NaCl REFTOX



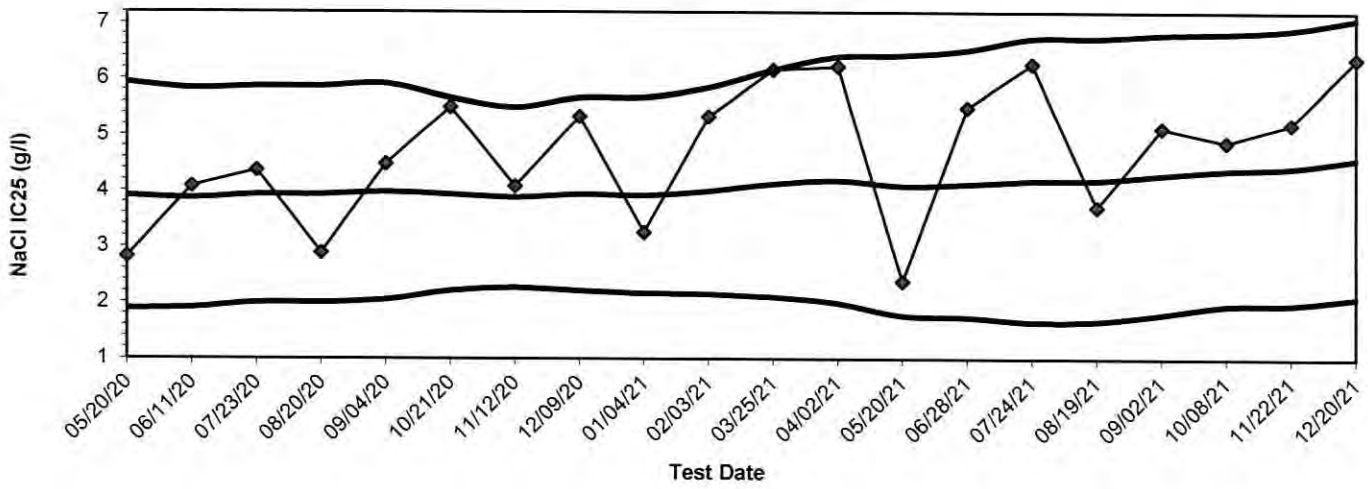
Date	IC25	Mean	-2 SD	+2 SD
06/22/20	1.4400	2.1115	1.3806	2.8425
07/01/20	2.0000	2.1056	1.3730	2.8381
08/05/20	1.8000	2.0722	1.3515	2.7930
09/14/20	2.0180	2.0735	1.3532	2.7937
10/02/20	2.3330	2.0715	1.3544	2.7885
11/06/20	2.3890	2.0785	1.3517	2.8053
12/04/20	2.1250	2.0997	1.3962	2.8032
01/04/21	2.3330	2.0968	1.3979	2.7956
02/15/21	2.0710	2.0843	1.3939	2.7747
03/04/21	2.1250	2.0843	1.3939	2.7747
04/01/21	2.5000	2.1359	1.4948	2.7769
05/03/21	2.2190	2.1304	1.4945	2.7664
06/14/21	2.5000	2.1661	1.5357	2.7966
07/01/21	1.5000	2.1319	1.4386	2.8252
08/11/21	2.3330	2.1101	1.4777	2.7425
09/06/21	2.5000	2.1429	1.5041	2.7816
10/03/21	2.5000	2.1746	1.5342	2.8150
11/04/21	2.1250	2.1568	1.5338	2.7797
12/07/21	2.5000	2.1592	1.5310	2.7874
1/3/2022	2.3330	2.1656	1.5330	2.7982

CERIODAPHNIA REPRODUCTION IC25 NaCl
REFTOX



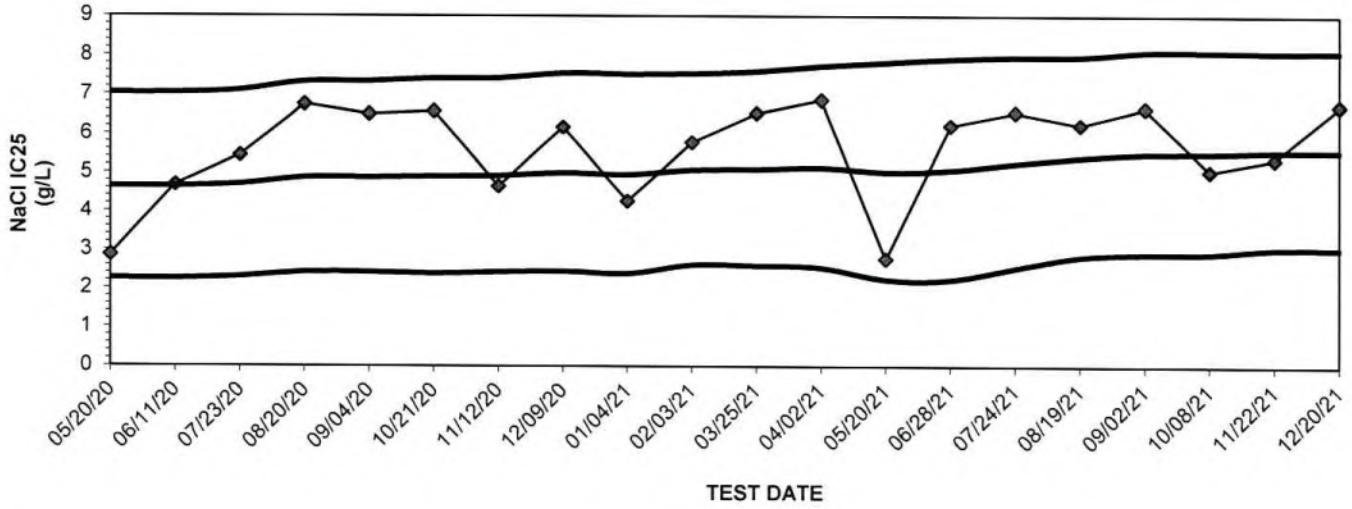
Date	IC25	Mean	-2 SD	+2 SD
06/22/20	1.0000	1.1251	0.8400	1.4102
7/1/2020	0.8	1.1072062	0.787921907	1.426490493
08/05/20	1.0450	1.0907	0.7964	1.3851
09/14/20	1.2040	1.0915	0.7961	1.3869
10/02/20	1.0270	1.0930	0.7993	1.3866
11/06/20	1.0020	1.0951	0.8049	1.3853
12/04/20	0.8229	1.0715	0.7730	1.3701
01/04/21	0.9453	1.0562	0.7653	1.3470
02/15/21	1.2100	1.0635	0.7646	1.3625
03/04/21	0.9062	1.0540	0.7475	1.3605
04/01/21	1.0030	1.0450	0.7439	1.3461
05/03/21	1.1140	1.0496	0.7472	1.3521
06/14/21	1.1340	1.0487	0.7475	1.3499
07/01/21	1.1550	1.0553	0.7508	1.3599
08/11/21	1.0180	1.0445	0.7516	1.3375
09/06/21	1.0820	1.0368	0.7574	1.3162
10/03/21	1.2630	1.0587	0.7807	1.3367
11/04/21	1.1930	1.0570	0.7830	1.3311
12/07/21	1.1450	1.0503	0.7931	1.3076
01/03/22	1.2300	1.0650	0.8016	1.3284

FHM SURVIVAL LC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
05/20/20	2.8120	3.9065	1.8832	5.9297
06/11/20	4.0740	3.8642	1.8990	5.8293
07/23/20	4.3640	3.9275	1.9934	5.8616
08/20/20	2.8830	3.9274	1.9931	5.8617
09/04/20	4.4760	3.9760	2.0428	5.9092
10/21/20	5.5000	3.9318	2.2040	5.6597
11/12/20	4.0770	3.8762	2.2576	5.4949
12/09/20	5.3330	3.9351	2.2017	5.6685
01/04/21	3.2500	3.9146	2.1591	5.6702
02/03/21	5.3330	3.9947	2.1464	5.8429
03/25/21	6.1583	4.1258	2.0920	6.1596
04/02/21	6.2160	4.1887	1.9849	6.3925
05/20/21	2.3750	4.0888	1.7621	6.4155
06/28/21	5.5000	4.1223	1.7345	6.5101
07/24/21	6.2580	4.1844	1.6465	6.7224
08/19/21	3.7000	4.1935	1.6644	6.7226
09/02/21	5.1250	4.2901	1.7899	6.7904
10/08/21	4.8750	4.3788	1.9442	6.8135
11/22/21	5.2000	4.4210	1.9620	6.8799
12/20/21	6.3570	4.5781	2.0849	7.0713

FHM GROWTH IC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
05/20/20	2.8660	4.6469	2.2521	7.0417
06/11/20	4.6820	4.6419	2.2479	7.0360
07/23/20	5.4310	4.7038	2.2980	7.1096
08/20/20	6.7500	4.8737	2.4157	7.3316
09/04/20	6.5000	4.8750	2.4133	7.3367
10/21/20	6.5770	4.8979	2.3802	7.4156
11/12/20	4.6370	4.9183	2.4172	7.4194
12/09/20	6.1720	4.9941	2.4402	7.5481
01/04/21	4.2580	4.9508	2.3784	7.5231
02/03/21	5.7680	5.0732	2.6088	7.5375
03/25/21	6.5280	5.0905	2.5891	7.5919
04/02/21	6.8650	5.1345	2.5395	7.7295
05/20/21	2.7590	5.0217	2.2272	7.8162
06/28/21	6.2200	5.0690	2.2267	7.9113
07/24/21	6.5530	5.2483	2.5384	7.9582
08/19/21	6.2310	5.3933	2.8247	7.9619
09/02/21	6.6650	5.4939	2.8982	8.0895
10/08/21	5.0481	5.4990	2.9074	8.0905
11/22/21	5.3520	5.5543	3.0315	8.0771
12/20/21	6.7310	5.5549	3.0309	8.0788

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

July 26, 2022

Colorado Department of Public Health and Environment
Water Quality Control Division
Attn: WQDC-B2 – DMR Receipt
4300 Cherry Creek Drive
Denver, CO 80246-1530

Re: Battle Mountain Resources, Inc.
San Luis Project - San Luis, Colorado
Second Quarter 2022 – DMR's, BMP and WET Testing Reports
CDPHE CDPS Permit No. CO0045675

Dear Sir or Madame:

Please find the enclosed Battle Mountain Resources, Inc. "San Luis Project" (Permit No. CO0045675) Colorado Department of Public Health and Environment-Colorado Discharge Permit System (CDPS) Best Management Practices (BMP) report for permitted outfall 002 for the second quarter 2022. The quarterly BMP report provides the required data associated with groundwater well elevations, the quarterly potentiometric surface map and groundwater well chemistry.

In addition, the second quarter 2022 Discharge Monitoring Reports (DMRs) were submitted for each of the permitted water treatment plant discharges in the NetDMR System and the WET Testing Reports were attached to the appropriate DMR submittal in NetDMR. These permitted discharges consist of water treatment plant Discharge Numbers 001-A and 001-B. During the quarter, the maximum 30-day average flow was 0.27 million gallons of water discharged per day, therefore the applicable permit criteria for the reporting period is associated with discharge number 001-B.

Should any questions arise or if I can be of any assistance providing clarification, please call me at (719) 379-0538.

Sincerely,

Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Tim Runnells, Engineering Analytics
Alan Fosdick, Engineering Analytics

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

July 26, 2022

Colorado Department of Public Health and Environment
Water Quality Control Division
Attn: WQDC-B2 – DMR Receipt
4300 Cherry Creek Drive
Denver, CO 80246-1530

Re: Battle Mountain Resources, Inc.
San Luis Project
Second Quarter 2022 BMP Report
CDPHE CDPS Permit No. CO0045675

Dear Sir or Madame:

In accordance with and compliance of the permit limitations and permit terms and conditions contained in Part I, Section 5 Discharge Point 002: (Permit Limitations, Best Management Practices, and Schedule of Compliance of the *State of Colorado Authorization to Discharge Under the Colorado Discharge Permit System*, Battle Mountain Resources, Inc. submits the following *Quarterly Best Management Practices Report.*

In accordance with the Water Quality Control Commission Regulations for Effluent Limitations, Section 62.4, and the Colorado Discharge Permit System Regulations, Sections 61.8(2), 61.8(3)(n), and 61.8(3)(r), 5 C.C.R. 1002-61, the permittee shall continue to implement the following limitations, compliance schedules, and Best Management Practices (BMPs).

The attainment of applicable water quality standards will be implemented and evaluated through the application of the following limitations, compliance schedules, and BMPs that are designed to monitor and control the groundwater quality and quantity discharging from the West Pit to the Rito Seco alluvial aquifer.

Specifically, the limitations, compliance schedules, and BMPs are those activities that address contaminated groundwater that may flow into the Rito Seco. This includes: (1) the potential flow of the affected groundwater from the West Pit that, in the past, manifested itself in the formation of the surface seeps along the arroyo sidewall of the Rito Seco, and (2) the plume of affected groundwater within the Rito Seco alluvial aquifer downgradient of the West Pit that flows along the naturally occurring hydraulic gradient and that may flow into the Rito Seco. The activities will include the following specific requirements:

1) The elevation of the groundwater table in the vicinity of the West Pit shall be measured on a weekly basis at the following locations: (i) the West Pit backfill wells BF-4 and BF-5 and (ii) the Rito Seco alluvial wells M-16 and M-20, as shown in Figure 3 of the permit, for purposes of determining the performance of the "pump and treat" system that regulates the flow and quality of the groundwater in the seepage front. The permittee shall

also determine on a quarterly basis the elevations of the groundwater table at BF-3, BF-4, BF-5, BF-6, M-11R, M-16, M-17, M-18, M-19, M-20, M-21, M-22, M-23, M-24, M-25, M-26, M-27, M-28, M-29, M-30, M-31, M-32, and M-33 for the purpose of developing a groundwater potentiometric map as monitoring confirmation of the groundwater flow direction. The quarterly data regarding depth to groundwater and groundwater potentiometric surface map will be submitted to the WQCD with the BMP report as described.

Compliance Action Taken: *Battle Mountain Resources, Inc. measured the weekly West Pit backfill and alluvial wells as required under Paragraph 1 of the specific requirements. Measurements obtained for the weekly West Pit backfill wells (BF-4 and BF-5R) and alluvial wells (M-16 and M-20) are shown in Table 1. The quarterly groundwater elevations required under Paragraph 1 were also measured and are shown in Table 2. A potentiometric surface map, developed by Engineering Analytics, is shown in Figure 1. The groundwater table elevations and potentiometric map confirm that the groundwater flow gradient during the second quarter of 2022 was from the Rito Seco to the West Pit. No corrective action is required under Paragraph 1 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 1 – Weekly Groundwater Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)
BF-4	04/06/2022	8579.29
	04/13/2022	8579.33
	04/20/2022	8579.30
	04/27/2022	8579.35
	05/04/2022	8579.29
	05/11/2022	8579.32
	05/18/2022	8579.31
	05/25/2022	8579.28
	06/01/2022	8579.28
	06/08/2022	8579.38
	06/15/2022	8579.35
	06/22/2022	8579.29
	06/29/2022	8579.33
BF-5R	04/06/2022	8579.07
	04/13/2022	8579.13
	04/20/2022	8579.08
	04/27/2022	8579.15
	05/04/2022	8579.09
	05/11/2022	8579.11
	05/18/2022	8579.08
	05/25/2022	8579.05
	06/01/2022	8579.09
	06/08/2022	8579.14
	06/15/2022	8579.12
	06/22/2022	8579.09
	06/29/2022	8579.08

Table 1 – Weekly Groundwater Elevations (continued)

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)
M-16	04/06/2022	8600.86
	04/13/2022	8600.88
	04/20/2022	8600.99
	04/27/2022	8601.19
	05/04/2022	8601.12
	05/11/2022	8601.47
	05/18/2022	8601.50
	05/25/2022	8601.56
	06/01/2022	8601.59
	06/08/2022	8601.61
	06/15/2022	8601.58
	06/22/2022	8601.52
	06/29/2022	8601.57
M-20	04/06/2022	8580.27
	04/13/2022	8580.40
	04/20/2022	8580.43
	04/27/2022	8580.55
	05/04/2022	8580.50
	05/11/2022	8580.52
	05/18/2022	8580.52
	05/25/2022	8580.53
	06/01/2022	8580.57
	06/08/2022	8580.58
	06/15/2022	8580.67
	06/22/2022	8580.64
	06/29/2022	8580.70

Table 2 – Quarterly Groundwater Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)
BF-3	04/28/2022	8578.11
BF-4	04/28/2022	8579.38
BF-5R	04/28/2022	8579.15
BF-6	04/28/2022	8579.09
M-11R	04/28/2022	8550.17
M-16	04/28/2022	8601.20
M-17	04/28/2022	8586.97
M-18	04/28/2022	8581.04
M-19	04/28/2022	8581.51
M-20	04/28/2022	8580.55
M-21	04/28/2022	8577.35
M-22	04/28/2022	8572.76
M-23	04/28/2022	8555.55
M-24	04/28/2022	8559.17
M-25	04/28/2022	DRY
M-26	04/28/2022	8544.05
M-27	04/28/2022	DRY
M-28	04/28/2022	8580.11
M-29	04/28/2022	8581.45
M-30	04/28/2022	8609.10
M-31	04/28/2022	8549.80
M-32	04/28/2022	8525.67
M-33	04/28/2022	8531.55

2) The weekly groundwater table elevation data shall be tabulated and reported on the quarterly BMP reports, and the data will be used to evaluate compliance with the following permit limitations.

   The groundwater table elevation, based on the average of all measured values for each calendar month in the West Pit backfill groundwater monitoring wells BF-4 and BF-5, must be equal to or lower than an elevation of 8582 feet above sea level (ft. amsl).

Compliance Action Taken: *Battle Mountain Resources, Inc. measured the West Pit backfill monitoring wells (BF-4 and BF-5R) weekly and the measurements are shown in Table 1. The groundwater measurements for wells BF-4 and BF-5R were averaged by calendar month and the results are shown in Table 3. The April, May, June 2022 averages were below the 8582 ft. amsl required in Paragraph 2. No corrective action is required under the Paragraph 2 requirement and schedule compliance monitoring will continue unchanged next quarter.*

Table 3 – Quarterly West Pit Backfill Monthly Average Groundwater Table Elevations

Monitoring Well Identification	Month (2022)	Number of Observations	Average Monthly Groundwater Elevation (ft amsl)
BF-4	April	4	8579.32
	May	4	8579.30
	June	5	8579.33
BF-5R	April	4	8579.11
	May	4	8579.08
	June	5	8579.10

3) If the average monthly groundwater table elevation in the West Pit backfill for any calendar month, measured as described in the above paragraph, is greater than 8582 ft. amsl or the quarterly determination of the groundwater potentiometric surface map indicates that the flow of the groundwater is from the West Pit to the Rito Seco alluvium, the permittee shall verbally communicate such condition to WQCD within 24 hours of the determination of the condition (elevated West Pit backfill table or groundwater flow from the West Pit as indicated by the quarterly groundwater potentiometric surface map) and initiate the following compliance schedule.

   Compliance Action Taken: *Battle Mountain Resources, Inc. measured the West Pit backfill monitoring wells (BF-4 and BF-5R) weekly and the calendar month average groundwater measurement elevations (Table 3) were below the 8582 ft. amsl required in Paragraph 2. The April 28, 2022, potentiometric surface map (Figure 1) shows the groundwater flow gradient was from the Rito Seco alluvium to the West Pit backfill. Therefore, site operations demonstrated the West Pit backfill groundwater level was maintained at or below an elevation of 8582 ft. amsl through the quarter. Therefore, no requirement(s) to initiate actions contained within the schedule of compliance for Section 5.3 is required.*

4) The quality of groundwater in the vicinity of the West Pit shall be monitored on a monthly basis in the Rito Seco alluvial groundwater monitoring wells M-19, M-21, M-24 and M-11R for the purposes of monitoring the changes in the quality of the plume or affected groundwater in the Rito Seco alluvial aquifer. Groundwater quality in these monitoring wells will be analyzed for pH, temperature, total dissolved solids, calcium, sulfate, manganese, fluoride, copper, and iron for the purpose of evaluating the status of the groundwater quality in the downgradient groundwater plume. The groundwater quality data will be summarized and transmitted to the WQCD in the quarterly BMP report required under Part I, Section E.1 of this permit.

   Compliance Action Taken: *Battle Mountain Resources, Inc. collected monthly groundwater samples in the vicinity of the West Pit backfill area from Rito Seco alluvial monitoring wells M-19, M-21, M-24 and M-11R. No corrective action is required under the Paragraph 4 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 4 – Rito Seco Alluvial Groundwater Quality Summary

Analyte	Reporting Units	Sample Date	Monitoring Well Identifier			
			M-11R	M-19	M-21	M-24
pH	SU	04/07/2022	6.98	6.25	6.65	6.93
		05/04/2022	7.05	6.40	6.70	6.88
		06/01/2022	7.19	6.49	6.78	6.93
Temperature	°C	04/07/2022	9.2	6.6	7.9	8.1
		05/04/2022	9.5	7.6	9.5	8.9
		06/01/2022	9.8	7.1	10.9	8.6
Calcium, Total	mg/L	04/07/2022	88.7	21.1	32.8	84.2
		05/04/2022	70.3	20.0	32.3	84.0
		06/01/2022	70.4	19.8	31.8	84.2
Copper, Dissolved	mg/L	04/07/2022	LT 0.002	LT 0.002	LT 0.002	LT 0.002
		05/04/2022	LT 0.002	LT 0.002	LT 0.002	LT 0.002
		06/01/2022	LT 0.002	LT 0.002	LT 0.002	LT 0.002
Fluoride	mg/L	04/07/2022	0.875	0.843	1.41	0.747
		05/04/2022	0.933	0.794	1.40	0.804
		06/01/2022	LT 1.25	0.748	1.35	LT 1.25
Iron, Dissolved	mg/L	04/07/2022	LT 0.15	0.150	LT 0.15	4.30
		05/04/2022	LT 0.15	LT 0.15	LT 0.15	4.36
		06/01/2022	LT 0.15	LT 0.15	LT 0.15	4.44
Manganese, Dissolved	mg/L	04/07/2022	0.308	0.234	0.384	0.899
		05/04/2022	0.172	0.144	0.372	0.903
		06/01/2022	0.155	0.119	0.367	0.900
Sulfate	mg/L	04/07/2022	152	9.63	12.3	160
		05/04/2022	94.6	12.5	12.2	169
		06/01/2022	79.0	10.7	10.8	143
Total Dissolved Solids	mg/L	04/07/2022	404	84	134	406
		05/04/2022	314	102	142	436
		06/01/2022	302	98	128	418

5) The historical seeps were caused by the plume of affected groundwater and may, in the future, also be caused by natural variation in the flow of groundwater in the vicinity of the area where the past seeps occurred. The permittee shall conduct a monthly visual inspection of the area of historical seeps and the permittee shall report any seepage flow that is associated with the area historic seepage expression, as is identified in Figure 2 of the permit. Results of the seep monitoring shall be tabulated and summarized in the quarterly BMP report.

   If these inspections identified the occurrence of seeps, the permittee will be required to communicate verbally to the WQCD within 24 hours of the seepage observation, followed by written notification within 7 calendar days of the seepage observation. Verbal updates will then be provided to the WQCD every second day thereafter until the WQCD has made a determination regarding the status of the West Pit groundwater control system through the implementation of the following compliance schedule.

Compliance Action Taken: *Battle Mountain Resources, Inc. performed monthly visual seepage expression inspections in the historic seepage area identified in Figure 2 of the permit. Visual observations during these inspections are shown in Table 5. No seepage expressions were observed in the historic seepage area during the second quarter of 2022. Therefore, no verbal or written notifications were required and the implementation of the compliance schedule was not required. No corrective action is required under the Paragraph 5 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 5 – Monthly Seepage Expression Inspection Tabulation

Visual Inspection Date	Was Visual Observation of Seepage Determined in the Area of the Historic Seepage Expression	Comments
04/28/2022	No	All Dry
05/31/2022	No	All Dry
06/30/2022	No	All Dry

6) The BMP for the groundwater flow downgradient from the groundwater divide (see section VI.A.2 for the Rationale) that has been developed in the Rito Seco alluvial aquifer consists of a groundwater capture system in conjunction with groundwater table elevation control in the West Pit. The water management plan for the Rito Seco alluvial aquifer consists of pumping two groundwater capture wells (M-32 and M-33) located downgradient of the plume of affected groundwater. This action will allow flushing of constituents in the groundwater of the Rito Seco alluvial aquifer in that portion (plume) of the aquifer affected by previous flow of groundwater from the West Pit. Measurements of the groundwater table elevations will be taken on a weekly basis from M-32 and M-33. This data shall be tabulated and reported for outfall 002 on the quarterly BMP report, and the data will be used to evaluate compliance with the following permit limitation.

   The groundwater table elevation, based on the average of all measured values for each calendar month at M-32 and M-33 in the Rito Seco alluvial aquifer, must be equal to or lower than an elevation of 8540 ft. amsl.

   If the average monthly groundwater table elevations measured in the Rito Seco alluvial aquifer at M-32 and M-33 is greater than 8540 ft. amsl, the permitee shall initiate the following compliance schedule within 24 hours of the determination of groundwater table elevation exceedance.

Compliance Action Taken: *Battle Mountain Resources, Inc. measured the alluvial aquifer monitoring wells (M-32 and M-33) weekly and the resulting elevations are presented in Table 6. The groundwater elevations for wells M-32 and M-33 were averaged by calendar month and the results are shown in Table 6. The April, May, June 2022 averages were below the 8540 ft. amsl required under Paragraph 6. Therefore, site operations were in full compliance of Part I, Section 5.5 and there were no requirements(s) to initiate actions contained within the schedule of compliance for Section 5.5. No corrective action is required under Paragraph 6 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 6 – Weekly/Monthly Rito Seco Alluvial Aquifer Average Groundwater Table Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)	Month (2022)	Average Monthly Groundwater Elevation (ft amsl)
M-32	04/06/2022	8527.16	April	8528.40
	04/13/2022	8525.55		
	04/20/2022	8532.04		
	04/27/2022	8531.60		
	04/28/2022	8525.67		
	05/04/2022	8528.16	May	8528.83
	05/11/2022	8529.11		
	05/18/2022	8529.18		
	05/25/2022	8528.88		
	05/31/2022	8528.83		

Table 6 (Cont) – Weekly/Monthly Rito Seco Alluvial Aquifer Average Groundwater Table Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)	Month (2022)	Average Monthly Groundwater Elevation (ft amsl)
M-32	06/01/2022	8528.79	June	8528.76
	06/08/2022	8528.67		
	06/15/2022	8528.48		
	06/22/2022	8528.75		
	06/29/2022	8528.89		
	06/30/2022	8528.97		
M-33	04/06/2022	8530.18	April	8532.07
	04/13/2022	8532.64		
	04/20/2022	8534.09		
	04/27/2022	8531.90		
	04/28/2022	8531.55		
	05/04/2022	8532.61	May	8532.10
	05/11/2022	8526.61		
	05/18/2022	8532.07		
	05/25/2022	8534.52		
	05/31/2022	8534.67		
	06/01/2022	8533.90	June	8534.63
	06/08/2022	8534.75		
	06/15/2022	8534.69		
	06/22/2022	8534.70		
	06/29/2022	8534.83		
	06/30/2022	8534.89		

7) The water quality of the Rito Seco will be assessed using surface water quality collected at RS-2, as shown in Figure 3. Surface water monitoring in the Rito Seco shall be conducted at RS-2 on a monthly basis and the laboratory analytical results shall be submitted to the WQCD in the quarterly BMP report. Water quality samples collected at RS-2 shall be analyzed for the following constituents: calcium, magnesium, sodium, potassium, ammonia, total dissolved solids, total hardness, pH, total suspended solids, cyanide (WAD and total), bicarbonate, alkalinity, chloride, sulfate, nitrate-nitrite, fluoride and the total and dissolved concentrations of aluminum, arsenic, barium, boron, cadmium, copper, chromium, iron, lead, manganese, mercury, nickel, selenium, silica, silver and zinc. The following compliance schedule shall be implemented in the event that any constituent exceeds the applicable water quality standards for the Rito Seco.

Compliance Action Taken: *Battle Mountain Resources, Inc. collected monthly surface water samples in April, May, June 2022 at location RS-2, as shown in Figure 3 of the permit. Results of analyses performed on these samples are shown in Table 7. The results of the laboratory analytical testing show that the applicable water quality standards were met for the Rito Seco during the months of April, May, June 2022. Site operations were in full compliance of Part I, Section 5.7 and there was no requirement(s) to initiate actions contained within the schedule of compliance for Section 5.7. Scheduled compliance monitoring will continue unchanged next quarter.*

Table 7 – RS-2 Surface Water Quality Results

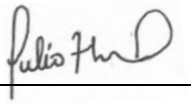
Analyte	Reporting Units	04/06/2022	05/04/2022	06/01/2022
Alkalinity	mg/L as $CaCO_3$	56.3	54.7	51.6
Aluminum, Dissolved	mg/L	LT 0.25	LT 0.25	LT 0.25
Aluminum, Total	mg/L	0.530	0.395	LT 0.25
Ammonia as N	mg/L	LT 0.2	LT 0.2	LT 0.2
Arsenic, Dissolved	mg/L	LT 0.001	LT 0.001	LT 0.001
Arsenic, Total	mg/L	LT 0.001	LT 0.001	LT 0.001
Barium, Dissolved	mg/L	LT 0.035	LT 0.035	LT 0.035
Barium, Total	mg/L	0.032	LT 0.035	LT 0.035
Bicarbonate as CaCO3	mg/L	56.3	54.7	51.6
Boron, Dissolved	mg/L	LT 0.1	LT 0.1	LT 0.1
Boron, Total	mg/L	LT 0.1	LT 0.1	LT 0.1
Cadmium, Dissolved	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Cadmium, Total	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Calcium, Total	mg/L	15.6	15.5	14.9
Carbonate as CaCO3	mg/L	LT 20	LT 20	LT 20
Chloride	mg/L	2.62	LT 2.0	3.97H
Chromium, Dissolved	mg/L	LT 0.002	LT 0.002	LT 0.002
Chromium, Total	mg/L	LT 0.002	LT 0.002	LT 0.002
Copper, Dissolved	mg/L	LT 0.002	LT 0.002	LT 0.002
Copper, Total	mg/L	LT 0.002	LT 0.002	LT 0.002
Cyanide, Total	mg/L	LT 0.01	LT 0.01	LT 0.01
Cyanide, WAD	mg/L	LT 0.01	LT 0.01	LT 0.01
Fluoride	mg/L	0.77	0.72	0.82
Hardness as CaCO3	mg/L	54	54	52
Iron, Dissolved	mg/L	0.154	0.165	0.265
Iron, Total	mg/L	0.740	0.643	0.567
Lead, Dissolved	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Lead, Total	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Magnesium, Total	mg/L	4.14	4.10	4.03
Manganese, Dissolved	mg/L	LT 0.05	LT 0.05	LT 0.05
Manganese, Total	mg/L	0.060	LT 0.05	LT 0.05
Mercury, Dissolved	mg/L	LT 0.001	LT 0.001	LT 0.001
Mercury, Total	mg/L	LT 0.001	LT 0.001	LT 0.001
Nickel, Dissolved	mg/L	LT 0.001	LT 0.04	LT 0.04
Nickel, Total	mg/L	LT 0.04	LT 0.04	LT 0.04
Nitrate+Nitrite as N	mg/L	LT 0.1	LT 0.1	LT 0.1
pH	SU	7.27	6.84	6.99
Potassium, Total	mg/L	1.11	1.24	1.14
Selenium, Dissolved	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Selenium, Total	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Silica, Total	mg/L	12.0	12.8	11.3
Silver, Dissolved	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Silver, Total	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Sodium, Total	mg/L	8.39	5.04	10.2
Sulfate	mg/L	15.8	7.61	16.0
Total Dissolved Solids	mg/L	92	86	100
Total Suspended Solids	mg/L	LT 20	LT 20	LT 20
Zinc, Dissolved	mg/L	LT 0.05	LT 0.05	LT 0.05
Zinc, Total	mg/L	LT 0.05	LT 0.05	LT 0.05

8) If any component of the groundwater control system is not performing within the limits set forth in this permit, the permittee will be required to initiate appropriate compliance schedule activities, including the preparation of a response plan, for any and all components of the groundwater control system that do not meet the applicable

requirements. The permittee shall also conduct weekly sampling at RS-2 until such time as the other compliance schedule activity(ies) have been completed.

Compliance Action Taken: *As demonstrated by the information and data presented in this report, all components of the groundwater control system performed within the limits set forth in the permit. Therefore, site operations were in full compliance of Part I, Section 8 and there was no requirement(s) to initiate actions contained within the schedule of compliance for Section 8.*

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is to the best of my knowledge and belief, is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Julio Madrid Signature: 

Date: July 26, 2022

APPROXIMATE SATURATED ALLUVIUM BOUNDARY

M-33 8532.61

M-31 8549.80

M-27 DRY

BF-6 8579.09

M-25 DRY

M-11R 8550.17

M-23 8555.55

BF-3 8578.11

BF-4 8579.38

WATER TREATMENT FACILITY AND PARKING AREA

BF-5R 8579.15

APPROXIMATE SATURATED ALLUVIUM BOUNDARY

8540

8550

M-26 8544.05

M-32 8532.06

8560

M-24 8559.17

8570

M-22 8572.76

M-21 8577.35

M-20 8580.55

M-19 8581.51

M-18 8581.04

M-28 8580.11

M-29 8581.45

8580

8580

8590

M-30 8609.10

8600

8610

M-17 8586.97

M-16 8601.20

KEY

NORTH

SCALE IN FEET
0 200

GROUND WATER FLOW DIRECTION

LINE OF EQUIPOTENTIAL
HYDRAULIC HEAD
8560

M-23 8555.72
WELL NAME
WATER LEVEL

NO	REVISION DESCR.	DATE	BY
A			
B			
C			
1			
2			

ALLUVIAL GROUND WATER
POTENTIOMETRIC SURFACE MAP
SECOND QUARTER (APRIL 2022)

SAN LUIS PROJECT

Engineering Analytics, Inc.

ISSUED BY:

Drawn By:	RDP
Designed By:	AF
Approved By:	AF
Date:	7/28/2022
Project:	210105206
Scale:	1" = 200'
Sheet Number:	1

O:_05 San Luis\POTENTIOMETRIC MAPS\GW Map 2022 2nd qtr\Groundwater 2022 2nd Qtr.dwg SAVED: 7/14/22 PRINTED: 7/28/22

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

May 27, 2022

Julio Madrid
Battle Mountain Resources, Inc.
P.O. Box 310
San Luis, CO 81152

Dear Julio:

Enclosed is the report for chronic biomonitoring tests performed for Battle Mountain Resources, Inc. on effluent from the 001B outfall. There was no statistically significant toxicity to either test species at any effluent concentration. The effluent passes WET (Whole Effluent Toxicity) testing requirements for this sampling period.

If you have any questions or concerns, please do not hesitate to contact me at (303) 661-9324.

Best regards,

Haley West

Haley West
Laboratory Supervisor
Enclosure(s): Invoice
Report

REPORT OF CHRONIC BIOMONITORING TESTS CONDUCTED FOR BATTLE MOUNTAIN RESOURCES, INC. ON EFFLUENT FROM THE 001B OUTFALL

Prepared for:

Julio Madrid
Battle Mountain Resources, Inc.
P.O. box 310
San Luis, CO 81152

Prepared by:

Haley West
SeaCrest Group
500 S Arthur Ave. Suite 450
Louisville, Colorado 80027-3065
(303) 661-9324

May 27, 2022

TABLE OF CONTENTS

LIST OF TABLES

Chronic Toxicity Test Summary

Test:	7-day static renewal using *Ceriodaphnia dubia* 7-day static renewal using fathead minnow *(Pimephales promelas)*
Client:	Battle Mountain Resources, Inc.
Test Procedure Followed:	*Ceriodaphnia dubia*: EPA/821/R-02-013. Method 1002.0 (2002) fathead minnow: EPA/821/R-02-013. Method 1000.0 (2002)
Sample Number:	422236.B
Dilution Water:	moderately hard laboratory reconstituted water
Test Organism Source:	SeaCrest Group
Reference Toxicant:	Sodium Chloride

Sample	Time of Collection	Date of Collection	Time of Receipt	Date of Receipt
Effluent 1	0600	05-16-2022	1015	05-16-2022
Effluent 2	0600	05-18-2022	1145	05-18-2022
Effluent 3	0600	05-20-2022	1000	05-20-2022

	Ceriodaphnia dubia	fathead minnow
Test Initiation Time	1330	1400
Test Initiation Date	05-16-2022	05-16-2022
Test Completion Time	1430	1430
Test Completion Date	05-22-2022	05-23-2022

Abstract with Results

Test Concentrations:	Control (0%), 13%, 26%, 52%, 76%, 100%
Number of Organisms/Concentration:	10 for *Ceriodaphnia dubia* 40 for fathead minnow
Replicates at each Concentration:	10 for *Ceriodaphnia dubia* 4 for fathead minnow

	Ceriodaphnia dubia	**fathead minnow**
Test vessel size/Exposure volume	30ml/15ml	500ml/200ml
Sub-lethal NOEL/IC25	100%/>100%	100%/>100%
Pass/Fail Status	**PASS**	**PASS**
Temperature Range (°C)	24.1 – 25.9	24.1 – 25.9
Dissolved Oxygen Range (mg/L)	6.8 – 8.7	5.7 – 7.7
pH Range	7.5 – 8.3	7.8 – 8.4

	Control (*Cerio*/FHM)	**Effluent Sample**
Hardness (mg/L as $CaCO_3$)	85/98	47/39/29
Alkalinity (mg/L as $CaCO_3$)	64/57	17/18/18
Total residual chlorine (mg/L)	<0.01	<0.01
Total ammonia (mg/L as NH_3)	<0.03	0.06/<0.03/<0.03

INTRODUCTION

Biomonitoring provides an effective means by which the toxicity of discharges from municipal, industrial, and mining operations can be tested. Among the advantages of biomonitoring is the ability to test complex effluents containing a broad range of contaminants. Biomonitoring, when used in conjunction with chemical analyses, can generate data capable of identifying a much wider range of contaminants.

The Colorado Water Quality Control Division requires certain NPDES permittees to perform acute and/or chronic biomonitoring tests. The chronic test measures significant differences in lethality and in reproduction (*Ceriodaphnia dubia*) or growth (fathead minnow – *Pimephales promelas*) between control and effluent-exposed organisms.

The present report discusses the results of chronic biomonitoring tests conducted on effluent from the Battle Mountain Resources, Inc. 001B discharge. These tests were conducted in accordance with EPA and State of Colorado procedures in May 2022.

MATERIALS AND METHODS

Sample Collection

Two gallons of the effluent were collected on three separate dates as specified in Permit CO-0045675. Samples were delivered chilled to the SeaCrest lab where they were held at 0-6°C. Chain of custody forms showing sample collection and laboratory arrival times are included (Appendix 1).

Dilution Water

Laboratory reconstituted water was used as both the dilution water source and the control for the tests. Reconstituted water for the *Ceriodaphnia dubia* test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, potassium chloride, and sodium selenate to deionized water. Reconstituted water for the fathead minnow test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, and potassium chloride to deionized water.

Test Organisms

The biomonitoring test used *Ceriodaphnia dubia,* cultured in the SeaCrest laboratory. The organisms are cultured in brood culture boards from which individual females are monitored for survival and reproduction for periods of up to two weeks. Neonates less than 24-hours old, released from third or subsequent broods of eight or more within an 8-hour period, are collected from the brood chambers and used in tests. The animals are fed daily with a mixture of Yeast, Cereal Leaves, and Trout Chow (YCT), produced in-house. This is supplemented with cultured green algae *(Selenastrum capricornutum)* provided by Aquatic Biosystems.

Less than one-day-old fathead minnow, cultured in the laboratory, were also used in the test. Adult fish are maintained in 10-gallon aquaria where females deposit their eggs on the under-surface of split PVC pipe sections. The eggs are collected daily and transferred to aerated containers where they hatch after three to four days. The larval fish are fed newly hatched brine shrimp *(Artemia* sp.) at least twice per day.

In-house organisms are tested monthly in a reference toxicant test using sodium chloride to monitor overall health and test reproducibility (Appendix 4).

Test Procedures

Upon receipt at the lab, samples were analyzed for alkalinity, ammonia, chlorine, conductivity, dissolved oxygen, hardness, and pH.

Methods used in chemical analysis

Alkalinity	EPA 310.2	Hach 8203	I-2030-85.2
Ammonia	SM4500-NH_3, C-E1997	ASTM D1426-08	
Chlorine	SM4500-Cl D	Hach 10026	
Conductivity	SM2510		
Dissolved Oxygen	SM4500-O	Electrode: G-2001	Winkler (QC): B-F-2001
Hardness	SM2340 B or C	Hach 8213	
pH	SM4500-H+ B-2000		

The test followed procedures in EPA[3] and CDPHE[4] guidelines. Exposure concentrations included control (0%), 13%, 26%, 52%, 76%, and 100% mixtures, diluted with moderately hard laboratory reconstituted water.

Individual *Ceriodaphnia dubia* were placed in 30ml plastic containers containing approximately 15ml of exposure medium. Ten replicates at each concentration were used. The animals were fed daily with the YCT mixture and an equal volume of the green algae *(Selenastrum capricornutum)*. The exposure medium was changed daily in each container and the number of young released overnight were counted and recorded. Young were removed from the containers daily and discarded. Routine measurements were made each day of temperature, dissolved oxygen, and pH before and after the water changes.

Fathead minnow were exposed in 500ml plastic cups to which 250ml of media was replaced daily. Four replicates were used at each concentration. Ten fish, less than 24-hours old, were placed in each cup. The fish were monitored daily for survival and fed live brine shrimp at least twice per day. After seven days, the fish were removed from the cups, euthanized with isopropyl alcohol, and then placed in aluminum pans and dried in an oven for a minimum of six hours at 100°C. The pans were then weighed on a five-place analytical balance to determine the average dry weight of the fish from each replicate.

Data Analysis

Data from the tests were analyzed on a personal computer using the CETIS program (developed by Tidepool Scientific Software). Statistical tests used in the analyses are shown in Table 1. Test acceptability was determined using control survival and reproduction/growth criteria, concentration-response relationships, and percent minimum significant differences (USEPA [5,6]).

Table 1. Statistical methods used in testing for significant differences in test parameters.

Variance	Distribution
Bartlett Equality of Variance Test	Shapiro-Wilk W Normality Test

Statistical Difference				
Species	Survival	Growth	Reproduction	IC_{25}
Ceriodaphnia dubia	Fisher Exact/Bonferroni-Holm Test	N/A	Dunnett Multiple Comparison Test	ICp
fathead minnow	N/A	Dunnett Multiple Comparison Test	N/A	ICp

RESULTS

Ceriodaphnia dubia Test Results

Test results for the *Ceriodaphnia dubia* are summarized in Table 2 and provided on the data sheets located in Appendix 2. Survival was 90% in the 100% effluent and was 100% in the remaining effluent concentrations. Control survival was 100%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL (No Observed Effect Level) for lethality was 100% and the LC_{25} (Lethal Concentration 25) for lethality was >100%.

Average number of neonates was 20.8 in the 100% effluent concentration and ranged from 17.2 – 22.9 in the remaining effluent concentrations. Average number of neonates in the control was 21.5 for statistical analyses and test acceptability criteria. No statistically significant differences in the number of neonates were found between the control and any effluent concentration. The NOEL for reproduction was 100% and the IC_{25} (Inhibition Concentration 25) for reproduction was >100%.

Table 2. Summary of *Ceriodaphnia dubia* test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Mean Neonates	Min.	Max.	Significant Difference	
					Lethality	Reprod.
Control (0%)	100	21.5	12	35		
13%	100	17.2	5	28		
26%	100	19.9	10	30		
52%	100	22.9	13	32		
76%	100	21.5	9	34		
100%	90	20.8	11	31		

Fathead Minnow Test Results

Fathead minnow results are summarized in Table 3 and are provided on data sheets in Appendix 3. Survival was 100% in the 100% effluent concentration and was 100% in the remaining effluent concentrations. Control survival was 100%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL for lethality was 100% and the LC_{25} for lethality was >100%.

Average weight in the 100% effluent concentration was 0.274mg and ranged from 0.276mg - 0.303mg per individual in the remaining effluent concentrations. Average weight for the control fish was 0.252mg for statistical analyses and test acceptability criteria. No statistically significant differences for growth were measured in any effluent concentration when compared to the control. The NOEL for growth was 100% and the IC_{25} for growth was >100%.

Table 3. Summary of fathead minnow test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Average Weight (mg)	Min.	Max.	Significant Difference	
					Lethality	Growth
Control (0%)	100	0.252	0.219	0.313		
13%	100	0.291	0.250	0.321		
26%	100	0.303	0.251	0.373		
52%	100	0.283	0.253	0.311		
76%	100	0.276	0.259	0.303		
100%	100	0.274	0.250	0.307		

Test Acceptability

Acceptable control survival (80%) was achieved in both tests. Similarly, *Ceriodaphnia dubia* reproduction (average 15 neonates/organism) and fathead minnow growth (average 0.250mg/test container) in control organisms met required levels. PMSD was within the required limits for an acceptable test (Table 4).

Table 4. PMSD for chronic test parameters.

	fathead minnow growth		*C. dubia* reproduction	
	Lower bound	Upper bound	Lower bound	Upper bound
PMSD	12	30	13	47
(% Minimum significant difference)	22.8		35.1	

DISCUSSION

A failed test for this discharge occurs when there is an NOEL or IC_{25} less than the IWC (Instream Waste Concentration) of 52%. The NOEL represents the highest effluent concentration at which no statistically significant effect is observed. The IC_{25} represents an estimate of the effluent concentration that would cause a 25 percent reduction of a non-quantal biological measurement. A violation for this discharge occurs when both the NOEL and the IC_{25} are less than the IWC. Since neither test species demonstrated statistically significant differences meeting these criteria, the discharge passes WET testing requirements for this sampling period.

REFERENCES

1. **Hach Chemical Company.** 2008. *Hach's Water Analysis Handbook.* Fifth Edition. Hach Chemical Company, Loveland, Colorado. Digital Medium.
2. **APHA/AWWA/WEF.** 1998. *Standard Methods for the Examination of Water and Wastewater.* 20th Edition. American Public Health Association, Washington, D.C.
3. **USEPA.** 2002. *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms.* EPA-821-R-02-013. 335 pp.
4. **CDPHE (Colorado Department of Public Health and Environment).** 1998. *Laboratory Guidelines for Conducting Whole Effluent Toxicity Tests.* Water Quality Control Division.
5. **USEPA.** 2000. *Method of Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 CFR Part 136). EPA/821/B-00/004.
6. **USEPA.** 2000. *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications under the National Pollutant Discharge Elimination System Program.* EPA/833/R-00/003.

Appendix 1 – Chain of Custody with Sample Receipt Forms

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: BMRI
P. O./Project Number: San Luis
Contact: Julio Madrid
Address: P.O. BOX 310 San Luis, CO 81152
Phone # 719-379-0827 E-Mail: David.Carino@Newmont.com
Fax # N/A Sampler: David S Carino
Report By: ☒ Mail ☐ PDF ☐ FAX

Analysis (Check all applicable)

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)				Number of Containers	Total Volume
W.E.T. Test	5/16/22	0600	comp	422236.8#1		X															2	2gal

Turnaround Requirements (Analytical Testing Only)

_____ Standard (10 days) _____ 6-9 Day
_____ 3-5 Day _____ 1-2 Day
Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

Outfall - 001B

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
David S Carino	5/16/22 0600		5/16/22 1015				

Battle Mountain Gold Mine NPDES WET Test Log

Treatment System Flow Rate 510 GPM
ISCO Sampling Schedule 100 ml per 10 minutes
Start Sample Program: Time 0600
End Sample Program: Time 0600 Date 5/16/22 Circle One: (M) W F

Sampling Personnel: A. Taylor, E. Lucero, S. Maestas, D. Cariño

~3 Hour Time 0900 Observation good water flow, power on to sampler, Sample containe on ice

~6 Hour Time 1200 Observation good water flow, power on to sampler, Sample container on ice

~9 Hour Time 1500 Observation good water flow, power on to sampler, Sample container on ice

~12 Hour Time 1800 Observation good water flow, power on to sampler, Sample container on ice

~15 Hour Time 2100 Observation good water flow, Power on to Sampler, Sample Container on ice

~18 Hour Time 2400 Observation good water flow, Power on to Sampler, Sample Container on ice

~21 Hour Time 0300 Observation good water flow, Power on to Sampler, Sample Container on ice

~24 Hour Time 0600 Observation good water flow, Power on to Sampler, Sample Container on ice

Total Volume Collected 4 gallons
Volume sent to lab 2 gallons

Samples packed on ice [X]
Completed COC [X]
Cooler Sealed [X]
~~UPS pick up on time [ ]~~

BMRI Delivered [X]

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2022

Project # 422236.B #1 Sample #: 1
Date: 05/16/22 Initials: IS

Samples Were:

1. FedEx UPS Courier (Hand Delivery) (circle one)
   Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — Y N (NA)
   Notes: same day sample

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: no visible PM
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
422236.B #1	11.4 °C	7.5	8.82	227

Custody Seals:

1. Present on Outer Package — (Y) N
2. Unbroken on Outer Package — (Y) N NA
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — (Y) N

JMJ

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: BMRI
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Phone # 719-379-0827 E-Mail: David.Carino@Newmont.com
Fax # N/A Sampler: David S Carino
Report By: ☒ Mail ☐ PDF ☐ FAX

Analysis (Check all applicable)

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)				Number of Containers	Total Volume
W.E.T. Test	5/18/22	0600	Comp	42236.8#2		X															2gal	2gal

Turnaround Requirements (Analytical Testing Only)

_____ Standard (10 days) _____ 6-9 Day
_____ 3-5 Day _____ 1-2 Day
Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

Outfall -001B

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
David S Carino	5/18/22 0600		5/18/22 1145				

Battle Mountain Gold Mine NPDES WET Test Log

Treatment System Flow Rate 540 GPM
ISCO Sampling Schedule 100 ml per 10 minutes
Start Sample Program: Time 0600
End Sample Program: Time 0600 Date 5-18-22 Circle One: M (W) F

Sampling Personnel: R.Lucero, D.Carino, A.Taylor, S.Maestas

~3 Hour Time 0900 Observation good water flow, power on to Sampler, Sample Container on ice

~6 Hour Time 1200 Observation good water flow, power on to Sampler, Sample Container on ice

~9 Hour Time 1500 Observation good water flow, power on to Sampler, Sample Container on ice

~12 Hour Time 1800 Observation good water flow, power on to Sampler, Sample Container on ice

~15 Hour Time 2100 Observation good water flow, power on to Sampler, Sample container on ice

~18 Hour Time 2400 Observation good water flow, power on to Sampler, sample container on ice

~21 Hour Time 0300 Observation good water flow, power on to Sampler, Sample container on ice

~24 Hour Time 0600 Observation good water flow, power on to Sampler, sample container on ice

Total Volume Collected 4 gallons
Volume sent to lab 2 gallons
Samples packed on ice [X]
Completed COC [X]
Cooler Sealed [X]
~~UPS pick up on time [ ]~~
BMRI Delivered [X]

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2022

Project # 422 236.B
Date: 05/8/22
Sample #: 2
Initials: SW

Samples Were:

1. FedEx UPS Courier (Hand Delivery) (circle one)
   Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — Y N (NA)
   Notes: same day

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: Clear, no visable pm
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
236.B	13.3	7.5	7.6	215

Custody Seals:

1. Present on Outer Package — (Y) N
2. Unbroken on Outer Package — Y (N) NA
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — (Y) N

HW

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: BMRI
P. O./Project Number: San Luis
Contact: Julio Madrid
Address: P.O. BOX 310 San Luis CO 81152
Phone # 719-379-0827 E-Mail: David.Carino@Newmont.com
Fax # N/A Sampler: David S Carino
Report By: ☒ Mail ☐ PDF ☐ FAX

Analysis (Check all applicable)

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)				Number of Containers	Total Volume
W.E.T. Test	5/20/22	0600	Comp	422236-13 #3		X															2	2gal

Turnaround Requirements (Analytical Testing Only)

_____ Standard (10 days) _____ 6-9 Day
_____ 3-5 Day _____ 1-2 Day
Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

outfall -001B

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
David S Carino	5/20/22 0600		052022 1000				

Battle Mountain Gold Mine NPDES WET Test Log

Treatment System Flow Rate 540 GPM
ISCO Sampling Schedule 100 ml per 10 minutes
Start Sample Program: Time 0600
End Sample Program: Time 0600 Date 5/20/22 Circle One: M W (F)

Sampling Personnel: R. Lucero, A. Taylor, D. Carino, S. Maestas

~3 Hour Time 0900 Observation good water flow, Power on to Sampler, Sample Container on ice

~6 Hour Time 1200 Observation good water flow, Power on to Sampler, Sample Container on ice

~9 Hour Time 1500 Observation good water flow, Power on to Sampler, Sample Container on ice

~12 Hour Time 1800 Observation good water flow, Power on to Sampler, Sample Container on ice

~15 Hour Time 2100 Observation good water flow, Power on to Sampler, Sample Container on ice

~18 Hour Time 2400 Observation good water flow, power on to Sampler, Sample Container on ice

~21 Hour Time 0300 Observation good water flow, power on to Sampler, Sample Container on ice

~24 Hour Time 0600 Observation good water flow, power on to Sampler, Sample Container on ice

Total Volume Collected 4 gallons
Volume sent to lab 2 gallons
Samples packed on ice X
Completed COC X
Cooler Sealed X
~~SPS pick up on time~~ [ ]
BMRI Delivered X

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2022

Project # 422236-B Sample #: 3
Date: 052022 Initials: JM

Samples Were:

1. FedEx UPS Courier (Hand Delivery) (circle one)
   Notes:

2. Chilled to Ship Ambient (Chilled)

3. Cooler Received Broken or Leaking Y (N) NA
   Notes:

4. Sample Received Broken or Leaking Y (N)
   Notes:

5. Received Within 36hr Holding Time (Y) N
   Notes:

6. Aeration necessary Y (N)

7. pH adjustment necessary Y (N)

8. Sample Received at Temperature between 0-6° C . Y N (NA)
   Notes: Same day sample

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: no visible PM
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
422236 B#3	13	8.1	7.8	240

Custody Seals:

1. Present on Outer Package (Y) (N)
2. Unbroken on Outer Package (Y) N NA
3. Present on Sample Y (N)
4. Unbroken on Sample Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample (Y) N

HW

Appendix 2 – Data Sheets for the *Ceriodaphnia dubia* Test

WET TEST REPORT FORM – CHRONIC

Permittee: Battle Mountain Resources, Inc.

Permit No.: CO-0045675

Outfall: 001B – IWC: 52%

Test Type: Routine ☒ Accelerated ☐ Screen ☐

Test Species: *Ceriodaphnia dubia*

Test Start Time	Test Start Date	Test End Time	Test End Date
1330	05-16-2022	1430	05-22-2022

Test Results	Lethality/TCP3B	Reproduction/TKP3B
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	13%	26%	52%	76%	100%
Exposed organisms	10	10	10	10	10	10
Survival for day 1	10	10	10	10	10	10
Survival for day 2	10	10	10	10	10	10
Survival for day 3	10	10	10	10	10	10
Survival for day 4	10	10	10	10	10	10
Survival for day 5	10	10	10	10	10	10
Survival for day 6	10	10	10	10	10	9
Mean 3 Brood Total	21.5	17.2	19.9	22.9	21.5	20.8

Hardness (mg/L) – Receiving Water: N/A Effluent: 47/39/29 Recon Water: 85
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 17/18/18 Recon Water: 64
Chlorine (mg/L) – Effluent: <0.01 pH (initial/final) – Control: 8.2/8.1 100%: 8.0/8.0
Total Ammonia as NH_3 (mg/L) - Effluent: 0.06/<0.03/<0.03

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Isabelle Sibley, Daniela Thornton, and Julie McKenney

Signature Kelly West *Date* May 27, 2022

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: March 2022

Permittee: Battle Mountain **Lab #:** 422236 · B **Site:** 001B

IWC %: 52 **Template #:** 5 **Dilution Water:** MHZZ-010 **Sample Date:** 051622

Age & Source: 2i16 051622 **Test Start:** 051622 1330 **Test End:** 052222 1430

Test Conditions:

	0	1	2	3	4	5	6	7	Total
(C)	0	0	0	0	5	8	0		13
	0	0	0	0	7	12	16		35
	0	0	0	4	5	0	12		21
	0	0	0	4	10	0	11		25
	0	0	0	0	4	9	7		20
0	0	0	0	0	4	8	0		12
	0	0	0	4	0	10	11		25
	0	0	0	0	7	12	12		23
	0	0	Ø 3	0	6	9	9		18
	0	0	0	0	6	9	8		23
DO	7.5	8.1 | 7.5	6.8 | 6.9	6.9 | 7.2	7.4 | 7.4	7.1 | 7.1	7.8		21.5
Temp	24.5	24.3 | 25.2	24.7 | 24.7	24.8 | 24.1	24.4 | 24.1	24.1 | 24.1	24.1		
pH	8.2	8.2 | 8.1	8.1 | 8.1	8.2 | 8.2	8.1 | 8.2	8.1 | 8.2	8.1		
Cond	346	350	351	345	335	371			
(1)	0	0	0	0	4	5	0		9
	0	0	0	0	4	11	13		28
	0	0	0	0	1	0	4		5
	0	0	0	0	5	6	0		11
	0	0	0	0	5	6 +2	0		13
13	0	0	0	0	5	4	0		9
	0	0	0	5	0	11	9		25
	0	0	0	6	6	12	10		28
	0	0	0	0	5	9	7		21
	0	0	0	0	4	8	11		23
DO	7.7	8.1 | 7.7	6.8 | 7.0	6.9 | 7.4	7.4 | 7.5	7.1 | 7.1	7.8		17.2
Temp	24.5	24.3 | 25.2	24.7 | 24.7	24.8 | 24.1	24.4 | 24.6	24.1 | 24.1	24.1		
pH	8.2	8.2 | 8.2	8.0 | 8.0	8.2 | 8.2	8.1 | 8.2	8.0 | 8.1	8.1		
Cond	329	336	329	323	320	348			
(2)	0	0	0	0	4	7	13		24
	0	0	0	0	3	12	13		28
	0	0	0	0	4	0	7		11
	0	0	0	0	5	6	0		11
	0	0	0	0	5	9	0		14
26	0	0	0	0	5	5	0		10
	0	0	0	4	0	7	8		19
	0	0	0	0	5	10	13		28
	0	0	0	0	4	10	16		30
	0	0	0	0	4	9	11		24
DO	7.9	8.1 | 8.0	6.8 | 7.1	6.9 | 7.0	7.4 | 7.6	7.1 | 7.2	7.8		19.9
Temp	24.5	24.3 | 25.2	24.7 | 24.6	24.8 | 24.1	24.4 | 25.0	24.1 | 24.1	24.1		
pH	8.2	8.2 | 8.2	7.9 | 8.0	8.2 | 8.2	8.0 | 8.2	*8.0 | 8.1	8.1		
Cond	311	319	314	316	311	335			
(3)	0	0	0	0	4	7	12		23
	0	0	0	0	5	11	16		32
	0	0	0	0	6	0	13		19
	0	0	0	0	7	8	0		15
	0	0	0	0	5	7	10		22
52	0	0	0	0	4	9	0		13
	0	0	0	5+1	0	10	11		27
	0	0	0	0	6	10	13		29
	0	0	0	0	5	9	10		24
	0	0	0	0	4	9	12		25
DO	8.1	8.1 | 8.3	6.8 | 7.2	6.8 | 7.8	7.3 | 7.7	7.1 | 7.2	7.7		22.9
Temp	24.5	24.3 | 25.2	24.7 | 24.6	24.8 | 24.1	24.4 | 25.3	24.1 | 24.1	24.1		
pH	8.2	8.3 | 8.2	7.8 | 7.9	8.1 | 8.0	7.9 | 8.1	7.9 | 8.0	8.0		
Cond	282	281	282	279	289	305			

* 8.0
315

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: March 2022

	0	1	2	3	4	5	6	7	Total
(4)	0	0	0	0	4	7	12		23
	0	0	0	0	5	6	16		27
	0	0	0	0	5	0	10		15
	0	0	0	0	5	4	0		9
	0	0	0	0	4	6	9		19
76	0	0	0	0	4	9	12		25
	0	0	0	0	0	4	6		10
	0	0	0	0	4	10	14		28
	0	0	0	0	7	12	15		34
	0	0	0	0	5	7	13		25
DO	8.2	8.1 | 8.5	6.8 | 7.4	6.8 | 8.0	7.3 | 7.9	7.1 | 7.3	7.7		21.5
Temp	24.5	24.3 | 25.0	24.7 | 24.5	24.8 | 24.1	24.4 | 25.6	24.1 | 24.1	24.1		
pH	8.1	8.3 | 8.1	7.6 | 7.8	8.1 | 7.9	7.8 | 8.1	7.8 | 7.9	8.0		
Cond	252	258	252	251	265	277			
(5)	0	0	0	0	4	10	9		23
	0	0	0	0	6	11	14		31
	0	0	0	0	8	8	0		16
	0	0	0	0	5	0	10		15
100	0	0	0	0	4	7	13		24
	0	0	0	0	4	7	0		11
	0	0	0	4	0	8	15		27
	0	0	0	0	4	9	10 D		23 D
	0	0	0	0	4	4	12		25
	0	0	0	0	4 +2	0	7		13
DO	8.5	8.1 | 8.7	6.8 | 7.5	6.8 | 8.2	7.3 | 8.1	7.1 | 7.3	7.7		20.8
Temp	24.5	24.3 | 25.2	24.7 | 24.5	24.8 | 24.1	24.4 | 25.9	24.1 | 24.1	24.1		
pH	8.0	8.3 | 8.0	7.5 | 7.6	8.0 | 7.8	7.7 | 7.8	7.7 | 7.7	8.0		
Cond	213	221	215	209	240	228			
Algae	ABS	ABS	ABS	ABS	ABS	ABS			
YCT	2204	2204	2204	2204	2203	2204			
H_2O	1	1	2	2	3	3			
Initials	IS	IS	DT	JM	JM	DT	IS		

	Eff #1	Eff #2	Eff #3	Recon
Hardness	47	39	29	85
Alkalinity	17	18	18	64
Chlorine	<0.01	<0.01	<0.01	<0.01
Ammonia	0.06	<0.03	<0.03	<0.03

Exposure Chamber:
Total Capacity: 30mL
Total Solution Volume: 15mL

Feeding Schedule:
Fed daily
Food used: YCT, Algae

Units:
DO: mg/L
Temp: °C
pH: N/A
Cond: µS/cm³
Hardness: mg/L
Alkalinity: mg/L
Chlorine: mg/L
Ammonia: mg/L

Comments: active + mobile

x:y:z = board #:row:column

1	2	3	4	5	6	7	8	9	10
A1	A2	A4	A7	A10	C1	C4	C9	C10	D1

CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **SeaCrest Group**

Analysis ID:	01-4632-8290	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	23 May-22 13:03	**Analysis:**	STP 2xK Contingency Tables	**Status Level:**	1
Batch ID:	08-5234-3236	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	16 May-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	22 May-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	04-7423-6650	**Code:**	422236.B	**Project:**	WET Quarterly Compliance Test (2Q)
Sample Date:	16 May-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	16 May-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU
Untransformed	C > T	100	>100	n/a	1

Fisher Exact/Bonferroni-Holm Test

Control	vs	Group	Test Stat	P-Type	P-Value	Decision(α:5%)
Dilution Water		13	1.0000	Exact	1.0000	Non-Significant Effect
		26	1.0000	Exact	1.0000	Non-Significant Effect
		52	1.0000	Exact	1.0000	Non-Significant Effect
		76	1.0000	Exact	1.0000	Non-Significant Effect
		100	0.5000	Exact	1.0000	Non-Significant Effect

Data Summary

Conc-%	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
0	D	10	0	10	1	0	0.0%
13		10	0	10	1	0	0.0%
26		10	0	10	1	0	0.0%
52		10	0	10	1	0	0.0%
76		10	0	10	1	0	0.0%
100		9	1	10	0.9	0.1	10.0%

CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **SeaCrest Group**

Analysis ID:	20-3417-1955	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	23 May-22 13:03	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	08-5234-3236	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	16 May-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	22 May-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	04-7423-6650	**Code:**	422236.B	**Project:**	WET Quarterly Compliance Test (2Q)
Sample Date:	16 May-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	16 May-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	438116	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
LC5	88	80	n/a	1.136	n/a	1.25
LC10	100	84	n/a	1	n/a	1.19
LC15	>100	n/a	n/a	<1	n/a	n/a
LC20	>100	n/a	n/a	<1	n/a	n/a
LC25	>100	n/a	n/a	<1	n/a	n/a
LC40	>100	n/a	n/a	<1	n/a	n/a
LC50	>100	n/a	n/a	<1	n/a	n/a

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	D	10	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	10/10	1	0.0%
13		10	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	10/10	1	0.0%
26		10	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	10/10	1	0.0%
52		10	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	10/10	1	0.0%
76		10	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	10/10	1	0.0%
100		10	0.9000	0.0000	1.0000	0.3162	35.14%	10.0%	9/10	0.9	10.0%

CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **SeaCrest Group**

Analysis ID:	19-1841-1561	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.9.6
Analyzed:	23 May-22 13:03	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Batch ID:	08-5234-3236	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	16 May-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	22 May-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	04-7423-6650	**Code:**	422236.B	**Project:**	WET Quarterly Compliance Test (2Q)
Sample Date:	16 May-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	16 May-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	100	>100	n/a	1	35.10%

Dunnett Multiple Comparison Test

Control vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water	13	1.304	2.289	7.546	18	CDF	0.2876	Non-Significant Effect
	26	0.4854	2.289	7.546	18	CDF	0.6523	Non-Significant Effect
	52	-0.4247	2.289	7.546	18	CDF	0.9296	Non-Significant Effect
	76	0	2.289	7.546	18	CDF	0.8333	Non-Significant Effect
	100	0.2123	2.289	7.546	18	CDF	0.7627	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	189.933	37.9867	5	0.6991	0.6264	Non-Significant Effect
Error	2934	54.3333	54			
Total	3123.93		59			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	1.871	15.09	0.8667	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9593	0.9459	0.0436	Normal Distribution

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	21.5	16.8	26.2	22	12	35	2.078	30.56%	0.00%
13		10	17.2	10.97	23.43	17	5	28	2.752	50.60%	20.00%
26		10	19.9	14.26	25.54	21.5	10	30	2.492	39.60%	7.44%
52		10	22.9	18.64	27.16	23.5	13	32	1.882	25.99%	-6.51%
76		10	21.5	15.7	27.3	24	9	34	2.566	37.74%	0.00%
100		10	20.8	16.07	25.53	23	11	31	2.091	31.79%	3.26%

Ceriodaphnia 7-d Survival and Reproduction Test

SeaCrest Group

Analysis ID:	05-6780-7425	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.9.6
Analyzed:	23 May-22 13:03	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	08-5234-3236	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	16 May-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	22 May-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	04-7423-6650	**Code:**	422236.B	**Project:**	WET Quarterly Compliance Test (2Q)
Sample Date:	16 May-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	16 May-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1559167	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	n/a	n/a	<1	n/a	n/a
IC10	>100	n/a	n/a	<1	n/a	n/a
IC15	>100	n/a	n/a	<1	n/a	n/a
IC20	>100	n/a	n/a	<1	n/a	n/a
IC25	>100	n/a	n/a	<1	n/a	n/a
IC40	>100	n/a	n/a	<1	n/a	n/a
IC50	>100	n/a	n/a	<1	n/a	n/a

Reproduction Summary

			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	D	10	21.5	12	35	6.57	30.56%	0.0%	21.5	0.0%
13		10	17.2	5	28	8.702	50.60%	20.0%	20.46	4.84%
26		10	19.9	10	30	7.88	39.60%	7.44%	20.46	4.84%
52		10	22.9	13	32	5.953	25.99%	-6.51%	20.46	4.84%
76		10	21.5	9	34	8.114	37.74%	0.0%	20.46	4.84%
100		10	20.8	11	31	6.613	31.79%	3.26%	20.46	4.84%

Appendix 3 – Data Sheets for the Fathead Minnow Test

WET TEST REPORT FORM – CHRONIC

Permittee: Battle Mountain Resources, Inc.

Permit No.: CO-0045675

Outfall: 001B – IWC: 52%

Test Type: Routine ☒ Accelerated ☐ Screen ☐

Test Species: fathead minnow

Test Start Time	Test Start Date	Test End Time	Test End Date
1400	05-16-2022	1430	05-23-2022

Test Results	Lethality/TCP6C	Growth/TKP6C
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	13%	26%	52%	76%	100%
Exposed organisms	40	40	40	40	40	40
Survival for day 1	40	40	40	40	40	40
Survival for day 2	40	40	40	40	40	40
Survival for day 3	40	40	40	40	40	40
Survival for day 4	40	40	40	40	40	40
Survival for day 5	40	40	40	40	40	40
Survival for day 6	40	40	40	40	40	40
Survival for day 7	40	40	40	40	40	40
Mean Dry Wt. (mg)	0.252	0.291	0.303	0.283	0.276	0.274

Hardness (mg/L) – Receiving Water: N/A Effluent: 47/39/29 Recon Water: 98
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 17/18/18 Recon Water: 57
Chlorine (mg/L) – Effluent: <0.01 pH (initial/final) – Control: 8.3/7.8 100%: 8.2/8.0
Total Ammonia as NH_3 (mg/L) - Effluent: 0.06/<0.03/<0.03

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Shanna Wepman, Haley West, and Catherine McDonald

Signature Haley West *Date* May 27, 2022

SeaCrest Group
Louisville, CO

Fathead Minnow Chronic Benchsheet

Form #: 103a
Effective: March 2022

Client: Battle Mountain **Site:** 001B **Lab #:** 422 236-B **Sample Date:** 0516 **IWC:** 52 **Dilution H_2O:** MHZZ-016

Test Start: 0516 - 1400 **Test End:** 0523 - 1430 **Species Info:** IH 0515 **Template:** FHM **Test Conditions:**

Conc	Read	0	1		2		3		4		5		6		7
0	DO	6.9	5.9	6.8	6.3	6.8	6.0	6.8	5.9	6.8	5.7	6.8	6.2	6.8	~~5.8~~
	Temp	25.0	24.6	24.9	24.4	25.2	25.9	24.8	24.1	24.3	24.1	24.1	24.1	24.4	24.1
	pH	8.3	8.2	8.3	8.2	8.2	8.0	8.3	8.3	8.1	8.3	8.3	8.0	8.1	7.8
	Cond	320	311		314		313		321		326		333		
13	DO	7.0	5.9	6.9	6.2	6.9	6.0	6.9	5.9	6.8	5.8	7.0	6.2	7.0	5.8
	Temp	25.0	24.6	25.0	24.4	25.3	25.6	24.6	24.1	24.3	24.1	24.1	24.1	24.3	24.1
	pH	8.3	8.2	8.3	8.2	8.2	8.0	8.2	8.3	8.1	8.3	8.2	8.0	8.1	7.8
	Cond	302	297		300		300		315		319		312		
26	DO	7.2	5.8	7.0	6.0	7.0	6.0	7.1	5.9	6.8	5.9	7.2	6.1	7.2	5.8
	Temp	24.9	24.6	25.1	24.4	25.4	25.3	24.5	24.1	24.3	24.1	24.1	24.1	24.3	24.1
	pH	8.3	8.2	8.3	8.2	8.2	8.0	8.2	8.3	8.1	8.3	8.2	8.0	8.1	7.9
	Cond	290	286		289		286		306		303		302		
52	DO	7.3	5.8	7.1	5.9	7.0	6.0	7.3	6.0	6.9	6.0	7.4	6.1	7.4	5.7
	Temp	24.9	24.6	25.1	24.4	25.6	25.0	24.4	24.1	24.3	24.1	24.1	24.1	24.2	24.1
	pH	8.3	8.2	8.3	8.2	8.2	8.1	8.2	8.4	8.1	8.2	8.1	8.0	8.0	7.9
	Cond	263	261		264		261		281		274		275		
76	DO	7.4	5.7	7.2	5.8	7.1	6.0	7.4	6.0	6.9	6.1	7.6	6.0	7.6	5.7
	Temp	24.8	24.6	25.2	24.4	25.7	24.7	24.3	24.1	24.3	24.1	24.1	24.1	24.2	24.1
	pH	8.2	8.2	8.2	8.2	8.2	8.1	8.2	8.4	8.1	8.2	8.1	8.0	7.9	8.0
	Cond	240	237		239		235		256		260		251		
100	DO	7.5	5.7	7.4	5.7	7.2	6.0	7.5	6.0	6.9	6.2	7.7	6.0	7.7	5.7
	Temp	24.8	24.6	25.3	24.4	25.8	24.4	24.2	24.1	24.3	24.1	24.1	24.1	24.1	24.1
	pH	8.2	8.2	8.1	8.2	8.1	8.1	8.2	8.4	8.1	8.2	8.1	8.0	7.9	8.0
	Cond	227	227		217		223		232		236		227		
	DO														
	Temp														
	pH														
	Cond														
Initials		SW	SW		CM		CM		HW		CM		SW		SW
Water #		1	1		1		2		3		2		3		

Conc	Read	0	1	2	3	4	5	6	7
0	DO	10	10	10	10	10	10	10	10
	Temp	10	10	10	10	10	10	10	10
	pH	10	10	10	10	10	10	10	10
	Cond	10	10	10	10	10	10	10	10
13	DO	10	10	10	10	10	10	10	10
	Temp	10	10	10	10	10	10	10	10
	pH	10	10	10	10	10	10	10	10
	Cond	10	10	10	10	10	10	10	10
26	DO	10	10	10	10	10	10	10	10
	Temp	10	10	10	10	10	10	10	10
	pH	10	10	10	10	10	10	10	10
	Cond	10	10	10	10	10	10	10	10
52	DO	10	10	10	10	10	10	10	10
	Temp	10	10	10	10	10	10	10	10
	pH	10	10	10	10	10	10	10	10
	Cond	10	10	10	10	10	10	10	10
76	DO	10	10	10	10	10	10	10	10
	Temp	10	10	10	10	10	10	10	10
	pH	10	10	10	10	10	10	10	10
	Cond	10	10	10	10	10	10	10	10
100	DO	10	10	10	10	10	10	10	10
	Temp	10	10	10	10	10	10	10	10
	pH	10	10	10	10	10	10	10	10
	Cond	10	10	10	10	10	10	10	10
	DO	10							
	Temp	10							
	pH	10							
	Cond	10							

#	Fish & Tare	Tare	Fish Wt mg	Ave wt
#1	1.13680	1.13447	0.233	0.252
#2	1.15573	1.15354	0.219	
#3	1.13680	1.13367	0.313	
#4	1.15004	1.14761	0.243	
#5	1.13599	1.13308	0.291	0.291
#6	1.13520	1.13217	0.303	
#7	1.13907	1.13586	0.321	
#8	1.13630	1.13380	0.250	
#9	1.16368	1.16117	0.251	0.303
#10	1.15750	1.15465	0.287	
#11	1.12930	1.12557	0.373	
#12	1.13526	1.13223	0.303	
#13	1.14514	1.14261	0.253	0.283
#14	1.14690	1.14403	0.287	
#15	1.13365	1.13054	0.311	
#16	1.14962	1.14683	0.279	
#17	1.12500	1.12230	0.270	0.276
#18	1.12788	1.12518	0.270	
#19	1.13348	1.13045	0.303	
#20	1.14710	1.14451	0.259	
#21	1.12623	1.12349	0.274	0.274
#22	1.13249	1.12999	0.250	
#23	1.13059	1.12752	0.307	
#24	1.17497	1.17234	0.263	
#				
#				
#				
#				
pretest	1.13251	1.13217		

	Eff 1	Eff 2	Eff 3	Recon	Rcv 1	Rcv 2	Rcv 3	MR
Hard	47	39	29	98				
Alk	17	18	18	57				
Chlor	<0.01	<0.01	<0.01	<0.01				
NH_3	0.06	<0.03	<0.03	<0.03				

Exposure Chamber

Total Capacity:	500 mL
Test Solution Volume:	250 mL
Test Solution Surface Area:	50.2 cm
Water Depth (constant):	6.5 cm

Units:

DO: mg/L	Hard: mg/L
Temp: °C	Alk: mg/L
pH: N/A	Chlor: mg/L
Cond: µS/cm³	NH_3: mg/L

Comments: active + mobile

Feeding	0	1	2	3	4	5	6	7
AM		✓	✓	✓	✓	✓	✓	✓
Initials		SW	SW	CM	HW	CM	SW	SW
PM	✓	✓	✓	✓	✓	✓	✓	
Initials	SW	SW	SW	CM	HW	CM	SW	

Feeding Schedule

Fed:	2x per day
Food Used:	<24hr artemia

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	11-3452-1520	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.6
Analyzed:	24 May-22 11:19	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Batch ID:	15-0512-5254	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	16 May-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	23 May-22	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	16-3450-2326	**Code:**	422236.B	**Project:**	WET Quarterly Compliance Test (2Q)
Sample Date:	16 May-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	16 May-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	100	>100	n/a	1	22.79%

Dunnett Multiple Comparison Test

Control vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water	13	-1.645	2.407	0.057	6	CDF	0.9973	Non-Significant Effect
	26	-2.138	2.407	0.057	6	CDF	0.9994	Non-Significant Effect
	52	-1.278	2.407	0.057	6	CDF	0.9921	Non-Significant Effect
	76	-0.9847	2.407	0.057	6	CDF	0.9820	Non-Significant Effect
	100	-0.901	2.407	0.057	6	CDF	0.9775	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.00603	0.001206	5	1.059	0.4147	Non-Significant Effect
Error	0.0204945	0.0011386	18			
Total	0.0265244		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	3.811	15.09	0.5770	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9563	0.884	0.3682	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.252	0.1854	0.3186	0.238	0.219	0.313	0.02092	16.60%	0.00%
13		4	0.2912	0.2433	0.3392	0.297	0.25	0.321	0.01507	10.35%	-15.57%
26		4	0.303	0.2212	0.3848	0.294	0.251	0.373	0.02571	16.97%	-20.24%
52		4	0.2825	0.2445	0.3205	0.283	0.253	0.311	0.01195	8.46%	-12.10%
76		4	0.2755	0.2452	0.3058	0.27	0.259	0.303	0.009528	6.92%	-9.32%
100		4	0.2735	0.2347	0.3123	0.2685	0.25	0.307	0.0122	8.92%	-8.53%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.233	0.219	0.313	0.243
13		0.291	0.303	0.321	0.25
26		0.251	0.285	0.373	0.303
52		0.253	0.287	0.311	0.279
76		0.27	0.27	0.303	0.259
100		0.274	0.25	0.307	0.263

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	07-6623-8914	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.6
Analyzed:	24 May-22 11:20	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	15-0512-5254	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	16 May-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	23 May-22	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	16-3450-2326	**Code:**	422236.B	**Project:**	WET Quarterly Compliance Test (2Q)
Sample Date:	16 May-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	16 May-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	471292	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	n/a	n/a	<1	n/a	n/a
IC10	>100	n/a	n/a	<1	n/a	n/a
IC15	>100	n/a	n/a	<1	n/a	n/a
IC20	>100	n/a	n/a	<1	n/a	n/a
IC25	>100	n/a	n/a	<1	n/a	n/a
IC40	>100	n/a	n/a	<1	n/a	n/a
IC50	>100	n/a	n/a	<1	n/a	n/a

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	D	4	0.252	0.219	0.313	0.04184	16.60%	0.0%	0.2822	0.0%
13		4	0.2912	0.25	0.321	0.03013	10.35%	-15.57%	0.2822	0.0%
26		4	0.303	0.251	0.373	0.05141	16.97%	-20.24%	0.2822	0.0%
52		4	0.2825	0.253	0.311	0.02391	8.46%	-12.1%	0.2822	0.0%
76		4	0.2755	0.259	0.303	0.01906	6.92%	-9.32%	0.2755	2.37%
100		4	0.2735	0.25	0.307	0.02439	8.92%	-8.53%	0.2735	3.08%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.233	0.219	0.313	0.243
13		0.291	0.303	0.321	0.25
26		0.251	0.285	0.373	0.303
52		0.253	0.287	0.311	0.279
76		0.27	0.27	0.303	0.259
100		0.274	0.25	0.307	0.263

Appendix 4 – QA/QC and Reference Toxicant Test Chart

Quality Assurance Check List – Chronic Whole Effluent Toxicity Test

Client:	Battle Mountain Resources, Inc.
SeaCrest Sample No:	422236.B
Species Tested:	*Ceriodaphnia dubia* and fathead minnow

Sample Dates	**Start Date of Test (*Ceriodaphnia dubia*)**	**Start Date of Test (fathead minnow)**
05-16-2022		
05-18-2022		
05-20-2022	05-16-2022	05-16-2022

Sample received in lab properly preserved (0-6°C)?	**N***
Sample received at laboratory within 36 hours of collection?	**Y**
Sample delivered on ice or equivalent?	**Y**
Test initiated within 36-hours of collection?	**Y**
Test protocol conforms to CDPHE guidelines (*Ceriodaphnia dubia)*?	**Y**
Test protocol conforms to CDPHE guidelines (fathead minnow)?	**Y**
Average test temp. ±1°C (*Ceriodaphnia dubia*)?	**Y**
Average test temp. ±1°C (fathead minnow)?	**Y**
DO level ≥4.0mg/L; no super-saturation (*Ceriodaphnia dubia*)?	**Y**
DO level ≥4.0mg/L; no super-saturation (fathead minnow)?	**Y**
Survival in control ≥80% (*Ceriodaphnia dubia*)?	**Y**
Survival in control ≥80% (fathead minnow)?	**Y**
Ceriodaphnia dubia neonates <24-hours old?	**Y**
Fathead minnow larvae <24-hours old?	**Y**
Appropriate reference toxicity test conducted?	**Y**
Reference toxicity test results within the confidence limits for the lab?	**Y**

* The samples were hand delivered at 11.4°C, 13.3°C, and 13.0°C on the same day as sampling.

Author Haley Ulrt *Date* May 27, 2022
Position: Laboratory Supervisor

Quality Control [signature] *Date* 27 My 2022

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

METHOD QC

Method	Analyte	Date	LCS (rec)	%REC	%RPD	QC LIMITS
2320 B	Alkalinity - Total	4/8/2022	100.80%	99.20%	-0.50%	± 5.00%
2320 B	Alkalinity - Total	4/14/2022	99.20%	99.88%	0.43%	± 5.00%
2320 B	Alkalinity - Total	4/21/2022	100.80%	100.61%	-0.70%	± 5.00%
2320 B	Alkalinity - Total	4/28/2022	100.00%	100.50%	-1.13%	± 5.00%
4500 NH_3 D	Ammonia	4/8/2022	99.20%	104.95%	0.59%	± 10.00%
4500 NH_3 D	Ammonia	4/14/2022	101.80%	97.09%	-1.32%	± 10.00%
4500 NH_3 D	Ammonia	4/20/2022	96.60%	103.00%	2.69%	± 10.00%
4500 NH_3 D	Ammonia	4/27/2022	104.60%	102.23%	-3.77%	± 10.00%
4500 Cl D	Chlorine	4/21/2022	96.97%	90.63%	0.00%	± 5.00, ± 20.00%
2340 B	Hardness - Total	4/7/2022	96.49%	100.40%	2.93%	± 5.00%
2340 B	Hardness - Total	4/14/2022	96.50%	100.00%	0.82%	± 5.00%
2340 B	Hardness - Total	4/21/2022	104.00%	101.00%	-3.35%	± 5.00%
2340 B	Hardness - Total	4/28/2022	98.25%	101.39%	1.77%	± 5.00%

			LCS (rec)	%REC M1	%REC M2	QC Limits
4500 O	DO - Winkler	4/6/2022	N/A	100.00%	97.06%	± 5.00%
4500 O	DO - Winkler	4/14/2022	N/A	96.92%	96.69%	± 5.00%
4500 O	DO - Winkler	4/20/2022	N/A	95.65%	97.06%	± 5.00%
4500 O	DO - Winkler	4/26/2022	N/A	98.51%	97.06%	± 5.00%

			Blank	%REC MR S	%RPD	QC Limits
2540 D	Suspended Solids (TTL)	4/13/2022	100.00%	96.64%	0.00%	± 15%
2540 C	Dissolved Solids (TTL)	4/13/2022	100.00%	100.80%	0.00%	± 15%

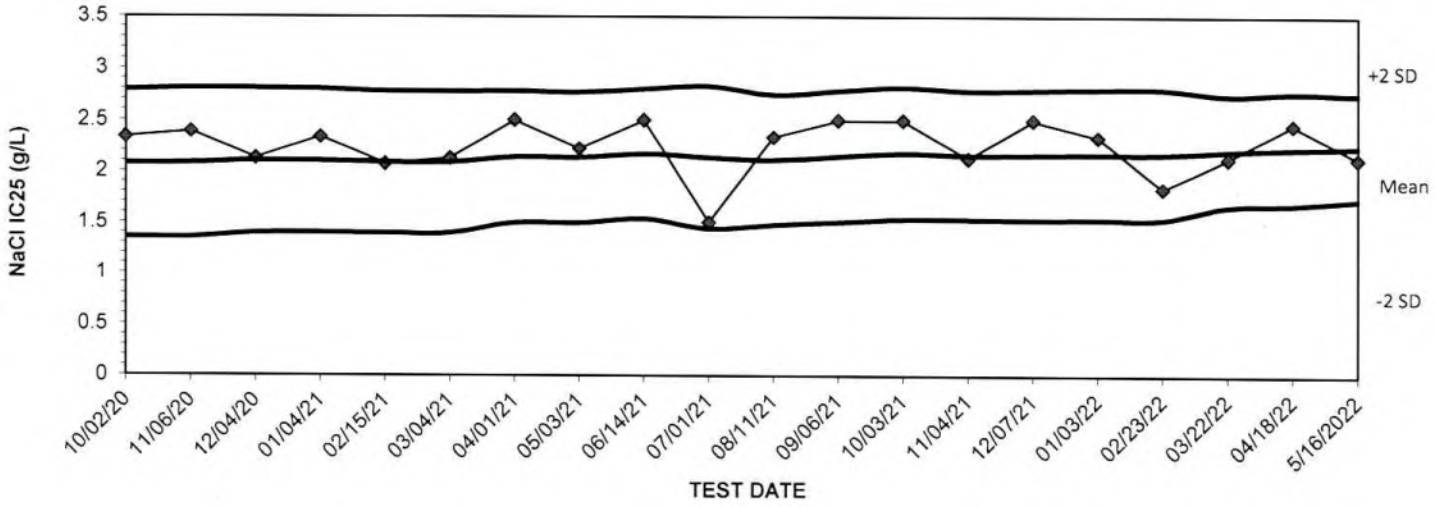
Signature: Haley West

Date: May 2, 2022

Signature: [signature]

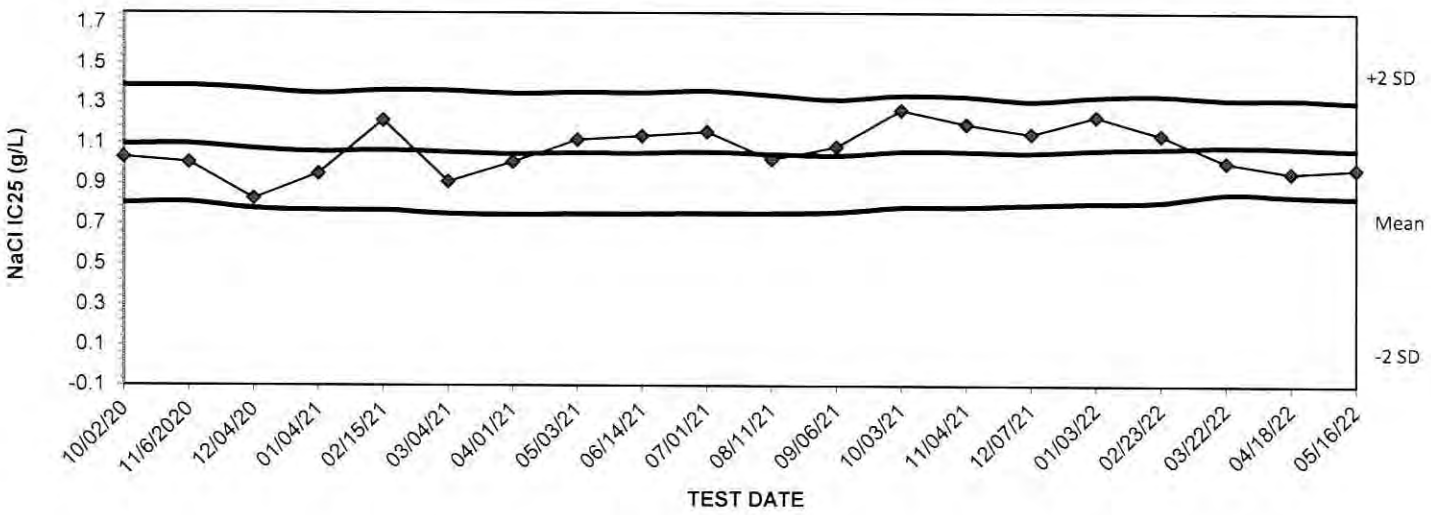
Date: 2 May 2022

CERIODAPHNIA SURVIVAL LC25 NaCl REFTOX



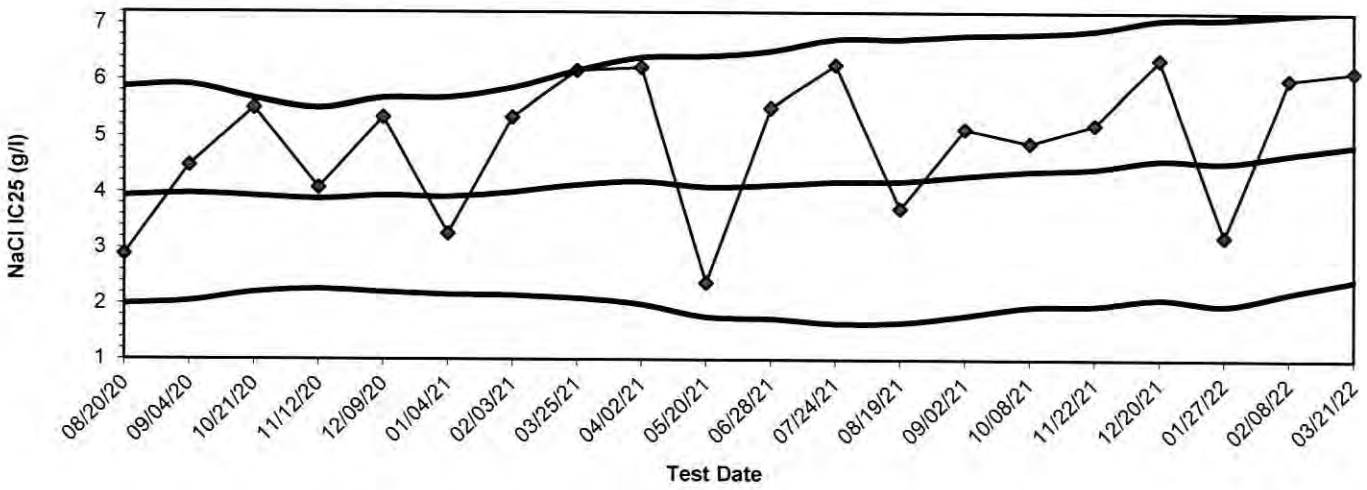
Date	IC25	Mean	-2 SD	+2 SD
10/02/20	2.3330	2.0715	1.3544	2.7885
11/06/20	2.3890	2.0785	1.3517	2.8053
12/04/20	2.1250	2.0997	1.3962	2.8032
01/04/21	2.3330	2.0968	1.3979	2.7956
02/15/21	2.0710	2.0843	1.3939	2.7747
03/04/21	2.1250	2.0843	1.3939	2.7747
04/01/21	2.5000	2.1359	1.4948	2.7769
05/03/21	2.2190	2.1304	1.4945	2.7664
06/14/21	2.5000	2.1661	1.5357	2.7966
07/01/21	1.5000	2.1319	1.4386	2.8252
08/11/21	2.3330	2.1101	1.4777	2.7425
09/06/21	2.5000	2.1429	1.5041	2.7816
10/03/21	2.5000	2.1746	1.5342	2.8150
11/04/21	2.1250	2.1568	1.5338	2.7797
12/07/21	2.5000	2.1592	1.5310	2.7874
01/03/22	2.3330	2.1656	1.5330	2.7982
02/23/22	1.8330	2.1656	1.5330	2.7982
03/22/22	2.1250	2.1982	1.6590	2.7374
04/18/22	2.4580	2.2200	1.6774	2.7626
5/16/2022	2.1250	2.2355	1.7257	2.7453

CERIODAPHNIA REPRODUCTION IC25 NaCl REFTOX



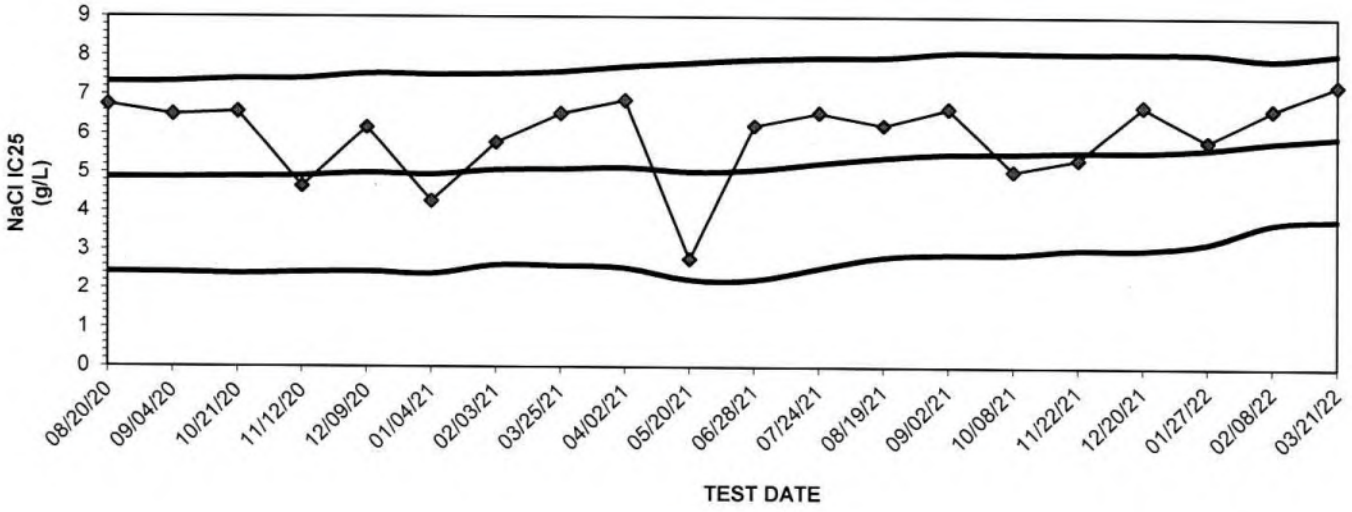
Date	IC25	Mean	-2 SD	+2 SD
10/02/20	1.0270	1.0930	0.7993	1.3866
11/6/2020	1.002	1.09508	0.804859404	1.385300596
12/04/20	0.8229	1.0715	0.7730	1.3701
01/04/21	0.9453	1.0562	0.7653	1.3470
02/15/21	1.2100	1.0635	0.7646	1.3625
03/04/21	0.9062	1.0540	0.7475	1.3605
04/01/21	1.0030	1.0450	0.7439	1.3461
05/03/21	1.1140	1.0496	0.7472	1.3521
06/14/21	1.1340	1.0487	0.7475	1.3499
07/01/21	1.1550	1.0553	0.7508	1.3599
08/11/21	1.0180	1.0445	0.7516	1.3375
09/06/21	1.0820	1.0368	0.7574	1.3162
10/03/21	1.2630	1.0587	0.7807	1.3367
11/04/21	1.1930	1.0570	0.7830	1.3311
12/07/21	1.1450	1.0503	0.7931	1.3076
01/03/22	1.2300	1.0650	0.8016	1.3284
02/23/22	1.1390	1.0719	0.8084	1.3354
03/22/22	1.0040	1.0821	0.8489	1.3154
04/18/22	0.9527	1.0775	0.8376	1.3174
05/16/22	0.9716	1.0659	0.8293	1.3025

FHM SURVIVAL LC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
08/20/20	2.8830	3.9274	1.9931	5.8617
09/04/20	4.4760	3.9760	2.0428	5.9092
10/21/20	5.5000	3.9318	2.2040	5.6597
11/12/20	4.0770	3.8762	2.2576	5.4949
12/09/20	5.3330	3.9351	2.2017	5.6685
01/04/21	3.2500	3.9146	2.1591	5.6702
02/03/21	5.3330	3.9947	2.1464	5.8429
03/25/21	6.1583	4.1258	2.0920	6.1596
04/02/21	6.2160	4.1887	1.9849	6.3925
05/20/21	2.3750	4.0888	1.7621	6.4155
06/28/21	5.5000	4.1223	1.7345	6.5101
07/24/21	6.2580	4.1844	1.6465	6.7224
08/19/21	3.7000	4.1935	1.6644	6.7226
09/02/21	5.1250	4.2901	1.7899	6.7904
10/08/21	4.8750	4.3788	1.9442	6.8135
11/22/21	5.2000	4.4210	1.9620	6.8799
12/20/21	6.3570	4.5781	2.0849	7.0713
01/27/22	3.2000	4.5318	1.9736	7.0900
02/08/22	6.0000	4.6848	2.2009	7.1688
03/21/22	6.1400	4.8361	2.4258	7.2464

FHM GROWTH IC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
08/20/20	6.7500	4.8737	2.4157	7.3316
09/04/20	6.5000	4.8750	2.4133	7.3367
10/21/20	6.5770	4.8979	2.3802	7.4156
11/12/20	4.6370	4.9183	2.4172	7.4194
12/09/20	6.1720	4.9941	2.4402	7.5481
01/04/21	4.2580	4.9508	2.3784	7.5231
02/03/21	5.7680	5.0732	2.6088	7.5375
03/25/21	6.5280	5.0905	2.5891	7.5919
04/02/21	6.8650	5.1345	2.5395	7.7295
05/20/21	2.7590	5.0217	2.2272	7.8162
06/28/21	6.2200	5.0690	2.2267	7.9113
07/24/21	6.5530	5.2483	2.5384	7.9582
08/19/21	6.2310	5.3933	2.8247	7.9619
09/02/21	6.6650	5.4939	2.8982	8.0895
10/08/21	5.0481	5.4990	2.9074	8.0905
11/22/21	5.3520	5.5543	3.0315	8.0771
12/20/21	6.7310	5.5549	3.0309	8.0788
01/27/22	5.8200	5.6387	3.2082	8.0692
02/08/22	6.6580	5.8193	3.7120	7.9266
03/21/22	7.2690	5.9425	3.8121	8.0729

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

October 26, 2022

Colorado Department of Public Health and Environment
Water Quality Control Division
Attn: WQDC-B2 – DMR Receipt
4300 Cherry Creek Drive
Denver, CO 80246-1530

Re: Battle Mountain Resources, Inc.
San Luis Project - San Luis, Colorado
Third Quarter 2022 – DMR's, BMP, Influent Summary and WET Testing Reports
CDPHE CDPS Permit No. CO0045675

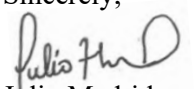
Dear Sir or Madame:

Please find the enclosed Battle Mountain Resources, Inc. "San Luis Project" (Permit No. CO0045675) Colorado Department of Public Health and Environment-Colorado Discharge Permit System (CDPS) Best Management Practices (BMP) report for permitted outfall 002 for the third quarter 2022. The quarterly BMP report provides the required data associated with groundwater well elevations, the quarterly potentiometric surface map and groundwater well chemistry.

In addition, the third quarter 2022 Discharge Monitoring Reports (DMRs) were submitted for each of the permitted water treatment plant discharges in the NetDMR System and the WET Testing Reports were attached to the appropriate DMR submittal in NetDMR. These permitted discharges consist of water treatment plant Discharge Numbers 001-A and 001-B. During the quarter, the maximum 30-day average flow was 0.31 million gallons of water discharged per day, therefore the applicable permit criteria for the reporting period is associated with discharge number 001-B. A summary report of the annual influent sampling required under the permit is also included for your review.

Should any questions arise or if I can be of any assistance providing clarification, please call me at (719) 379-0538.

Sincerely,



Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Tim Runnells, Engineering Analytics
Alan Fosdick, Engineering Analytics

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

October 26, 2022

Colorado Department of Public Health and Environment
Water Quality Control Division
Attn: WQDC-B2 – DMR Receipt
4300 Cherry Creek Drive
Denver, CO 80246-1530

Re: Battle Mountain Resources, Inc.
San Luis Project
Third Quarter 2022 BMP Report
CDPHE CDPS Permit No. CO0045675

Dear Sir or Madame:

In accordance with and compliance of the permit limitations and permit terms and conditions contained in Part I, Section 5 Discharge Point 002: (Permit Limitations, Best Management Practices, and Schedule of Compliance of the *State of Colorado Authorization to Discharge Under the Colorado Discharge Permit System*, Battle Mountain Resources, Inc. submits the following *Quarterly Best Management Practices Report.*

In accordance with the Water Quality Control Commission Regulations for Effluent Limitations, Section 62.4, and the Colorado Discharge Permit System Regulations, Sections 61.8(2), 61.8(3)(n), and 61.8(3)(r), 5 C.C.R. 1002-61, the permittee shall continue to implement the following limitations, compliance schedules, and Best Management Practices (BMPs).

The attainment of applicable water quality standards will be implemented and evaluated through the application of the following limitations, compliance schedules, and BMPs that are designed to monitor and control the groundwater quality and quantity discharging from the West Pit to the Rito Seco alluvial aquifer.

Specifically, the limitations, compliance schedules, and BMPs are those activities that address contaminated groundwater that may flow into the Rito Seco. This includes: (1) the potential flow of the affected groundwater from the West Pit that, in the past, manifested itself in the formation of the surface seeps along the arroyo sidewall of the Rito Seco, and (2) the plume of affected groundwater within the Rito Seco alluvial aquifer downgradient of the West Pit that flows along the naturally occurring hydraulic gradient and that may flow into the Rito Seco. The activities will include the following specific requirements:

1) The elevation of the groundwater table in the vicinity of the West Pit shall be measured on a weekly basis at the following locations: (i) the West Pit backfill wells BF-4 and BF-5 and (ii) the Rito Seco alluvial wells M-16 and M-20, as shown in Figure 3 of the permit, for purposes of determining the performance of the "pump and treat" system that regulates the flow and quality of the groundwater in the seepage front. The permittee shall

also determine on a quarterly basis the elevations of the groundwater table at BF-3, BF-4, BF-5, BF-6, M-11R, M-16, M-17, M-18, M-19, M-20, M-21, M-22, M-23, M-24, M-25, M-26, M-27, M-28, M-29, M-30, M-31, M-32, and M-33 for the purpose of developing a groundwater potentiometric map as monitoring confirmation of the groundwater flow direction. The quarterly data regarding depth to groundwater and groundwater potentiometric surface map will be submitted to the WQCD with the BMP report as described.

Compliance Action Taken: *Battle Mountain Resources, Inc. measured the weekly West Pit backfill and alluvial wells as required under Paragraph 1 of the specific requirements. Measurements obtained for the weekly West Pit backfill wells (BF-4 and BF-5R) and alluvial wells (M-16 and M-20) are shown in Table 1. The quarterly groundwater elevations required under Paragraph 1 were also measured and are shown in Table 2. A potentiometric surface map, developed by Engineering Analytics, is shown in Figure 1. The groundwater table elevations and potentiometric map confirm that the groundwater flow gradient during the third quarter of 2022 was from the Rito Seco to the West Pit. No corrective action is required under Paragraph 1 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 1 – Weekly Groundwater Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)
BF-4	07/06/2022	8579.36
	07/13/2022	8579.30
	07/20/2022	8579.29
	07/27/2022	8579.28
	08/03/2022	8579.39
	08/10/2022	8579.30
	08/17/2022	8579.29
	08/24/2022	8579.31
	08/31/2022	8579.28
	09/07/2022	8579.32
	09/14/2022	8579.34
	09/21/2022	8579.32
	09/28/2022	8579.33
BF-5R	07/06/2022	8579.12
	07/13/2022	8579.10
	07/20/2022	8579.06
	07/27/2022	8579.04
	08/03/2022	8579.13
	08/10/2022	8579.09
	08/17/2022	8579.06
	08/24/2022	8579.11
	08/31/2022	8579.09
	09/07/2022	8579.07
	09/14/2022	8579.13
	09/21/2022	8579.08
	09/28/2022	8579.12

Table 1 – Weekly Groundwater Elevations (continued)

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)
M-16	07/06/2022	8601.65
	07/13/2022	8601.63
	07/20/2022	8601.56
	07/27/2022	8601.41
	08/03/2022	8601.67
	08/10/2022	8601.95
	08/17/2022	8602.13
	08/24/2022	8602.30
	08/31/2022	8601.41
	09/07/2022	8602.69
	09/14/2022	8602.86
	09/21/2022	8602.94
	09/28/2022	8603.02
M-20	07/06/2022	8580.67
	07/13/2022	8580.61
	07/20/2022	8580.54
	07/27/2022	8580.54
	08/03/2022	8580.81
	08/10/2022	8580.66
	08/17/2022	8580.52
	08/24/2022	8580.46
	08/31/2022	8580.54
	09/07/2022	8580.38
	09/14/2022	8580.42
	09/21/2022	8580.34
	09/28/2022	8580.53

Table 2 – Quarterly Groundwater Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)
BF-3	07/28/2022	8578.00
BF-4	07/28/2022	8579.28
BF-5R	07/28/2022	8579.05
BF-6	07/28/2022	8578.97
M-11R	07/28/2022	8550.83
M-16	07/28/2022	8601.41
M-17	07/28/2022	8586.79
M-18	07/28/2022	8581.31
M-19	07/28/2022	8581.63
M-20	07/28/2022	8580.54
M-21	07/28/2022	8577.48
M-22	07/28/2022	8572.87
M-23	07/28/2022	8556.06
M-24	07/28/2022	8559.58
M-25	07/28/2022	DRY
M-26	07/28/2022	8544.20
M-27	07/28/2022	DRY
M-28	07/28/2022	8580.85
M-29	07/28/2022	8581.38
M-30	07/28/2022	8610.00
M-31	07/28/2022	8550.46
M-32	07/28/2022	8533.56
M-33	07/28/2022	8534.73

2) The weekly groundwater table elevation data shall be tabulated and reported on the quarterly BMP reports, and the data will be used to evaluate compliance with the following permit limitations.

   The groundwater table elevation, based on the average of all measured values for each calendar month in the West Pit backfill groundwater monitoring wells BF-4 and BF-5, must be equal to or lower than an elevation of 8582 feet above sea level (ft. amsl).

Compliance Action Taken: *Battle Mountain Resources, Inc. measured the West Pit backfill monitoring wells (BF-4 and BF-5R) weekly and the measurements are shown in Table 1. The groundwater measurements for wells BF-4 and BF-5R were averaged by calendar month and the results are shown in Table 3. The July, August, September 2022 averages were below the 8582 ft. amsl required in Paragraph 2. No corrective action is required under the Paragraph 2 requirement and schedule compliance monitoring will continue unchanged next quarter.*

Table 3 – Quarterly West Pit Backfill Monthly Average Groundwater Table Elevations

Monitoring Well Identification	Month (2022)	Number of Observations	Average Monthly Groundwater Elevation (ft amsl)
BF-4	July	4	8579.31
	August	5	8579.31
	September	4	8579.33
BF-5R	July	4	8579.08
	August	5	8579.10
	September	4	8579.10

3) If the average monthly groundwater table elevation in the West Pit backfill for any calendar month, measured as described in the above paragraph, is greater than 8582 ft. amsl or the quarterly determination of the groundwater potentiometric surface map indicates that the flow of the groundwater is from the West Pit to the Rito Seco alluvium, the permittee shall verbally communicate such condition to WQCD within 24 hours of the determination of the condition (elevated West Pit backfill table or groundwater flow from the West Pit as indicated by the quarterly groundwater potentiometric surface map) and initiate the following compliance schedule.

Compliance Action Taken: *Battle Mountain Resources, Inc. measured the West Pit backfill monitoring wells (BF-4 and BF-5R) weekly and the calendar month average groundwater measurement elevations (Table 3) were below the 8582 ft. amsl required in Paragraph 2. The July 28, 2022, potentiometric surface map (Figure 1) shows the groundwater flow gradient was from the Rito Seco alluvium to the West Pit backfill. Therefore, site operations demonstrated the West Pit backfill groundwater level was maintained at or below an elevation of 8582 ft. amsl through the quarter. Therefore, no requirement(s) to initiate actions contained within the schedule of compliance for Section 5.3 is required.*

4) The quality of groundwater in the vicinity of the West Pit shall be monitored on a monthly basis in the Rito Seco alluvial groundwater monitoring wells M-19, M-21, M-24 and M-11R for the purposes of monitoring the changes in the quality of the plume or affected groundwater in the Rito Seco alluvial aquifer. Groundwater quality in these monitoring wells will be analyzed for pH, temperature, total dissolved solids, calcium, sulfate, manganese, fluoride, copper, and iron for the purpose of evaluating the status of the groundwater quality in the downgradient groundwater plume. The groundwater quality data will be summarized and transmitted to the WQCD in the quarterly BMP report required under Part I, Section E.1 of this permit.

Compliance Action Taken: *Battle Mountain Resources, Inc. collected monthly groundwater samples in the vicinity of the West Pit backfill area from Rito Seco alluvial monitoring wells M-19, M-21, M-24 and M-11R. No corrective action is required under the Paragraph 4 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 4 – Rito Seco Alluvial Groundwater Quality Summary

Analyte	Reporting Units	Sample Date	Monitoring Well Identifier			
			M-11R	M-19	M-21	M-24
pH	SU	07/05/2022	7.18	6.52	6.93	7.03
		08/01/2022	7.20	6.62	6.88	7.03
		09/01/2022	7.17	6.40	6.75	6.97
Temperature	°C	07/05/2022	10.3	8.50	9.1	8.8
		08/01/2022	10.6	10.8	10.3	8.9
		09/01/2022	9.7	11.1	8.3	8.5
Calcium, Total	mg/L	07/05/2022	72.2	17.5	31.1	84.1
		08/01/2022	77.9	19.3	32.4	86.7
		09/01/2022	76.9	17.6	31.5	80.6
Copper, Dissolved	mg/L	07/05/2022	LT 0.002	LT 0.002	LT 0.002	LT 0.002
		08/01/2022	LT 0.002	0.00617	0.00203	LT 0.002
		09/01/2022	LT 0.002	0.00226	LT 0.002	LT 0.002
Fluoride	mg/L	07/05/2022	LT 1.25	0.692	1.24	LT 1.25
		08/01/2022	0.867 H	0.826 H	1.36 H	0.796 H
		09/01/2022	LT 1.25	0.803	1.24	LT 1.25
Iron, Dissolved	mg/L	07/05/2022	LT 0.15	0.185	LT 0.15	4.47
		08/01/2022	LT 0.15	LT 0.15	LT 0.15	4.57
		09/01/2022	LT 0.15	0.727	LT 0.15	4.31
Manganese, Dissolved	mg/L	07/05/2022	0.128	0.082	0.353	0.898
		08/01/2022	0.121	0.055	0.373	0.930
		09/01/2022	0.119	0.197	0.362	0.878
Sulfate	mg/L	07/05/2022	90.7	11.6	10.8	146
		08/01/2022	96.7 H	11.4 H	9.91 H	145 H
		09/01/2022	99.5	5.78	9.01	138
Total Dissolved Solids	mg/L	07/05/2022	326	100	144	430
		08/01/2022	338	102	134	418
		09/01/2022	342	100	134	414

5) The historical seeps were caused by the plume of affected groundwater and may, in the future, also be caused by natural variation in the flow of groundwater in the vicinity of the area where the past seeps occurred. The permittee shall conduct a monthly visual inspection of the area of historical seeps and the permittee shall report any seepage flow that is associated with the area historic seepage expression, as is identified in Figure 2 of the permit. Results of the seep monitoring shall be tabulated and summarized in the quarterly BMP report.

   If these inspections identified the occurrence of seeps, the permittee will be required to communicate verbally to the WQCD within 24 hours of the seepage observation, followed by written notification within 7 calendar days of the seepage observation. Verbal updates will then be provided to the WQCD every second day thereafter until the WQCD has made a determination regarding the status of the West Pit groundwater control system through the implementation of the following compliance schedule.

Compliance Action Taken: *Battle Mountain Resources, Inc. performed monthly visual seepage expression inspections in the historic seepage area identified in Figure 2 of the permit. Visual observations during these inspections are shown in Table 5. No seepage expressions were observed in the historic seepage area during the third quarter of 2022. Therefore, no verbal or written notifications were required and the implementation of the compliance schedule was not required. No corrective action is required under the Paragraph 5 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 5 – Monthly Seepage Expression Inspection Tabulation

Visual Inspection Date	Was Visual Observation of Seepage Determined in the Area of the Historic Seepage Expression	Comments
07/28/2022	No	All Dry
08/31/2022	No	All Dry
09/29/2022	No	All Dry

6) The BMP for the groundwater flow downgradient from the groundwater divide (see section VI.A.2 for the Rationale) that has been developed in the Rito Seco alluvial aquifer consists of a groundwater capture system in conjunction with groundwater table elevation control in the West Pit. The water management plan for the Rito Seco alluvial aquifer consists of pumping two groundwater capture wells (M-32 and M-33) located downgradient of the plume of affected groundwater. This action will allow flushing of constituents in the groundwater of the Rito Seco alluvial aquifer in that portion (plume) of the aquifer affected by previous flow of groundwater from the West Pit. Measurements of the groundwater table elevations will be taken on a weekly basis from M-32 and M-33. This data shall be tabulated and reported for outfall 002 on the quarterly BMP report, and the data will be used to evaluate compliance with the following permit limitation.

   The groundwater table elevation, based on the average of all measured values for each calendar month at M-32 and M-33 in the Rito Seco alluvial aquifer, must be equal to or lower than an elevation of 8540 ft. amsl.

   If the average monthly groundwater table elevations measured in the Rito Seco alluvial aquifer at M-32 and M-33 is greater than 8540 ft. amsl, the permitee shall initiate the following compliance schedule within 24 hours of the determination of groundwater table elevation exceedance.

Compliance Action Taken: *Battle Mountain Resources, Inc. measured the alluvial aquifer monitoring wells (M-32 and M-33) weekly and the resulting elevations are presented in Table 6. The groundwater elevations for wells M-32 and M-33 were averaged by calendar month and the results are shown in Table 6. The July, August, September 2022 averages were below the 8540 ft. amsl required under Paragraph 6. Therefore, site operations were in full compliance of Part I, Section 5.5 and there were no requirements(s) to initiate actions contained within the schedule of compliance for Section 5.5. No corrective action is required under Paragraph 6 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 6 – Weekly/Monthly Rito Seco Alluvial Aquifer Average Groundwater Table Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)	Month (2022)	Average Monthly Groundwater Elevation (ft amsl)
M-32	07/06/2022	8533.67	July	8533.49
	07/13/2022	8533.55		
	07/20/2022	8533.38		
	07/27/2022	8533.30		
	07/28/2022	8533.56		
	08/03/2022	8533.25	August	8531.79
	08/10/2022	8532.33		
	08/17/2022	8531.15		
	08/24/2022	8531.09		
	08/31/2022	8531.46		

Table 6 (Cont) – Weekly/Monthly Rito Seco Alluvial Aquifer Average Groundwater Table Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)	Month (2022)	Average Monthly Groundwater Elevation (ft amsl)
M-32	09/07/2022	8531.63	September	8531.48
	09/14/2022	8531.59		
	09/21/2022	8531.46		
	09/28/2022	8531.38		
	09/29/2022	8531.34		
M-33	07/06/2022	8535.23	July	8534.97
	07/13/2022	8535.44		
	07/20/2022	8534.80		
	07/27/2022	8534.67		
	07/28/2022	8534.73		
	08/03/2022	8534.77	August	8535.53
	08/10/2022	8534.91		
	08/17/2022	8535.23		
	08/24/2022	8535.27		
	08/31/2022	8536.51		
	09/07/2022	8536.49	September	8536.74
	09/14/2022	8536.74		
	09/21/2022	8536.80		
	09/28/2022	8536.85		
	09/29/2022	8536.83		

7) The water quality of the Rito Seco will be assessed using surface water quality collected at RS-2, as shown in Figure 3. Surface water monitoring in the Rito Seco shall be conducted at RS-2 on a monthly basis and the laboratory analytical results shall be submitted to the WQCD in the quarterly BMP report. Water quality samples collected at RS-2 shall be analyzed for the following constituents: calcium, magnesium, sodium, potassium, ammonia, total dissolved solids, total hardness, pH, total suspended solids, cyanide (WAD and total), bicarbonate, alkalinity, chloride, sulfate, nitrate-nitrite, fluoride and the total and dissolved concentrations of aluminum, arsenic, barium, boron, cadmium, copper, chromium, iron, lead, manganese, mercury, nickel, selenium, silica, silver and zinc. The following compliance schedule shall be implemented in the event that any constituent exceeds the applicable water quality standards for the Rito Seco.

Compliance Action Taken: *Battle Mountain Resources, Inc. collected monthly surface water samples in July, August, September 2022 at location RS-2, as shown in Figure 3 of the permit. Results of analyses performed on these samples are shown in Table 7. The results of the laboratory analytical testing show that the applicable water quality standards were met for the Rito Seco during the months of July, August, September 2022. Site operations were in full compliance of Part I, Section 5.7 and there was no requirement(s) to initiate actions contained within the schedule of compliance for Section 5.7. Scheduled compliance monitoring will continue unchanged next quarter.*

Table 7 – RS-2 Surface Water Quality Results

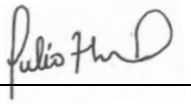
Analyte	Reporting Units	07/05/2022	08/01/2022	09/01/2022
Alkalinity	mg/L as $CaCO_3$	85.0	55.4	47.8
Aluminum, Dissolved	mg/L	LT 0.25	LT 0.25	LT 0.25
Aluminum, Total	mg/L	0.727	0.421	0.371
Ammonia as N	mg/L	LT 0.2	LT 0.2	LT 0.2
Arsenic, Dissolved	mg/L	LT 0.001	LT 0.001	LT 0.001
Arsenic, Total	mg/L	LT 0.001	LT 0.001	LT 0.001
Barium, Dissolved	mg/L	LT 0.035	LT 0.035	LT 0.035
Barium, Total	mg/L	0.0384	LT 0.035	LT 0.035
Bicarbonate as CaCO3	mg/L	85.0	55.4	47.8
Boron, Dissolved	mg/L	LT 0.1	LT 0.1	LT 0.1
Boron, Total	mg/L	LT 0.1	LT 0.1	LT 0.1
Cadmium, Dissolved	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Cadmium, Total	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Calcium, Total	mg/L	17.5	15.7	13.9
Carbonate as CaCO3	mg/L	LT 20	LT 20	LT 20
Chloride	mg/L	LT 2.0	LT 2.0	LT 2.0
Chromium, Dissolved	mg/L	LT 0.002	LT 0.002	LT 0.002
Chromium, Total	mg/L	LT 0.002	LT 0.002	LT 0.002
Copper, Dissolved	mg/L	LT 0.002	0.0104	LT 0.002
Copper, Total	mg/L	LT 0.002	LT 0.002	LT 0.002
Cyanide, Total	mg/L	LT 0.01	LT 0.01	LT 0.01
Cyanide, WAD	mg/L	LT 0.01H	LT 0.01	LT 0.01
Fluoride	mg/L	0.47	0.35	0.41
Hardness as CaCO3	mg/L	59	52	48
Iron, Dissolved	mg/L	0.411	0.239	0.216
Iron, Total	mg/L	1.41	0.803	0.673
Lead, Dissolved	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Lead, Total	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Magnesium, Total	mg/L	4.17	3.70	3.56
Manganese, Dissolved	mg/L	LT 0.05	LT 0.05	LT 0.05
Manganese, Total	mg/L	0.175	0.055	LT 0.05
Mercury, Dissolved	mg/L	LT 0.001	LT 0.001	LT 0.001
Mercury, Total	mg/L	LT 0.001	LT 0.001	LT 0.001
Nickel, Dissolved	mg/L	LT 0.04	LT 0.04	LT 0.04
Nickel, Total	mg/L	LT 0.04	LT 0.04	LT 0.04
Nitrate+Nitrite as N	mg/L	LT 0.1	LT 0.1	LT 0.1
pH	SU	7.35	7.25	6.98
Potassium, Total	mg/L	LT 1.0	LT 1.0	LT 1.0
Selenium, Dissolved	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Selenium, Total	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Silica, Total	mg/L	14.2	13.0	10.0
Silver, Dissolved	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Silver, Total	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Sodium, Total	mg/L	4.13	3.55	3.78
Sulfate	mg/L	3.39	2.32H	3.08
Total Dissolved Solids	mg/L	92	94	76
Total Suspended Solids	mg/L	23H	LT 20	LT 20
Zinc, Dissolved	mg/L	LT 0.05	LT 0.05	LT 0.05
Zinc, Total	mg/L	LT 0.05	LT 0.05	LT 0.05

8) If any component of the groundwater control system is not performing within the limits set forth in this permit, the permittee will be required to initiate appropriate compliance schedule activities, including the preparation of a response plan, for any and all components of the groundwater control system that do not meet the applicable

requirements. The permittee shall also conduct weekly sampling at RS-2 until such time as the other compliance schedule activity(ies) have been completed.

Compliance Action Taken: *As demonstrated by the information and data presented in this report, all components of the groundwater control system performed within the limits set forth in the permit. Therefore, site operations were in full compliance of Part I, Section 8 and there was no requirement(s) to initiate actions contained within the schedule of compliance for Section 8.*

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is to the best of my knowledge and belief, is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Julio Madrid Signature: 

Date: October 26, 2022

APPROXIMATE SATURATED ALLUVIUM BOUNDARY

M-33 8535.63

M-31 8550.46

M-27 DRY

BF-6 8578.97

M-25 DRY

M-11R 8550.83

M-23 8556.06

BF-3 8578.00

BF-4 8579.28

WATER TREATMENT FACILITY AND PARKING AREA

BF-5R 8579.05

APPROXIMATE SATURATED ALLUVIUM BOUNDARY

8540

8550

M-26 8544.20

M-32 8538.06

8560

M-24 8559.58

8570

M-22 8572.87

M-21 8577.48

M-20 8580.54

M-19 8581.63

M-18 8581.31

8580

M-28 8580.85

M-29 8581.38

8580

8590

M-30 8610.00

8600

8610

M-17 8586.79

M-16 8601.41

KEY

NORTH

SCALE IN FEET

0 200

GROUND WATER FLOW DIRECTION

LINE OF EQUIPOTENTIAL HYDRAULIC HEAD

8560

M-23 8555.72

WELL NAME

WATER LEVEL

NO	REVISION DESCR.	DATE	BY
A			
B			
C			
1			
2			

ALLUVIAL GROUND WATER POTENTIOMETRIC SURFACE MAP

THIRD QUARTER (JULY 2022)

SAN LUIS PROJECT

Engineering Analytics, Inc.

ISSUED BY

Drawn By:	RDP
Designed By:	AF
Approved By:	AF
Date	10/16/2022
Project:	21010506
Scale:	1" = 200'
Sheet Number:	1

O:_05 San Luis\POTENTIOMETRIC MAPS\GW Map 2022 3rd qtr\Groundwater 2022 3rd Qtr.dwg SAVED:10/16/22 PRINTED:10/16/22

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

September 1, 2022

Julio Madrid
Battle Mountain Resources, Inc.
P.O. Box 310
San Luis, CO 81152

Dear Julio:

Enclosed is the report for chronic biomonitoring tests performed for Battle Mountain Resources, Inc. on effluent from the 001B outfall. There was no statistically significant toxicity to either test species at any effluent concentration. The effluent passes WET (Whole Effluent Toxicity) testing requirements for this sampling period.

If you have any questions or concerns, please do not hesitate to contact me at (303) 661-9324.

Best regards,

Julie McKenney
Aquatic Toxicologist II
Enclosure(s): Invoice
Report

REPORT OF CHRONIC BIOMONITORING TESTS CONDUCTED FOR BATTLE MOUNTAIN RESOURCES, INC. ON EFFLUENT FROM THE 001B OUTFALL

Prepared for:

Julio Madrid
Battle Mountain Resources, Inc.
P.O. box 310
San Luis, CO 81152

Prepared by:

Julie McKenney
SeaCrest Group
500 S Arthur Ave. Suite 450
Louisville, Colorado 80027-3065
(303) 661-9324

September 1, 2022

TABLE OF CONTENTS

LIST OF TABLES

Chronic Toxicity Test Summary

Test:	7-day static renewal using *Ceriodaphnia dubia* 7-day static renewal using fathead minnow *(Pimephales promelas)*
Client:	Battle Mountain Resources, Inc.
Test Procedure Followed:	*Ceriodaphnia dubia*: EPA/821/R-02-013. Method 1002.0 (2002) fathead minnow: EPA/821/R-02-013. Method 1000.0 (2002)
Sample Number:	422426.B
Dilution Water:	moderately hard laboratory reconstituted water
Test Organism Source:	SeaCrest Group
Reference Toxicant:	Sodium Chloride

Sample	Time of Collection	Date of Collection	Time of Receipt	Date of Receipt
Effluent 1	0600	08-22-2022	1100	08-22-2022
Effluent 2	0600	08-24-2022	1200	08-24-2022
Effluent 3	0600	08-26-2022	0945	08-26-2022

	Ceriodaphnia dubia	fathead minnow
Test Initiation Time	1230	1530
Test Initiation Date	08-22-2022	08-22-2022
Test Completion Time	1230	1430
Test Completion Date	08-28-2022	08-29-2022

Abstract with Results

Test Concentrations:	Control (0%), 13%, 26%, 52%, 76%, 100%
Number of Organisms/Concentration:	10 for *Ceriodaphnia dubia* 40 for fathead minnow
Replicates at each Concentration:	10 for *Ceriodaphnia dubia* 4 for fathead minnow

	Ceriodaphnia dubia	**fathead minnow**
Test vessel size/Exposure volume	30ml/15ml	500ml/200ml
Sub-lethal NOEL/IC25	100%/>100%	100%/>100%
Pass/Fail Status	**PASS**	**PASS**
Temperature Range (°C)	24.1 – 25.9	24.1 – 25.9
Dissolved Oxygen Range (mg/L)	6.6 – 8.2	4.7 – 7.8
pH Range	7.5 – 8.3	7.1 – 8.3

	Control (*Cerio*/FHM)	**Effluent Sample**
Hardness (mg/L as $CaCO_3$)	91/87	58/40/42
Alkalinity (mg/L as $CaCO_3$)	61/60	16/12/13
Total residual chlorine (mg/L)	<0.01	<0.01
Total ammonia (mg/L as NH_3)	<0.03	<0.03/<0.03/0.04

INTRODUCTION

Biomonitoring provides an effective means by which the toxicity of discharges from municipal, industrial, and mining operations can be tested. Among the advantages of biomonitoring is the ability to test complex effluents containing a broad range of contaminants. Biomonitoring, when used in conjunction with chemical analyses, can generate data capable of identifying a much wider range of contaminants.

The Colorado Water Quality Control Division requires certain NPDES permittees to perform acute and/or chronic biomonitoring tests. The chronic test measures significant differences in lethality and in reproduction (*Ceriodaphnia dubia*) or growth (fathead minnow – *Pimephales promelas*) between control and effluent-exposed organisms.

The present report discusses the results of chronic biomonitoring tests conducted on effluent from the Battle Mountain Resources, Inc. 001B discharge. These tests were conducted in accordance with EPA and State of Colorado procedures in August 2022.

MATERIALS AND METHODS

Sample Collection

Two gallons of the effluent were collected on three separate dates as specified in Permit CO-0045675. Samples were delivered chilled to the SeaCrest lab where they were held at 0-6°C. Chain of custody forms showing sample collection and laboratory arrival times are included (Appendix 1).

Dilution Water

Laboratory reconstituted water was used as both the dilution water source and the control for the tests. Reconstituted water for the *Ceriodaphnia dubia* test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, potassium chloride, and sodium selenate to deionized water. Reconstituted water for the fathead minnow test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, and potassium chloride to deionized water.

Test Organisms

The biomonitoring test used *Ceriodaphnia dubia,* cultured in the SeaCrest laboratory. The organisms are cultured in brood culture boards from which individual females are monitored for survival and reproduction for periods of up to two weeks. Neonates less than 24-hours old, released from third or subsequent broods of eight or more within an 8-hour period, are collected from the brood chambers and used in tests. The animals are fed daily with a mixture of Yeast, Cereal Leaves, and Trout Chow (YCT), produced in-house. This is supplemented with cultured green algae *(Selenastrum capricornutum)* provided by Aquatic Biosystems.

Less than one-day-old fathead minnow, cultured in the laboratory, were also used in the test. Adult fish are maintained in 10-gallon aquaria where females deposit their eggs on the under-surface of split PVC pipe sections. The eggs are collected daily and transferred to aerated containers where they hatch after three to four days. The larval fish are fed newly hatched brine shrimp *(Artemia* sp.) at least twice per day.

In-house organisms are tested monthly in a reference toxicant test using sodium chloride to monitor overall health and test reproducibility (Appendix 4).

Test Procedures

Upon receipt at the lab, samples were analyzed for alkalinity, ammonia, chlorine, conductivity, dissolved oxygen, hardness, and pH.

Methods used in chemical analysis

Alkalinity	EPA 310.2	Hach 8203	I-2030-85.2
Ammonia	SM4500-NH_3, C-E1997	ASTM D1426-08	
Chlorine	SM4500-Cl D	Hach 10026	
Conductivity	SM2510		
Dissolved Oxygen	SM4500-O	Electrode: G-2001	Winkler (QC): B-F-2001
Hardness	SM2340 B or C	Hach 8213	
pH	SM4500-H+ B-2000		

The test followed procedures in EPA[3] and CDPHE[4] guidelines. Exposure concentrations included control (0%), 13%, 26%, 52%, 76%, and 100% mixtures, diluted with moderately hard laboratory reconstituted water.

Individual *Ceriodaphnia dubia* were placed in 30ml plastic containers containing approximately 15ml of exposure medium. Ten replicates at each concentration were used. The animals were fed daily with the YCT mixture and an equal volume of the green algae *(Selenastrum capricornutum)*. The exposure medium was changed daily in each container and the number of young released overnight were counted and recorded. Young were removed from the containers daily and discarded. Routine measurements were made each day of temperature, dissolved oxygen, and pH before and after the water changes.

Fathead minnow were exposed in 500ml plastic cups to which 250ml of media was replaced daily. Four replicates were used at each concentration. Ten fish, less than 24-hours old, were placed in each cup. The fish were monitored daily for survival and fed live brine shrimp at least twice per day. After seven days, the fish were removed from the cups, euthanized with isopropyl alcohol, and then placed in aluminum pans and dried in an oven for a minimum of six hours at 100°C. The pans were then weighed on a five-place analytical balance to determine the average dry weight of the fish from each replicate.

Data Analysis

Data from the tests were analyzed on a personal computer using the CETIS program (developed by Tidepool Scientific Software). Statistical tests used in the analyses are shown in Table 1. Test acceptability was determined using control survival and reproduction/growth criteria, concentration-response relationships, and percent minimum significant differences (USEPA [5,6]).

Table 1. Statistical methods used in testing for significant differences in test parameters.

Variance	Distribution
Bartlett Equality of Variance Test	Shapiro-Wilk W Normality Test

Statistical Difference				
Species	Survival	Growth	Reproduction	IC_{25}
Ceriodaphnia dubia	Fisher Exact/Bonferroni-Holm Test	N/A	Steel Many-One Rank Sum Test	ICp
fathead minnow	Steel Many-One Rank Sum Test	Dunnett Multiple Comparison Test	N/A	ICp

RESULTS

Ceriodaphnia dubia Test Results

Test results for the *Ceriodaphnia dubia* are summarized in Table 2 and provided on the data sheets located in Appendix 2. Survival was 100% in the 100% effluent and ranged from 90% - 100% in the remaining effluent concentrations. Control survival was 90%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL (No Observed Effect Level) for lethality was 100% and the LC_{25} (Lethal Concentration 25) for lethality was >100%.

Average number of neonates was 29.8 in the 100% effluent concentration and ranged from 25.6 – 28.3 in the remaining effluent concentrations. Average number of neonates in the control was 25.2 for statistical analyses and test acceptability criteria. No statistically significant differences in the number of neonates were found between the control and any effluent concentration. The NOEL for reproduction was 100% and the IC_{25} (Inhibition Concentration 25) for reproduction was >100%.

Table 2. Summary of *Ceriodaphnia dubia* test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Mean Neonates	Min.	Max.	Significant Difference	
					Lethality	Reprod.
Control (0%)	90	25.2	6	37		
13%	90	25.6	0	39		
26%	100	26.6	13	38		
52%	100	28.3	14	36		
76%	100	26.6	13	35		
100%	100	29.8	23	33		

Fathead Minnow Test Results

Fathead minnow results are summarized in Table 3 and are provided on data sheets in Appendix 3. Survival was 95% in the 100% effluent concentration and ranged from 98% - 100% in the remaining effluent concentrations. Control survival was 100%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL for lethality was 100% and the LC_{25} for lethality was >100%.

Average weight in the 100% effluent concentration was 0.298mg and ranged from 0.314mg - 0.372mg per individual in the remaining effluent concentrations. Average weight for the control fish was 0.343mg for statistical analyses and test acceptability criteria. No statistically significant differences for growth were measured in any effluent concentration when compared to the control. The NOEL for growth was 100% and the IC_{25} for growth was >100%.

Table 3. Summary of fathead minnow test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Average Weight (mg)	Min.	Max.	Significant Difference	
					Lethality	Growth
Control (0%)	100	0.343	0.295	0.375		
13%	100	0.372	0.323	0.424		
26%	98	0.314	0.304	0.339		
52%	100	0.344	0.331	0.364		
76%	98	0.341	0.315	0.376		
100%	95	0.298	0.272	0.329		

Test Acceptability

Acceptable control survival (80%) was achieved in both tests. Similarly, *Ceriodaphnia dubia* reproduction (average 15 neonates/organism) and fathead minnow growth (average 0.250mg/test container) in control organisms met required levels. PMSD was within the required limits for an acceptable test (Table 4).

Table 4. PMSD for chronic test parameters.

	fathead minnow growth		*C. dubia* reproduction	
	Lower bound	Upper bound	Lower bound	Upper bound
PMSD	12	30	13	47
(% Minimum significant difference)	14.4		32.6	

DISCUSSION

A failed test for this discharge occurs when there is an NOEL or IC_{25} less than the IWC (Instream Waste Concentration) of 52%. The NOEL represents the highest effluent concentration at which no statistically significant effect is observed. The IC_{25} represents an estimate of the effluent concentration that would cause a 25 percent reduction of a non-quantal biological measurement. A violation for this discharge occurs when both the NOEL and the IC_{25} are less than the IWC. Since neither test species demonstrated statistically significant differences meeting these criteria, the discharge passes WET testing requirements for this sampling period.

REFERENCES

1. **Hach Chemical Company.** 2008. *Hach's Water Analysis Handbook.* Fifth Edition. Hach Chemical Company, Loveland, Colorado. Digital Medium.
2. **APHA/AWWA/WEF.** 1998. *Standard Methods for the Examination of Water and Wastewater.* 20th Edition. American Public Health Association, Washington, D.C.
3. **USEPA.** 2002. *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms.* EPA-821-R-02-013. 335 pp.
4. **CDPHE (Colorado Department of Public Health and Environment).** 1998. *Laboratory Guidelines for Conducting Whole Effluent Toxicity Tests.* Water Quality Control Division.
5. **USEPA.** 2000. *Method of Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 CFR Part 136). EPA/821/B-00/004.
6. **USEPA**. 2000. *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications under the National Pollutant Discharge Elimination System Program.* EPA/833/R-00/003.

Appendix 1 – Chain of Custody with Sample Receipt Forms

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: BMRI

P. O./Project Number: San Luis

Contact: Julio Madrid

Address: P.O. BOX 310 San Luis, CO 81152

Phone # 719-379-0827 E-Mail: DavidCarino@Newmont.com

Fax # N/A Sampler: David S. Cariño

Report By: [X] Mail [ ] PDF [ ] FAX

Analysis (Check all applicable)

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)				Number of Containers	Total Volume
W.E.T Test	8/22/22	0600	Comp	422426.B#1		X															2	2gal

Turnaround Requirements (Analytical Testing Only)

_____ Standard (10 days) _____ 6-9 Day

_____ 3-5 Day _____ 1-2 Day

Requested Report Date:

Test Species: [X] Fathead Minnow [X] Cerio daphnia [ ] Daphnia magna [ ] Daphnia pulex [ ] Other (List Below)

Special Instructions/Comments:

outfall - 001B

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature: David S Cariño	Date/Time: 8/22/22 0600	Signature:	Date/Time: 8/22/22 1100	Signature	Date/Time	Signature	Date/Time

Battle Mountain Gold Mine NPDES WET Test Log

Treatment System Flow Rate 540 GPM
ISCO Sampling Schedule 100 ml per 10 minutes
Start Sample Program: Time 0600
End Sample Program: Time 0600 Date 8/22/22 Circle One: (M) W F

Sampling Personnel: A. Taylor, S. maestas, R. Lucero, D. Cariño

~3 Hour Time 0900 Observation good water flow, power on to Sampler, sample container on ice

~6 Hour Time 1200 Observation good water flow, power on to Sampler, sample container on ice

~9 Hour Time 1500 Observation good water flow, power on to Sampler, sample container on ice

~12 Hour Time 1800 Observation good water flow, power on to Sampler, sample container on ice

~15 Hour Time 2100 Observation good water flow, power on to Sampler, Sample Container on ice

~18 Hour Time 2400 Observation good water flow, power on to Sampler, Sample Container on ice

~21 Hour Time 0300 Observation good water flow, power on to Sampler, Sample Container on ice

~24 Hour Time 0600 Observation good water flow, power on to Sampler, Sample Container on ice

Total Volume Collected 4 gallons Volume sent to lab 2 gallons

Samples packed on ice [X]
Completed COC [X]
Cooler Sealed [X]
~~UPS pick up on time~~ [ ]

BMRT Delivered ☒

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2022

Project # 422 426.B Sample #: 1
Date: 082222 Initials: SW

Samples Were:

1. FedEx UPS Courier (Hand Delivery) (circle one)
   Notes:

2. Chilled to Ship Ambient (Chilled)

3. Cooler Received Broken or Leaking Y (N) NA
   Notes:

4. Sample Received Broken or Leaking Y (N)
   Notes:

5. Received Within 36hr Holding Time (Y) N
   Notes:

6. Aeration necessary Y (N)

7. pH adjustment necessary Y (N)

8. Sample Received at Temperature between 0-6° C . Y N (NA)
   Notes: same day

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: clear, no visable pm
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
426.B	12.5	7.0	7.9	233

Custody Seals:

1. Present on Outer Package (Y) N
2. Unbroken on Outer Package (Y) N NA
3. Present on Sample Y (N)
4. Unbroken on Sample Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample (Y) N

TM

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: BMRI
P. O./Project Number: San Luis
Contact: Julio Madrid
Address: P.O. BOX 310 San Luis, CO 81152
Phone #719-379-0827 E-Mail: David.Carino@Navorit.com
Fax # N/A Sampler: David S Cariño
Report By: [X] Mail [ ] PDF [ ] FAX

Analysis (Check all applicable)

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)				Number of Containers	Total Volume
W.E.T. Test	8/24/22	0600	Comp	422426-B #2		X															2	2gal

Turnaround Requirements (Analytical Testing Only)

_____ Standard (10 days) _____ 6-9 Day
_____ 3-5 Day _____ 1-2 Day
Requested Report Date:

Test Species: [X] Fathead Minnow [X] Cerio daphnia [ ] Daphnia magna [ ] Daphnia pulex [ ] Other (List Below)

Special Instructions/Comments:

outfall - 001B

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
David S Cariño	8/24/22 0600	Courier		Courier			082422 1200

Battle Mountain Gold Mine NPDES WET Test Log

Treatment System Flow Rate 550 GPM
ISCO Sampling Schedule 100 ml per 10 minutes
Start Sample Program: Time 0600
End Sample Program: Time 0600 Date 8-24-22 Circle One: M (W) F

Sampling Personnel: R. Lucero, D. Carino, A. Taylor, S. Maesta

~3 Hour Time 0900 Observation good Water flow, power on to Sampler, Sample Container on ice

~6 Hour Time 1200 Observation good Water flow, power on to Sampler, Sample Container on ice

~9 Hour Time 1500 Observation good Water flow, power on to Sampler, Sample Container on ice

~12 Hour Time 1800 Observation good water flow, power on to Sampler, Sample Container on ice

~15 Hour Time 2100 Observation good water flow, power on to Sampler, Sample Container on ice

~18 Hour Time 2400 Observation good water flow, power on to Sampler, Sample Container on ice

~21 Hour Time 0300 Observation good water flow, Power on to Sampler, Sample Container on ice

~24 Hour Time 0600 Observation good water flow, Power on to Sampler, Sample Container on ice

Total Volume Collected 4 gallons
Volume sent to lab 2 gallons
Samples packed on ice [X]
Completed COC [X]
Cooler Sealed [X]
~~UPS pick up on time [ ]~~
BMRI Delivered [X]

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2022

Project # 422426-B Sample #: 2
Date: 082422 Initials: JM

Samples Were:

1. FedEx UPS (Courier) Hand Delivery (circle one)
   Notes:

2. Chilled to Ship Ambient (Chilled)

3. Cooler Received Broken or Leaking Y (N) NA
   Notes:

4. Sample Received Broken or Leaking Y (N)
   Notes:

5. Received Within 36hr Holding Time (Y) N
   Notes:

6. Aeration necessary Y (N)

7. pH adjustment necessary Y (N)

8. Sample Received at Temperature between 0-6° C . Y N (NA)
   Notes: same day sample

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: clear no visible PM
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
422426-B#2	6.1	7.5	8.0	248

Custody Seals:

1. Present on Outer Package (Y) N
2. Unbroken on Outer Package (Y) N NA
3. Present on Sample Y (N)
4. Unbroken on Sample Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample (Y) N

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: BMRI
P. O./Project Number: San Luis
Contact: Julio Madrid
Address: P.O. BOX 310 San Luis, CO 81152
Phone # 719-379-0827 E-Mail: DavidSariño@Newmont.com
Fax # N/A Sampler: David S Cariño
Report By: [X] Mail [ ] PDF [ ] FAX

Analysis (Check all applicable)

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)				Number of Containers	Total Volume
W.E.T. Test	8/26/22	0600	Comp	422426.B #3		X															2	2gal

Turnaround Requirements (Analytical Testing Only)

_____ Standard (10 days) _____ 6-9 Day
_____ 3-5 Day _____ 1-2 Day
Requested Report Date:

Test Species: [X] Fathead Minnow [X] Cerio daphnia [ ] Daphnia magna [ ] Daphnia pulex [ ] Other (List Below)

Special Instructions/Comments:

outfall - 001B

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
David S Cariño	8/26/22 0600		8/26/22 0945				

Battle Mountain Gold Mine NPDES WET Test Log

Treatment System Flow Rate 550 GPM
ISCO Sampling Schedule 100 ml per 10 minutes
Start Sample Program: Time 0600
End Sample Program: Time 0600 Date 8/26/22 Circle One: M W (F)

Sampling Personnel: A. Taylor, R. Lucero, D. Carino, S. Maestas

~3 Hour Time 0900 Observation good water flow, Power on to Sampler, Sample Container on ice

~6 Hour Time 1200 Observation good water flow, Power on to Sampler, Sample Container on ice

~9 Hour Time 1500 Observation good water flow, Power on to Sampler, Sample Container on ice

~12 Hour Time 1800 Observation good water flow, Power on to Sampler, Sample Container on ice

~15 Hour Time 2100 Observation good water flow, Power on to Sampler, Sample container on ice

~18 Hour Time 2400 Observation good water flow, Power on to Sampler, Sample Container on ice

~21 Hour Time 0300 Observation good water flow, Power on to Sampler, Sample Container on ice

~24 Hour Time 0600 Observation good water flow, Power on to Sampler, Sample Container on ice

Total Volume Collected 4 gallons
Samples packed on ice [✓]
Completed COC [✓]
Cooler Sealed [✓]
~~UPS pick up on time [ ]~~
BMRI Delivered Samples

Volume sent to lab 2 gallons
Contacts Lab: 303-794-8976(Henry Latimer)

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2022

Project # 422 426.B Sample #: 3
Date: 082622 Initials: CM

Samples Were:

1. FedEx UPS Courier (Hand Delivery) (circle one)
   Notes:

2. Chilled to Ship Ambient (Chilled)

3. Cooler Received Broken or Leaking Y (N) NA
   Notes:

4. Sample Received Broken or Leaking Y (N)
   Notes:

5. Received Within 36hr Holding Time (Y) N
   Notes:

6. Aeration necessary Y (N)

7. pH adjustment necessary Y (N)

8. Sample Received at Temperature between 0-6° C . Y N (NA)
   Notes: Same day delivery.

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: No visible PM
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
422426.B3	12.9	7.5	8.0	250

Custody Seals:

1. Present on Outer Package (Y) N
2. Unbroken on Outer Package Y (N) NA
3. Present on Sample Y (N)
4. Unbroken on Sample Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample (Y) N

Appendix 2 – Data Sheets for the *Ceriodaphnia dubia* Test

WET TEST REPORT FORM – CHRONIC

Permittee: Battle Mountain Resources, Inc.

Permit No.: CO-0045675

Outfall: 001B – IWC: 52%

Test Type: Routine ☒ Accelerated ☐ Screen ☐

Test Species: *Ceriodaphnia dubia*

Test Start Time	Test Start Date	Test End Time	Test End Date
1230	08-22-2022	1230	08-28-2022

Test Results	Lethality/TCP3B	Reproduction/TKP3B
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	13%	26%	52%	76%	100%
Exposed organisms	10	10	10	10	10	10
Survival for day 1	10	10	10	10	10	10
Survival for day 2	10	10	10	10	10	10
Survival for day 3	10	10	10	10	10	10
Survival for day 4	9	9	10	10	10	10
Survival for day 5	9	9	10	10	10	10
Survival for day 6	9	9	10	10	10	10
Mean 3 Brood Total	25.2	25.6	26.6	28.3	26.6	29.8

Hardness (mg/L) – Receiving Water: N/A Effluent: 58/40/42 Recon Water: 91
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 16/12/13 Recon Water: 61
Chlorine (mg/L) – Effluent: <0.01 pH (initial/final) – Control: 8.3/7.9 100%: 7.9/7.8
Total Ammonia as NH_3 (mg/L) - Effluent: <0.03/<0.03/0.04

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Lindsay Rutherford, Daniela Thornton, and Julie McKenney

Signature _____ *Date* 09/02/2022

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: March 2022

Permittee: BMRI Lab #: 422426.B Site: 001B

IWC %: 52 Template #: 5 Dilution Water: MH22-17 Sample Date: 082222

Age & Source: 082222 1123 Test Start: 082222 1230 Test End: 082822 1230

Test Conditions:

	0	1	2	3	4	5	6	7	Total
(C)	0	0	0	0	5	8	12		25
	0	0	0	0	8	13	16		37
	0	0	0	0	5	10	11		26
	0	0	0	0	6 D				6 D
	0	0	0	0	7	12	17		36
0	0	0	0	4	0	10	18		32
	0	0	0	0	5	7	10		22
	0	0	0	5	0	10	11		26
	0	0	0	0	6	11	12		29
	0	0	0	0	7	6	0		13
DO	7.0	6.7 | 6.9	7.0 | 7.0	6.9 | 7.0	6.7 | 7.2	6.8 | 6.9	7.1		
Temp	25.9	25.2 | 25.9	25.1 | 25.1	25.3 | 25.0	25.0 | 25.2	25.3 | 24.8	24.9		25.2
pH	8.3	8.1 | 8.2	8.1 | 8.3	8.1 | 8.3	8.1 | 8.3	8.0 | 8.3	7.9		
Cond	309	310	355	345	313	329			
(1)	0	0	0	0	6	9	15		30
	0	0	0	0	0 D				0 D
	0	0	0	0	6	12	17		35
	0	0	0	0	5	12	15		32
	0	0	0	0	7	14	18		39
13	0	0	0	0	5	9	10		24
	0	0	0	0	4	7	12		23
	0	0	0	0	6	12	16		34
	0	0	0	0	5	7	14		26
	0	0	0	0	5	7 +1	0		13
DO	7.0	6.7 | 6.9	7.0 | 7.0	6.9 | 7.1	6.7 | 7.4	6.8 | 7.0	7.1		
Temp	25.9	25.2 | 25.9	25.1 | 25.0	25.3 | 24.9	25.0 | 25.2	25.3 | 25.0	24.9		25.6
pH	8.3	8.1 | 8.2	8.0 | 8.3	8.0 | 8.3	8.1 | 8.2	7.9 | 8.3	7.9		
Cond	300	302	339	310	305	318			
(2)	0	0	0	0	6	12	14		32
	0	0	0	0	5	11	18		34
	0	0	0	0	5	8	0		13
	0	0	0	0	5	6	10		21
	0	0	0	0	5	12	21		38
26	0	0	0	0	6	10	10		26
	0	0	0	0	6	9	10		25
	0	0	0	0	5	9	15		29
	0	0	0	0	0	10	17		27
	0	0	0	0	5	9	7		21
DO	7.0	6.7 | 6.9	7.0 | 7.0	6.9 | 7.2	6.7 | 7.6	6.8 | 7.1	7.1		
Temp	25.9	25.2 | 25.9	25.1 | 24.9	25.3 | 24.7	25.0 | 25.2	25.3 | 25.1	24.9		26.6
pH	8.2	8.0 | 8.1	7.9 | 8.2	7.9 | 8.2	8.0 | 8.2	7.8 | 8.3	7.9		
Cond	290	292	327	290	295	310			
(3)	0	0	0	0	7	10	15		32
	0	0	0	0	6	12	16		34
	0	0	0	0	7	10	19		36
	0	0	0	0	5	8	12		25
52	0	0	0	0	5	11	20		36
	0	0	0	6	0	8	16		30
	0	0	0	0	5	8	10		23
	0	0	0	0	6	8	12		26
	0	0	0	0	0	9	18		27
	0	0	0	0	5	9	0		14
DO	7.0	6.7 | 6.9	7.0 | 7.1	6.9 | 7.3	6.6 | 7.8	6.8 | 7.2	7.1		
Temp	25.9	25.2 | 25.9	25.1 | 24.7	25.3 | 24.5	25.0 | 23.1	25.3 | 25.4	24.9		28.3
pH	8.1	7.9 | 8.0	7.8 | 8.1	7.8 | 8.2	8.0 | 8.2	7.7 | 8.1	7.8		
Cond	270	274	304	280	280	291			

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: March 2022

	0	1	2	3	4	5	6	7	Total
(4)	0	0	0	0	5	9	12		26
	0	0	0	0	5	9	20		34
	0	0	0	0	6	11	15		32
	0	0	0	0	3	8	8		19
	0	0	0	0	6	13	16		35
76	0	0	0	4	0	9	13		26
	0	0	0	0	7	9	12		28
	0	0	0	3	0	11	16		30
	0	0	0	0	6	10	7		LE ~~25~~ 23
	0	0	0	0	4	5	4		13
DO	7.0	6.7 | 6.9	7.0 | 7.1	6.9 | 7.4	6.6 | 8.0	6.8 | 7.4	7.1		26.6
Temp	25.9	25.2 | 25.9	25.1 | 24.5	25.3 | 24.3	25.0 | 25.1	25.3 | 25.6	24.9		
pH	8.0	7.8 | 7.9	7.7 | 7.9	7.7 | 8.1	7.9 | 8.1	7.6 | 8.0	7.8		
Cond	253	256	281	265	276	272			
(5)	0	0	0	0	4	9	14		27
	0	0	0	0	5	9	14		28
	0	0	0	0	6	12	14		32
	0	0	0	0	5	10	18		33
	0	0	0	0	6	7	17		30
100	0	0	0	3	0	11	17		31
	0	0	0	0	6	10	15		31
	0	0	0	4	0	9	17		30
	0	0	0	0	4	11	18		33
	0	0	0	0	4	9	10		23
DO	7.0	6.7 | 6.9	7.0 | 7.1	6.9 | 7.5	6.6 | 8.2	6.8 | 7.5	7.1		29.8
Temp	25.9	25.2 | 25.9	25.1 | 24.3	25.3 | 24.1	25.0 | 25.1	25.3 | 25.9	24.9		
pH	7.9	7.7 | 7.8	7.6 | 7.6	7.6 | 8.0	7.9 | 8.0	7.5 | 7.8	7.8		
Cond	233	237	256	256	260	254			
Algae	ABS	ABS	ABS	ABS	ABS	ABS			
YCT	2205	2205	2205	2200	2206	2206			
H_2O	1	1	1	2	2	3			
Initials	LR	LR	DT	JM	JM	DT	LR		

	Eff #1	Eff #2	Eff #3	Recon
Hardness	58	40	42	91
Alkalinity	16	12	13	61
Chlorine	<0.01	<0.01	<0.01	<0.01
Ammonia	<0.03	<0.03	0.04	<0.03

Exposure Chamber:
Total Capacity: 30mL
Total Solution Volume: 15mL

Feeding Schedule:
Fed daily
Food used: YCT, Algae

Units:
DO: mg/L
Temp: °C
pH: N/A
Cond: µS/cm³
Hardness: mg/L
Alkalinity: mg/L
Chlorine: mg/L
Ammonia: mg/L

Comments: Active and mobile

x:y:z = board #:row:column

1	2	3	4	5	6	7	8	9	10
D6	D7	D9	D10	E2	E4	E5	E6	E9	E10

TM

CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **SeaCrest Group**

Analysis ID:	20-4282-6415	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	29 Aug-22 13:57	**Analysis:**	STP 2xK Contingency Tables	**Status Level:**	1
Batch ID:	14-0386-7502	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	22 Aug-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	28 Aug-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	02-0094-4637	**Code:**	422426.B	**Project:**	WET Quarterly Compliance Test (3Q)
Sample Date:	22 Aug-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	22 Aug-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU
Untransformed	C > T	100	>100	n/a	1

Fisher Exact/Bonferroni-Holm Test

Control	vs	Group	Test Stat	P-Type	P-Value	Decision(α:5%)
Dilution Water		13	0.7632	Exact	1.0000	Non-Significant Effect
		26	1.0000	Exact	1.0000	Non-Significant Effect
		52	1.0000	Exact	1.0000	Non-Significant Effect
		76	1.0000	Exact	1.0000	Non-Significant Effect
		100	1.0000	Exact	1.0000	Non-Significant Effect

Data Summary

Conc-%	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
0	D	9	1	10	0.9	0.1	0.0%
13		9	1	10	0.9	0.1	0.0%
26		10	0	10	1	0	-11.11%
52		10	0	10	1	0	-11.11%
76		10	0	10	1	0	-11.11%
100		10	0	10	1	0	-11.11%

Ceriodaphnia 7-d Survival and Reproduction Test — **SeaCrest Group**

Analysis ID:	09-4291-0087	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	29 Aug-22 13:57	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	14-0386-7502	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	22 Aug-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	28 Aug-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	02-0094-4637	**Code:**	422426.B	**Project:**	WET Quarterly Compliance Test (3Q)
Sample Date:	22 Aug-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	22 Aug-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	2061979	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
LC5	>100	n/a	n/a	<1	n/a	n/a
LC10	>100	n/a	n/a	<1	n/a	n/a
LC15	>100	n/a	n/a	<1	n/a	n/a
LC20	>100	n/a	n/a	<1	n/a	n/a
LC25	>100	n/a	n/a	<1	n/a	n/a
LC40	>100	n/a	n/a	<1	n/a	n/a
LC50	>100	n/a	n/a	<1	n/a	n/a

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	D	10	0.9000	0.0000	1.0000	0.3162	35.14%	0.0%	9/10	0.9667	0.0%
13		10	0.9000	0.0000	1.0000	0.3162	35.14%	0.0%	9/10	0.9667	0.0%
26		10	1.0000	1.0000	1.0000	0.0000	0.00%	-11.11%	10/10	0.9667	0.0%
52		10	1.0000	1.0000	1.0000	0.0000	0.00%	-11.11%	10/10	0.9667	0.0%
76		10	1.0000	1.0000	1.0000	0.0000	0.00%	-11.11%	10/10	0.9667	0.0%
100		10	1.0000	1.0000	1.0000	0.0000	0.00%	-11.11%	10/10	0.9667	0.0%

CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **SeaCrest Group**

Analysis ID:	10-6320-0454	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.9.6
Analyzed:	29 Aug-22 13:57	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Batch ID:	14-0386-7502	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	22 Aug-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	28 Aug-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	02-0094-4637	**Code:**	422426.B	**Project:**	WET Quarterly Compliance Test (3Q)
Sample Date:	22 Aug-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	22 Aug-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	100	>100	n/a	1	32.55%

Steel Many-One Rank Sum Test

Control vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water	13	108	75	3	18	CDF	0.8923	Non-Significant Effect
	26	107	75	5	18	CDF	0.8746	Non-Significant Effect
	52	114	75	4	18	CDF	0.9629	Non-Significant Effect
	76	108	75	3	18	CDF	0.8923	Non-Significant Effect
	100	121.5	75	1	18	CDF	0.9933	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	150.483	30.0967	5	0.4688	0.7978	Non-Significant Effect
Error	3466.5	64.1944	54			
Total	3616.98		59			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	13.95	15.09	0.0160	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9416	0.9459	0.0064	Non-Normal Distribution

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	25.2	18.27	32.13	26	6	37	3.065	38.46%	0.00%
13		10	25.6	17.26	33.94	28	0	39	3.685	45.52%	-1.59%
26		10	26.6	21.43	31.77	26.5	13	38	2.286	27.18%	-5.56%
52		10	28.3	23.42	33.18	28.5	14	36	2.155	24.08%	-12.30%
76		10	26.6	21.69	31.51	27	13	35	2.172	25.82%	-5.56%
100		10	29.8	27.59	32.01	30.5	23	33	0.9752	10.35%	-18.25%

Ceriodaphnia 7-d Survival and Reproduction Test — **SeaCrest Group**

Analysis ID:	16-2401-5629	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.9.6
Analyzed:	29 Aug-22 13:57	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	14-0386-7502	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	22 Aug-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	28 Aug-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	02-0094-4637	**Code:**	422426.B	**Project:**	WET Quarterly Compliance Test (3Q)
Sample Date:	22 Aug-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	22 Aug-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	98818	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	n/a	n/a	<1	n/a	n/a
IC10	>100	n/a	n/a	<1	n/a	n/a
IC15	>100	n/a	n/a	<1	n/a	n/a
IC20	>100	n/a	n/a	<1	n/a	n/a
IC25	>100	n/a	n/a	<1	n/a	n/a
IC40	>100	n/a	n/a	<1	n/a	n/a
IC50	>100	n/a	n/a	<1	n/a	n/a

Reproduction Summary

			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	D	10	25.2	6	37	9.693	38.46%	0.0%	27.02	0.0%
13		10	25.6	0	39	11.65	45.52%	-1.59%	27.02	0.0%
26		10	26.6	13	38	7.23	27.18%	-5.56%	27.02	0.0%
52		10	28.3	14	36	6.816	24.08%	-12.3%	27.02	0.0%
76		10	26.6	13	35	6.867	25.82%	-5.56%	27.02	0.0%
100		10	29.8	23	33	3.084	10.35%	-18.25%	27.02	0.0%

Appendix 3 – Data Sheets for the Fathead Minnow Test

WET TEST REPORT FORM – CHRONIC

Permittee: Battle Mountain Resources, Inc.

Permit No.: CO-0045675

Outfall: 001B – IWC: 52%

Test Type: Routine ☒ Accelerated ☐ Screen ☐

Test Species: fathead minnow

Test Start Time	Test Start Date	Test End Time	Test End Date
1530	08-22-2022	1430	08-29-2022

Test Results	Lethality/TCP6C	Growth/TKP6C
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	13%	26%	52%	76%	100%
Exposed organisms	40	40	40	40	40	40
Survival for day 1	40	40	40	40	40	39
Survival for day 2	40	40	40	40	40	39
Survival for day 3	40	40	40	40	40	39
Survival for day 4	40	40	39	40	40	39
Survival for day 5	40	40	39	40	39	39
Survival for day 6	40	40	39	40	39	38
Survival for day 7	40	40	39	40	39	38
Mean Dry Wt. (mg)	0.343	0.372	0.314	0.344	0.341	0.298

Hardness (mg/L) – Receiving Water: N/A Effluent: 58/40/42 Recon Water: 87
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 16/12/13 Recon Water: 60
Chlorine (mg/L) – Effluent: <0.01 pH (initial/final) – Control: 8.3/7.8 100%: 7.7/7.1
Total Ammonia as NH_3 (mg/L) - Effluent: <0.03/<0.03/0.04

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Shanna Wepman and Catherine McDonald

Signature _____ *Date* 09/01/2022

SeaCrest Group
Louisville, CO

Fathead Minnow Chronic Benchsheet

Form #: 103a
Effective: March 2022

Client: BMRI Site: 0018 Lab #: 422426.8 Sample Date: 082222 IWC: 52 Dilution H_2O: MH22-027

Test Start: 082222-1530 Test End: 082922 - 1430 Species Info: IH 082222 Template: FHM Test Conditions:

Conc	Read	0	1		2		3		4		5		6		7
0	DO	6.8	5.4	7.1	5.2	6.8	5.8	6.8	6.0	7.1	5.8	6.8	4.7	6.8	5.0
	Temp	25.2	25.9	24.7	25.9	25.2	25.9	25.4	25.3	24.1	24.5	25.0	25.9	25.7	24.1
	pH	8.3	7.8	8.2	7.8	8.2	7.9	8.3	8.0	8.3	7.8	8.3	7.9	8.3	7.8
	Cond	330	346		341		339		324		314		323		
13	DO	7.0	5.4	7.1	5.2	6.8	5.7	7.0	6.0	7.2	5.8	6.8	4.8	6.9	5.0
	Temp	25.2	25.8	24.9	25.7	25.1	25.8	25.1	25.3	24.1	24.3	25.2	25.9	25.7	24.1
	pH	8.3	7.7	8.2	7.6	8.2	7.7	8.3	7.8	8.2	7.7	8.2	7.8	8.3	7.6
	Cond	319	335		330		329		316		308		314		
26	DO	7.2	5.5	7.1	5.2	6.8	5.6	7.1	5.9	7.4	5.8	6.9	4.9	7.0	5.0
	Temp	25.2	25.7	25.1	25.6	25.0	25.7	24.8	25.4	24.2	24.4	25.4	25.9	25.7	24.1
	pH	8.3	7.6	8.1	7.5	8.2	7.6	8.2	7.7	8.2	7.5	8.2	7.6	8.3	7.4
	Cond	316	327		318		318		305		303		303		
52	DO	7.4	5.5	7.1	5.3	6.8	5.5	7.2	5.8	7.6	5.8	7.0	5.0	7.2	5.1
	Temp	25.3	25.6	25.3	25.5	24.9	25.6	24.5	25.4	24.3	24.3	25.6	25.9	25.6	24.1
	pH	8.2	7.5	8.0	7.4	8.1	7.5	8.2	7.6	8.1	7.3	8.1	7.4	8.1	7.3
	Cond	288	306		292		288		287		283		282		
76	DO	7.5	5.6	7.1	5.3	6.8	5.4	7.3	5.7	7.7	5.8	7.1	5.1	7.3	5.1
	Temp	25.3	25.5	25.5	25.4	24.8	25.5	24.7	25.3	24.4	24.2	25.8	25.9	25.6	24.1
	pH	8.0	7.4	7.9	7.3	7.9	7.4	8.0	7.5	7.9	7.2	7.9	7.3	8.0	7.2
	Cond	267	288		271		263		272		266		262		
100	DO	7.6	5.6	7.1	5.3	6.8	5.4	7.6	5.6	7.8	5.8	7.2	5.2	7.4	5.1
	Temp	25.3	25.4	25.8	25.2	24.7	25.4	24.1	25.5	24.5	24.1	25.9	25.9	25.6	24.1
	pH	7.7	7.3	7.6	7.2	7.6	7.2	7.8	7.3	7.7	7.2	7.7	7.2	7.6	7.1
	Cond	244	264		252		241		254		247		242		
	DO														
	Temp														
	pH														
	Cond														
Initials		SW	CM		CM		CM		CM		CM		SW		SW
Water #		1	1		1		2		2		3		3		

	0	1	2	3	4	5	6	7
Feeding								
AM		✓	✓	✓	✓	✓	✓	✓
Initials		CM	CM	CM	CM	CM	SW	SW
PM	✓	✓	✓	✓	✓	✓	✓	
Initials	SW	CM	CM	CM	CM	CM	SW	

Feeding Schedule
Fed: 2x per day
Food Used: <24hr artemia

	Eff 1	Eff 2	Eff 3	Recon	Rcv 1	Rcv 2	Rcv 3	MR
Hard	38	40	42	87				
Alk	16	12	13	60				
Chlor	<0.01	<0.01	<0.01	<0.01				
NH_3	<0.03	<0.03	0.04	<0.03				

Exposure Chamber
Total Capacity: 500 mL
Test Solution Volume: 250 mL
Test Solution Surface Area: 50.2 cm
Water Depth (constant): 6.5 cm

Units:
DO: mg/L Hard: mg/L
Temp: °C Alk: mg/L
pH: N/A Chlor: mg/L
Cond: µS/cm³ NH_3: mg/L

Conc	Read	0	1	2	3	4	5	6	7	#	Fish & Tare	Tare	Fish Wt mg	Ave wt
0	DO	10	10	10	10	10	10	10	10	#1	1.14612	1.14244	0.368	0.343
	Temp	10	10	10	10	10	10	10	10	#2	1.19391	1.19056	0.335	
	pH	10	10	10	10	10	10	10	10	#3	1.16111	1.15736	0.375	
	Cond	10	10	10	10	10	10	10	10	#4	1.15279	1.14984	0.295	
13	DO	10	10	10	10	10	10	10	10	#5	1.15884	1.15460	0.424	0.372
	Temp	10	10	10	10	10	10	10	10	#6	1.16940	1.16569	0.371	
	pH	10	10	10	10	10	10	10	10	#7	1.14566	1.14243	0.323	
	Cond	10	10	10	10	10	10	10	10	#8	1.16427	1.16059	0.368	
26	DO	10	10	10	10	10	10	10	10	#9	1.16466	1.16127	0.339	0.314
	Temp	10	10	10	10	10	10	10	10	#10	1.13614	1.13310	0.304	
	pH	10	10	10	9	9	9	9	10	#11	1.15604	1.15295	0.309	
	Cond	10	10	10	10	10	10	10	10	#12	1.17049	1.16745	0.304	
52	DO	10	10	10	10	10	10	10	10	#13	1.12205	1.11874	0.331	0.344
	Temp	10	10	10	10	10	10	10	10	#14	1.16905	1.16563	0.342	
	pH	10	10	10	10	10	10	10	10	#15	1.14778	1.14414	0.364	
	Cond	10	10	10	10	10	10	10	10	#16	1.15798	1.15458	0.340	
76	DO	10	10	10	10	10	10	10	10	#17	1.17000	1.16624	0.376	0.311
	Temp	10	10	10	10	9	9	9	10	#18	1.14595	1.14280	0.315	
	pH	10	10	10	10	10	10	10	10	#19	1.12577	1.12236	0.341	
	Cond	10	10	10	10	10	10	10	10	#20	1.14834	1.14503	0.331	
100	DO	10	10	10	10	10	9	9	10	#21	1.14495	1.14166	0.329	0.298
	Temp	10	10	10	10	10	10	10	10	#22	1.12273	1.11951	0.272	
	pH	10	9	9	9	9	9	9	10	#23	1.12237	1.11962	0.275	
	Cond	10	10	10	10	10	10	10	10	#24	1.16475	1.16159	0.316	
	DO	10								#				
	Temp	10								#				
	pH	10								#				
	Cond	10								#				
										pretest	1.12648	1.12660		

Comments: active + mobile

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	01-2519-7805	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	30 Aug-22 16:23	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Batch ID:	03-6230-2756	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	22 Aug-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	29 Aug-22	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	08-2940-5779	**Code:**	422426.B	**Project:**	WET Quarterly Compliance Test (3Q)
Sample Date:	22 Aug-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	22 Aug-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	C > T	100	>100	n/a	1	6.72%

Steel Many-One Rank Sum Test

Control vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water	13	18	10	1	6	CDF	0.8333	Non-Significant Effect
	26	16	10	1	6	CDF	0.6105	Non-Significant Effect
	52	18	10	1	6	CDF	0.8333	Non-Significant Effect
	76	16	10	1	6	CDF	0.6105	Non-Significant Effect
	100	14	10	1	6	CDF	0.3451	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0221328	0.0044266	5	1.2	0.3485	Non-Significant Effect
Error	0.0663983	0.0036888	18			
Total	0.0885311		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.8314	0.884	0.0010	Non-Normal Distribution

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
13		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
26		4	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	2.50%
52		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
76		4	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	2.50%
100		4	0.9500	0.8581	1.0000	0.9500	0.9000	1.0000	0.0289	6.08%	5.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%
13		4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%
26		4	1.371	1.242	1.501	1.412	1.249	1.412	0.04074	5.94%	2.89%
52		4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%
76		4	1.371	1.242	1.501	1.412	1.249	1.412	0.04074	5.94%	2.89%
100		4	1.331	1.181	1.48	1.331	1.249	1.412	0.04705	7.07%	5.77%

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	20-7867-1816	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	30 Aug-22 16:23	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	03-6230-2756	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	22 Aug-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	29 Aug-22	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	08-2940-5779	**Code:**	422426.B	**Project:**	WET Quarterly Compliance Test (3Q)
Sample Date:	22 Aug-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	22 Aug-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1200371	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
LC5	100	61.6	n/a	1	n/a	1.623
LC10	>100	n/a	n/a	<1	n/a	n/a
LC15	>100	n/a	n/a	<1	n/a	n/a
LC20	>100	n/a	n/a	<1	n/a	n/a
LC25	>100	n/a	n/a	<1	n/a	n/a
LC40	>100	n/a	n/a	<1	n/a	n/a
LC50	>100	n/a	n/a	<1	n/a	n/a

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	D	4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	1	0.0%
13		4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	1	0.0%
26		4	0.9750	0.9000	1.0000	0.0500	5.13%	2.5%	39/40	0.9875	1.25%
52		4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	0.9875	1.25%
76		4	0.9750	0.9000	1.0000	0.0500	5.13%	2.5%	39/40	0.975	2.5%
100		4	0.9500	0.9000	1.0000	0.0577	6.08%	5.0%	38/40	0.95	5.0%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
13		1.0000	1.0000	1.0000	1.0000
26		1.0000	1.0000	0.9000	1.0000
52		1.0000	1.0000	1.0000	1.0000
76		1.0000	0.9000	1.0000	1.0000
100		0.9000	1.0000	0.9000	1.0000

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	02-1538-6845	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.6
Analyzed:	30 Aug-22 16:23	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Batch ID:	03-6230-2756	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	22 Aug-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	29 Aug-22	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	08-2940-5779	**Code:**	422426.B	**Project:**	WET Quarterly Compliance Test (3Q)
Sample Date:	22 Aug-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	22 Aug-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	100	>100	n/a	1	14.35%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water		13	-1.381	2.407	0.049	6	CDF	0.9941	Non-Significant Effect
		26	1.43	2.407	0.049	6	CDF	0.2513	Non-Significant Effect
		52	-0.04893	2.407	0.049	6	CDF	0.8473	Non-Significant Effect
		76	0.1225	2.407	0.049	6	CDF	0.7947	Non-Significant Effect
		100	2.212	2.407	0.049	6	CDF	0.0718	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0133146	0.0026629	5	3.181	0.0313	Significant Effect
Error	0.015067	0.0008371	18			
Total	0.0283816		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	4.216	15.09	0.5188	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9623	0.884	0.4864	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.3433	0.285	0.4015	0.3515	0.295	0.375	0.01829	10.66%	0.00%
13		4	0.3715	0.3058	0.4372	0.3695	0.323	0.424	0.02066	11.12%	-8.23%
26		4	0.314	0.2872	0.3408	0.3065	0.304	0.339	0.008415	5.36%	8.52%
52		4	0.3443	0.322	0.3665	0.341	0.331	0.364	0.007004	4.07%	-0.29%
76		4	0.3407	0.2996	0.3818	0.336	0.315	0.376	0.01291	7.58%	0.73%
100		4	0.298	0.2522	0.3438	0.2955	0.272	0.329	0.0144	9.67%	13.18%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.368	0.335	0.375	0.295
13		0.424	0.371	0.323	0.368
26		0.339	0.304	0.309	0.304
52		0.331	0.342	0.364	0.34
76		0.376	0.315	0.341	0.331
100		0.329	0.272	0.275	0.316

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	06-1221-5683	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.6
Analyzed:	30 Aug-22 16:23	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	03-6230-2756	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	22 Aug-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	29 Aug-22	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	08-2940-5779	**Code:**	422426.B	**Project:**	WET Quarterly Compliance Test (3Q)
Sample Date:	22 Aug-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	22 Aug-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	921828	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	22.53	8.951	127.1	4.439	0.7869	11.17
IC10	83.79	n/a	n/a	1.193	n/a	n/a
IC15	96.04	72.18	n/a	1.041	n/a	1.385
IC20	>100	n/a	n/a	<1	n/a	n/a
IC25	>100	n/a	n/a	<1	n/a	n/a
IC40	>100	n/a	n/a	<1	n/a	n/a
IC50	>100	n/a	n/a	<1	n/a	n/a

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	D	4	0.3433	0.295	0.375	0.03659	10.66%	0.0%	0.3574	0.0%
13		4	0.3715	0.323	0.424	0.04132	11.12%	-8.23%	0.3574	0.0%
26		4	0.314	0.304	0.339	0.01683	5.36%	8.52%	0.333	6.82%
52		4	0.3443	0.331	0.364	0.01401	4.07%	-0.29%	0.333	6.82%
76		4	0.3407	0.315	0.376	0.02583	7.58%	0.73%	0.333	6.82%
100		4	0.298	0.272	0.329	0.02881	9.67%	13.18%	0.298	16.62%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.368	0.335	0.375	0.295
13		0.424	0.371	0.323	0.368
26		0.339	0.304	0.309	0.304
52		0.331	0.342	0.364	0.34
76		0.376	0.315	0.341	0.331
100		0.329	0.272	0.275	0.316

Appendix 4 – QA/QC and Reference Toxicant Test Chart

Quality Assurance Check List – Chronic Whole Effluent Toxicity Test

Client:	Battle Mountain Resources, Inc.
SeaCrest Sample No:	422426.B
Species Tested:	*Ceriodaphnia dubia* and fathead minnow

Sample Dates	**Start Date of Test (*Ceriodaphnia dubia*)**	**Start Date of Test (fathead minnow)**
08-22-2022 08-24-2022 08-26-2022	08-22-2022	08-22-2022

Sample received in lab properly preserved (0-6°C)?	**N***
Sample received at laboratory within 36 hours of collection?	**Y**
Sample delivered on ice or equivalent?	**Y**
Test initiated within 36-hours of collection?	**Y**
Test protocol conforms to CDPHE guidelines (*Ceriodaphnia dubia)*?	**Y**
Test protocol conforms to CDPHE guidelines (fathead minnow)?	**Y**
Average test temp. ±1°C (*Ceriodaphnia dubia*)?	**Y**
Average test temp. ±1°C (fathead minnow)?	**Y**
DO level ≥4.0mg/L; no super-saturation (*Ceriodaphnia dubia*)?	**Y**
DO level ≥4.0mg/L; no super-saturation (fathead minnow)?	**Y**
Survival in control ≥80% (*Ceriodaphnia dubia*)?	**Y**
Survival in control ≥80% (fathead minnow)?	**Y**
Ceriodaphnia dubia neonates <24-hours old?	**Y**
Fathead minnow larvae <24-hours old?	**Y**
Appropriate reference toxicity test conducted?	**Y**
Reference toxicity test results within the confidence limits for the lab?	**Y**

* The samples were received at 12.5°C, 6.1°C, and 12.9°C on the same day as sampling.

Author _____ *Date* 09/01/2022
Position: Aquatic Toxicologist

Quality Control _____ *Date* _____

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

METHOD QC

Method	Analyte	Date	LCS (rec)	%REC	%RPD	QC LIMITS
2320 B	Alkalinity - Total	7/7/2022	104.94%	97.78%	2.06%	± 5.00%
2320 B	Alkalinity - Total	7/14/2022	100.00%	99.25%	0.00%	± 5.00%
2320 B	Alkalinity - Total	7/21/2022	106.88%	99.25%	1.59%	± 5.00%
2320 B	Alkalinity - Total	7/28/2022	99.38%	102.26%	1.29%	± 5.00%
4500 NH_3 D	Ammonia	7/7/2022	96.40%	96.75%	-2.90%	± 10.00%
4500 NH_3 D	Ammonia	7/14/2022	104.00%	103.18%	4.64%	± 10.00%
4500 NH_3 D	Ammonia	7/19/2022	95.60%	95.10%	-0.73%	± 10.00%
4500 NH_3 D	Ammonia	7/26/2022	95.60%	96.60%	-2.97%	± 10.00%
4500 Cl D	Chlorine	7/28/2022	103.03%	97.06%	0.00%	± 5.00, ± 20.00%
2340 B	Hardness - Total	7/7/2022	96.50%	101.44%	0.00%	± 5.00%
2340 B	Hardness - Total	7/14/2022	96.50%	100.00%	-0.58%	± 5.00%
2340 B	Hardness - Total	7/21/2022	98.00%	103.00%	-1.09%	± 5.00%
2340 B	Hardness - Total	7/28/2022	101.75%	100.21%	-0.82%	± 5.00%

			LCS (rec)	%REC M1	%REC M2	QC Limits
4500 O	DO - Winkler	7/1/2022	N/A	100.00%	98.57%	± 5.00%
4500 O	DO - Winkler	7/7/2022	N/A	102.82%	102.82%	± 5.00%
4500 O	DO - Winkler	7/14/2022	N/A	95.89%	98.59%	± 5.00%
4500 O	DO - Winkler	7/21/2022.	N/A	100.00%	97.22%	± 5.00%

			Blank	%REC MR S	%RPD	QC Limits
2540 D	Suspended Solids (TTL)	7/20/2022	100.00%	97.30%	0.00%	± 15%
2540 C	Dissolved Solids (TTL)	7/20/2022	100.00%	99.64%	0.00%	± 15%

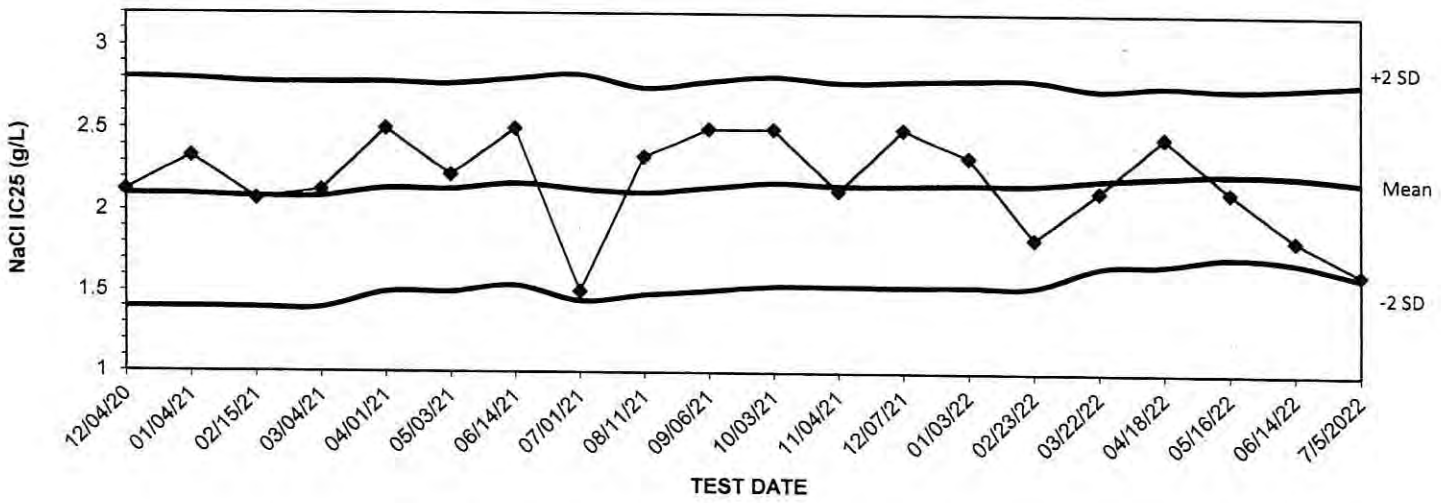
Signature: _____

Date: 1 August 2022

Signature: _____

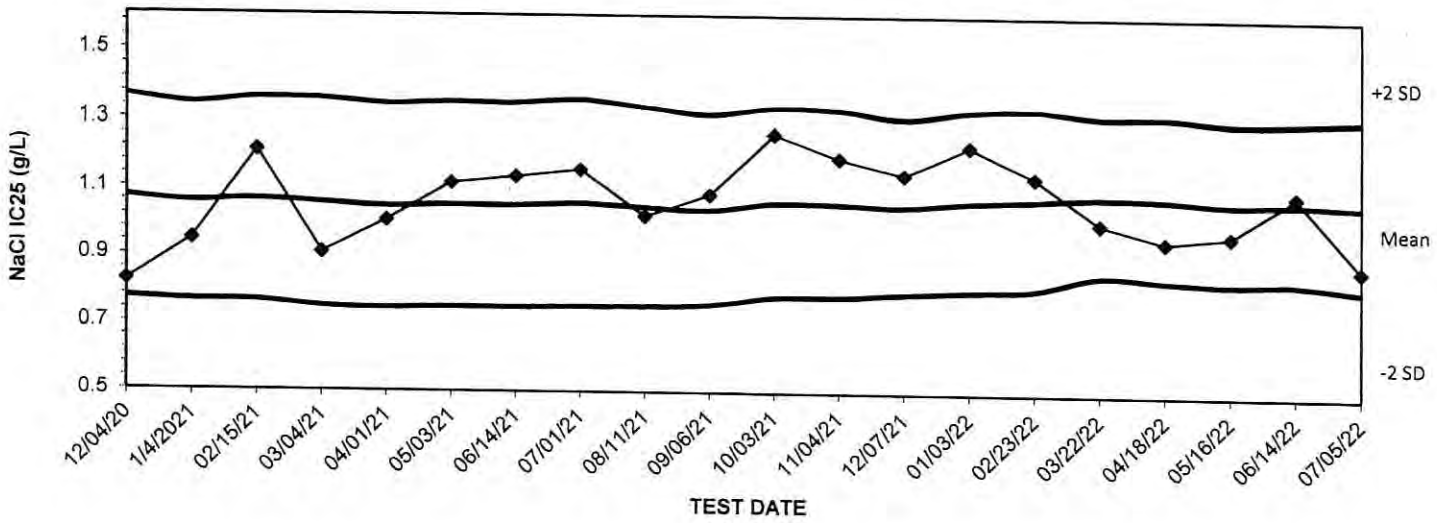
Date: August 1 2022

CERIODAPHNIA SURVIVAL LC25 NaCl REFTOX



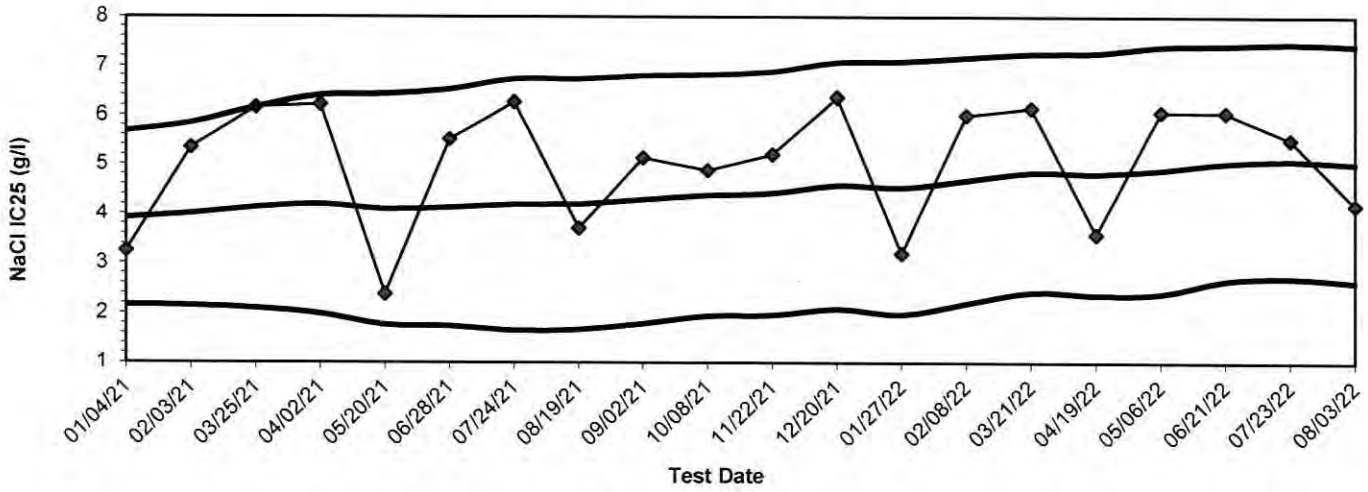
Date	IC25	Mean	-2 SD	+2 SD
12/04/20	2.1250	2.0997	1.3962	2.8032
01/04/21	2.3330	2.0968	1.3979	2.7956
02/15/21	2.0710	2.0843	1.3939	2.7747
03/04/21	2.1250	2.0843	1.3939	2.7747
04/01/21	2.5000	2.1359	1.4948	2.7769
05/03/21	2.2190	2.1304	1.4945	2.7664
06/14/21	2.5000	2.1661	1.5357	2.7966
07/01/21	1.5000	2.1319	1.4386	2.8252
08/11/21	2.3330	2.1101	1.4777	2.7425
09/06/21	2.5000	2.1429	1.5041	2.7816
10/03/21	2.5000	2.1746	1.5342	2.8150
11/04/21	2.1250	2.1568	1.5338	2.7797
12/07/21	2.5000	2.1592	1.5310	2.7874
01/03/22	2.3330	2.1656	1.5330	2.7982
02/23/22	1.8330	2.1656	1.5330	2.7982
03/22/22	2.1250	2.1982	1.6590	2.7374
04/18/22	2.4580	2.2200	1.6774	2.7626
05/16/22	2.1250	2.2355	1.7257	2.7453
06/14/22	1.8330	2.2267	1.6951	2.7582
7/5/2022	1.6250	2.1930	1.6031	2.7828

CERIODAPHNIA REPRODUCTION IC25 NaCl REFTOX



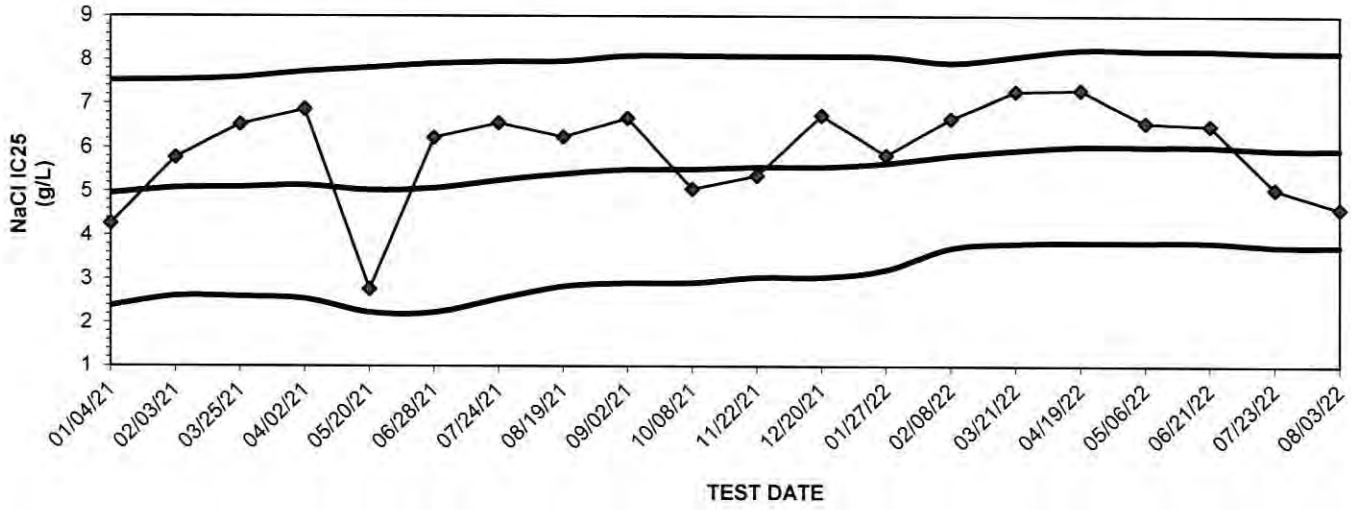
Date	IC25	Mean	-2 SD	+2 SD
12/04/20	0.8229	1.0715	0.7730	1.3701
1/4/2021	0.9453	1.05616	0.765282233	1.347037767
02/15/21	1.2100	1.0635	0.7646	1.3625
03/04/21	0.9062	1.0540	0.7475	1.3605
04/01/21	1.0030	1.0450	0.7439	1.3461
05/03/21	1.1140	1.0496	0.7472	1.3521
06/14/21	1.1340	1.0487	0.7475	1.3499
07/01/21	1.1550	1.0553	0.7508	1.3599
08/11/21	1.0180	1.0445	0.7516	1.3375
09/06/21	1.0820	1.0368	0.7574	1.3162
10/03/21	1.2630	1.0587	0.7807	1.3367
11/04/21	1.1930	1.0570	0.7830	1.3311
12/07/21	1.1450	1.0503	0.7931	1.3076
01/03/22	1.2300	1.0650	0.8016	1.3284
02/23/22	1.1390	1.0719	0.8084	1.3354
03/22/22	1.0040	1.0821	0.8489	1.3154
04/18/22	0.9527	1.0775	0.8376	1.3174
05/16/22	0.9716	1.0659	0.8293	1.3025
06/14/22	1.0920	1.0691	0.8330	1.3053
07/05/22	0.8750	1.0628	0.8126	1.3129

FHM SURVIVAL LC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
01/04/21	3.2500	3.9146	2.1591	5.6702
02/03/21	5.3330	3.9947	2.1464	5.8429
03/25/21	6.1583	4.1258	2.0920	6.1596
04/02/21	6.2160	4.1887	1.9849	6.3925
05/20/21	2.3750	4.0888	1.7621	6.4155
06/28/21	5.5000	4.1223	1.7345	6.5101
07/24/21	6.2580	4.1844	1.6465	6.7224
08/19/21	3.7000	4.1935	1.6644	6.7226
09/02/21	5.1250	4.2901	1.7899	6.7904
10/08/21	4.8750	4.3788	1.9442	6.8135
11/22/21	5.2000	4.4210	1.9620	6.8799
12/20/21	6.3570	4.5781	2.0849	7.0713
01/27/22	3.2000	4.5318	1.9736	7.0900
02/08/22	6.0000	4.6848	2.2009	7.1688
03/21/22	6.1400	4.8361	2.4258	7.2464
04/19/22	3.5870	4.8140	2.3657	7.2622
05/06/22	6.0670	4.8914	2.3955	7.3872
06/21/22	6.0500	5.0353	2.6626	7.4081
07/23/22	5.5000	5.0819	2.7150	7.4488
08/03/22	4.1820	5.0220	2.6328	7.4112

FHM GROWTH IC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
01/04/21	4.2580	4.9508	2.3784	7.5231
02/03/21	5.7680	5.0732	2.6088	7.5375
03/25/21	6.5280	5.0905	2.5891	7.5919
04/02/21	6.8650	5.1345	2.5395	7.7295
05/20/21	2.7590	5.0217	2.2272	7.8162
06/28/21	6.2200	5.0690	2.2267	7.9113
07/24/21	6.5530	5.2483	2.5384	7.9582
08/19/21	6.2310	5.3933	2.8247	7.9619
09/02/21	6.6650	5.4939	2.8982	8.0895
10/08/21	5.0481	5.4990	2.9074	8.0905
11/22/21	5.3520	5.5543	3.0315	8.0771
12/20/21	6.7310	5.5549	3.0309	8.0788
01/27/22	5.8200	5.6387	3.2082	8.0692
02/08/22	6.6580	5.8193	3.7120	7.9266
03/21/22	7.2690	5.9425	3.8121	8.0729
04/19/22	7.2990	6.0314	3.8358	8.2271
05/06/22	6.5630	6.0225	3.8376	8.2074
06/21/22	6.5000	6.0225	3.8376	8.2074
07/23/22	5.0500	5.9498	3.7409	8.1587
08/03/22	4.6040	5.9482	3.7354	8.1611

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

January 26, 2023

Colorado Department of Public Health and Environment
Water Quality Control Division
Attn: WQDC-B2 – DMR Receipt
4300 Cherry Creek Drive
Denver, CO 80246-1530

Re: Battle Mountain Resources, Inc.
San Luis Project - San Luis, Colorado
Fourth Quarter 2022 – DMR's, BMP and WET Testing Reports
CDPHE CDPS Permit No. CO0045675

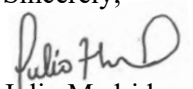
Dear Sir or Madame:

Please find the enclosed Battle Mountain Resources, Inc. "San Luis Project" (Permit No. CO0045675) Colorado Department of Public Health and Environment-Colorado Discharge Permit System (CDPS) Best Management Practices (BMP) report for permitted outfall 002 for the fourth quarter 2022. The quarterly BMP report provides the required data associated with groundwater well elevations, the quarterly potentiometric surface map and groundwater well chemistry.

In addition, the fourth quarter 2022 Discharge Monitoring Reports (DMRs) were submitted for each of the permitted water treatment plant discharges in the NetDMR System and the WET Testing Reports were attached to the appropriate DMR submittal in NetDMR. These permitted discharges consist of water treatment plant Discharge Numbers 001-A and 001-B. During the quarter, the maximum 30-day average flow was 0.29 million gallons of water discharged per day, therefore the applicable permit criteria for the reporting period is associated with discharge number 001-B.

Should any questions arise or if I can be of any assistance providing clarification, please call me at (719) 379-0538.

Sincerely,



Julio Madrid
Authorized Agent
Battle Mountain Resources, Inc.

Cc: BMRI File
Devon Horntvedt, Newmont USA Limited
Lawrence Fiske, Newmont USA Limited
Tim Runnells, Engineering Analytics
Alan Fosdick, Engineering Analytics

Battle Mountain Resources, Inc.
San Luis Project
P.O. Box 310
San Luis, Colorado 81152-0310
(719) 379-0798

January 26, 2023

Colorado Department of Public Health and Environment
Water Quality Control Division
Attn: WQDC-B2 – DMR Receipt
4300 Cherry Creek Drive
Denver, CO 80246-1530

Re: Battle Mountain Resources, Inc.
San Luis Project
Fourth Quarter 2022 BMP Report
CDPHE CDPS Permit No. CO0045675

Dear Sir or Madame:

In accordance with and compliance of the permit limitations and permit terms and conditions contained in Part I, Section 5 Discharge Point 002: (Permit Limitations, Best Management Practices, and Schedule of Compliance of the *State of Colorado Authorization to Discharge Under the Colorado Discharge Permit System*, Battle Mountain Resources, Inc. submits the following *Quarterly Best Management Practices Report.*

In accordance with the Water Quality Control Commission Regulations for Effluent Limitations, Section 62.4, and the Colorado Discharge Permit System Regulations, Sections 61.8(2), 61.8(3)(n), and 61.8(3)(r), 5 C.C.R. 1002-61, the permittee shall continue to implement the following limitations, compliance schedules, and Best Management Practices (BMPs).

The attainment of applicable water quality standards will be implemented and evaluated through the application of the following limitations, compliance schedules, and BMPs that are designed to monitor and control the groundwater quality and quantity discharging from the West Pit to the Rito Seco alluvial aquifer.

Specifically, the limitations, compliance schedules, and BMPs are those activities that address contaminated groundwater that may flow into the Rito Seco. This includes: (1) the potential flow of the affected groundwater from the West Pit that, in the past, manifested itself in the formation of the surface seeps along the arroyo sidewall of the Rito Seco, and (2) the plume of affected groundwater within the Rito Seco alluvial aquifer downgradient of the West Pit that flows along the naturally occurring hydraulic gradient and that may flow into the Rito Seco. The activities will include the following specific requirements:

1) The elevation of the groundwater table in the vicinity of the West Pit shall be measured on a weekly basis at the following locations: (i) the West Pit backfill wells BF-4 and BF-5 and (ii) the Rito Seco alluvial wells M-16 and M-20, as shown in Figure 3 of the permit, for purposes of determining the performance of the "pump and treat" system that regulates the flow and quality of the groundwater in the seepage front. The permittee shall

also determine on a quarterly basis the elevations of the groundwater table at BF-3, BF-4, BF-5, BF-6, M-11R, M-16, M-17, M-18, M-19, M-20, M-21, M-22, M-23, M-24, M-25, M-26, M-27, M-28, M-29, M-30, M-31, M-32, and M-33 for the purpose of developing a groundwater potentiometric map as monitoring confirmation of the groundwater flow direction. The quarterly data regarding depth to groundwater and groundwater potentiometric surface map will be submitted to the WQCD with the BMP report as described.

Compliance Action Taken: *Battle Mountain Resources, Inc. measured the weekly West Pit backfill and alluvial wells as required under Paragraph 1 of the specific requirements. Measurements obtained for the weekly West Pit backfill wells (BF-4 and BF-5R) and alluvial wells (M-16 and M-20) are shown in Table 1. The quarterly groundwater elevations required under Paragraph 1 were also measured and are shown in Table 2. A potentiometric surface map, developed by Engineering Analytics, is shown in Figure 1. The groundwater table elevations and potentiometric map confirm that the groundwater flow gradient during the fourth quarter of 2022 was from the Rito Seco to the West Pit. No corrective action is required under Paragraph 1 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 1 – Weekly Groundwater Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)
BF-4	10/05/2022	8579.30
	10/12/2022	8579.27
	10/19/2022	8579.33
	10/26/2022	8579.38
	11/02/2022	8579.36
	11/09/2022	8579.53
	11/16/2022	8579.36
	11/23/2022	8579.40
	11/30/2022	8579.35
	12/07/2022	8579.31
	12/14/2022	8579.28
	12/21/2022	8579.29
	12/28/2022	8579.32
BF-5R	10/05/2022	8579.10
	10/12/2022	8579.08
	10/19/2022	8579.12
	10/26/2022	8579.05
	11/02/2022	8579.08
	11/09/2022	8579.12
	11/16/2022	8579.09
	11/23/2022	8579.08
	11/30/2022	8579.09
	12/07/2022	8579.04
	12/14/2022	8579.05
	12/21/2022	8579.04
	12/28/2022	8579.05

Table 1 – Weekly Groundwater Elevations (continued)

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)
M-16	10/05/2022	8603.07
	10/12/2022	8603.06
	10/19/2022	8602.92
	10/26/2022	8602.99
	11/02/2022	8603.03
	11/09/2022	8603.13
	11/16/2022	8603.16
	11/23/2022	8603.17
	11/30/2022	8603.05
	12/07/2022	8602.90
	12/14/2022	8602.79
	12/21/2022	8602.72
	12/28/2022	8602.68
M-20	10/05/2022	8580.72
	10/12/2022	8580.84
	10/19/2022	8580.78
	10/26/2022	8580.75
	11/02/2022	8580.70
	11/09/2022	8580.69
	11/16/2022	8580.61
	11/23/2022	8580.59
	11/30/2022	8580.56
	12/07/2022	8580.57
	12/14/2022	8580.40
	12/21/2022	8580.36
	12/28/2022	8580.29

Table 2 – Quarterly Groundwater Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)
BF-3	10/31/2022	8578.07
BF-4	10/31/2022	8579.36
BF-5R	10/31/2022	8579.07
BF-6	10/31/2022	8579.08
M-11R	10/31/2022	8550.85
M-16	10/31/2022	8603.03
M-17	10/31/2022	8588.00
M-18	10/31/2022	8580.78
M-19	10/31/2022	8581.25
M-20	10/31/2022	8580.70
M-21	10/31/2022	8578.25
M-22	10/31/2022	8573.68
M-23	10/31/2022	8556.39
M-24	10/31/2022	8559.75
M-25	10/31/2022	DRY
M-26	10/31/2022	8543.87
M-27	10/31/2022	DRY
M-28	10/31/2022	8580.42
M-29	10/31/2022	8581.14
M-30	10/31/2022	8612.92
M-31	10/31/2022	8550.42
M-32	10/31/2022	8530.96
M-33	10/31/2022	8538.37

2) The weekly groundwater table elevation data shall be tabulated and reported on the quarterly BMP reports, and the data will be used to evaluate compliance with the following permit limitations.

   The groundwater table elevation, based on the average of all measured values for each calendar month in the West Pit backfill groundwater monitoring wells BF-4 and BF-5, must be equal to or lower than an elevation of 8582 feet above sea level (ft. amsl).

Compliance Action Taken: *Battle Mountain Resources, Inc. measured the West Pit backfill monitoring wells (BF-4 and BF-5R) weekly and the measurements are shown in Table 1. The groundwater measurements for wells BF-4 and BF-5R were averaged by calendar month and the results are shown in Table 3. The October, November, December 2022 averages were below the 8582 ft. amsl required in Paragraph 2. No corrective action is required under the Paragraph 2 requirement and schedule compliance monitoring will continue unchanged next quarter.*

Table 3 – Quarterly West Pit Backfill Monthly Average Groundwater Table Elevations

Monitoring Well Identification	Month (2022)	Number of Observations	Average Monthly Groundwater Elevation (ft amsl)
BF-4	October	4	8579.32
	November	5	8579.40
	December	4	8579.30
BF-5R	October	4	8579.09
	November	5	8579.09
	December	4	8579.05

3) If the average monthly groundwater table elevation in the West Pit backfill for any calendar month, measured as described in the above paragraph, is greater than 8582 ft. amsl or the quarterly determination of the groundwater potentiometric surface map indicates that the flow of the groundwater is from the West Pit to the Rito Seco alluvium, the permittee shall verbally communicate such condition to WQCD within 24 hours of the determination of the condition (elevated West Pit backfill table or groundwater flow from the West Pit as indicated by the quarterly groundwater potentiometric surface map) and initiate the following compliance schedule.

   Compliance Action Taken: *Battle Mountain Resources, Inc. measured the West Pit backfill monitoring wells (BF-4 and BF-5R) weekly and the calendar month average groundwater measurement elevations (Table 3) were below the 8582 ft. amsl required in Paragraph 2. The October 31, 2022, potentiometric surface map (Figure 1) shows the groundwater flow gradient was from the Rito Seco alluvium to the West Pit backfill. Therefore, site operations demonstrated the West Pit backfill groundwater level was maintained at or below an elevation of 8582 ft. amsl through the quarter. Therefore, no requirement(s) to initiate actions contained within the schedule of compliance for Section 5.3 is required.*

4) The quality of groundwater in the vicinity of the West Pit shall be monitored on a monthly basis in the Rito Seco alluvial groundwater monitoring wells M-19, M-21, M-24 and M-11R for the purposes of monitoring the changes in the quality of the plume or affected groundwater in the Rito Seco alluvial aquifer. Groundwater quality in these monitoring wells will be analyzed for pH, temperature, total dissolved solids, calcium, sulfate, manganese, fluoride, copper, and iron for the purpose of evaluating the status of the groundwater quality in the downgradient groundwater plume. The groundwater quality data will be summarized and transmitted to the WQCD in the quarterly BMP report required under Part I, Section E.1 of this permit.

   Compliance Action Taken: *Battle Mountain Resources, Inc. collected monthly groundwater samples in the vicinity of the West Pit backfill area from Rito Seco alluvial monitoring wells M-19, M-21, M-24 and M-11R. No corrective action is required under the Paragraph 4 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 4 – Rito Seco Alluvial Groundwater Quality Summary

Analyte	Reporting Units	Sample Date	Monitoring Well Identifier			
			M-11R	M-19	M-21	M-24
pH	SU	10/03/2022	7.12	6.52	6.86	6.86
		11/01/2022	7.01	6.48	6.53	6.83
		12/05/2022	7.06	6.52	6.73	6.89
Temperature	°C	10/03/2022	9.4	11.5	8.2	8.2
		11/01/2022	10.1	11.3	8.3	8.6
		12/05/2022	9.4	11.5	8.1	8.1
Calcium, Total	mg/L	10/03/2022	83.3	20.3	33.6	86.0
		11/01/2022	77.1	18.3	29.0	81.5
		12/05/2022	75.7	18.6	28.4	78.3
Copper, Dissolved	mg/L	10/03/2022	LT 0.002	LT 0.002	LT 0.002	LT 0.002
		11/01/2022	LT 0.002	LT 0.002	LT 0.002	LT 0.002
		12/05/2022	LT 0.002	LT 0.002	LT 0.002	LT 0.002
Fluoride	mg/L	10/03/2022	LT 1.25	0.832	1.30	LT 1.25
		11/01/2022	0.828	0.819	1.18	LT 1.25
		12/05/2022	0.842	0.811	1.30	LT 1.25
Iron, Dissolved	mg/L	10/03/2022	LT 0.15	0.224	LT 0.15	4.43
		11/01/2022	LT 0.15	LT 0.15	LT 0.15	4.31
		12/05/2022	LT 0.15	LT 0.15	LT 0.15	4.18
Manganese, Dissolved	mg/L	10/03/2022	0.115	0.103	0.364	0.911
		11/01/2022	0.101	0.056	0.295	0.893
		12/05/2022	0.137	LT 0.05	0.351	0.875
Sulfate	mg/L	10/03/2022	101	6.42	7.89	140
		11/01/2022	108	7.63	7.47	140
		12/05/2022	105	7.48	8.20	134
Total Dissolved Solids	mg/L	10/03/2022	336	100	136	408
		11/01/2022	340	92	128	410
		12/05/2022	340	104	136	404

5) The historical seeps were caused by the plume of affected groundwater and may, in the future, also be caused by natural variation in the flow of groundwater in the vicinity of the area where the past seeps occurred. The permittee shall conduct a monthly visual inspection of the area of historical seeps and the permittee shall report any seepage flow that is associated with the area historic seepage expression, as is identified in Figure 2 of the permit. Results of the seep monitoring shall be tabulated and summarized in the quarterly BMP report.

   If these inspections identified the occurrence of seeps, the permittee will be required to communicate verbally to the WQCD within 24 hours of the seepage observation, followed by written notification within 7 calendar days of the seepage observation. Verbal updates will then be provided to the WQCD every second day thereafter until the WQCD has made a determination regarding the status of the West Pit groundwater control system through the implementation of the following compliance schedule.

Compliance Action Taken: *Battle Mountain Resources, Inc. performed monthly visual seepage expression inspections in the historic seepage area identified in Figure 2 of the permit. Visual observations during these inspections are shown in Table 5. No seepage expressions were observed in the historic seepage area during the fourth quarter of 2022. Therefore, no verbal or written notifications were required and the implementation of the compliance schedule was not required. No corrective action is required under the Paragraph 5 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 5 – Monthly Seepage Expression Inspection Tabulation

Visual Inspection Date	Was Visual Observation of Seepage Determined in the Area of the Historic Seepage Expression	Comments
10/31/2022	No	All Dry
11/30/2022	No	All Dry
12/30/2022	No	All Dry

6) The BMP for the groundwater flow downgradient from the groundwater divide (see section VI.A.2 for the Rationale) that has been developed in the Rito Seco alluvial aquifer consists of a groundwater capture system in conjunction with groundwater table elevation control in the West Pit. The water management plan for the Rito Seco alluvial aquifer consists of pumping two groundwater capture wells (M-32 and M-33) located downgradient of the plume of affected groundwater. This action will allow flushing of constituents in the groundwater of the Rito Seco alluvial aquifer in that portion (plume) of the aquifer affected by previous flow of groundwater from the West Pit. Measurements of the groundwater table elevations will be taken on a weekly basis from M-32 and M-33. This data shall be tabulated and reported for outfall 002 on the quarterly BMP report, and the data will be used to evaluate compliance with the following permit limitation.

   The groundwater table elevation, based on the average of all measured values for each calendar month at M-32 and M-33 in the Rito Seco alluvial aquifer, must be equal to or lower than an elevation of 8540 ft. amsl.

   If the average monthly groundwater table elevations measured in the Rito Seco alluvial aquifer at M-32 and M-33 is greater than 8540 ft. amsl, the permitee shall initiate the following compliance schedule within 24 hours of the determination of groundwater table elevation exceedance.

Compliance Action Taken: *Battle Mountain Resources, Inc. measured the alluvial aquifer monitoring wells (M-32 and M-33) weekly and the resulting elevations are presented in Table 6. The groundwater elevations for wells M-32 and M-33 were averaged by calendar month and the results are shown in Table 6. The October, November, December 2022 averages were below the 8540 ft. amsl required under Paragraph 6. Therefore, site operations were in full compliance of Part I, Section 5.5 and there were no requirements(s) to initiate actions contained within the schedule of compliance for Section 5.5. No corrective action is required under Paragraph 6 specific requirement and scheduled compliance monitoring will continue unchanged next quarter.*

Table 6 – Weekly/Monthly Rito Seco Alluvial Aquifer Average Groundwater Table Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)	Month (2022)	Average Monthly Groundwater Elevation (ft amsl)
M-32	10/05/2022	8531.32	October	8530.93
	10/12/2022	8530.56		
	10/19/2022	8530.73		
	10/26/2022	8531.06		
	10/31/2022	8530.96		
	11/02/2022	8530.99	November	8529.41
	11/09/2022	8530.25		
	11/16/2022	8531.18		
	11/23/2022	8531.67		
	11/30/2022	8526.19		

Table 6 (Cont) – Weekly/Monthly Rito Seco Alluvial Aquifer Average Groundwater Table Elevations

Monitoring Well Identification	Observation Date	Groundwater Elevation (ft amsl)	Month (2022)	Average Monthly Groundwater Elevation (ft amsl)
M-32	12/07/2022	8527.52	December	8529.46
	12/14/2022	8528.24		
	12/21/2022	8528.14		
	12/28/2022	8531.60		
	12/30/2022	8531.80		
M-33	10/05/2022	8536.89	October	8537.84
	10/12/2022	8537.74		
	10/19/2022	8537.97		
	10/26/2022	8538.23		
	10/31/2022	8538.37		
	11/02/2022	8538.34	November	8533.96
	11/09/2022	8526.88		
	11/16/2022	8534.25		
	11/23/2022	8534.36		
	11/30/2022	8534.97		
	12/07/2022	8535.22	December	8535.51
	12/14/2022	8535.25		
	12/21/2022	8535.72		
	12/28/2022	8535.71		
	12/30/2022	8535.66		

7) The water quality of the Rito Seco will be assessed using surface water quality collected at RS-2, as shown in Figure 3. Surface water monitoring in the Rito Seco shall be conducted at RS-2 on a monthly basis and the laboratory analytical results shall be submitted to the WQCD in the quarterly BMP report. Water quality samples collected at RS-2 shall be analyzed for the following constituents: calcium, magnesium, sodium, potassium, ammonia, total dissolved solids, total hardness, pH, total suspended solids, cyanide (WAD and total), bicarbonate, alkalinity, chloride, sulfate, nitrate-nitrite, fluoride and the total and dissolved concentrations of aluminum, arsenic, barium, boron, cadmium, copper, chromium, iron, lead, manganese, mercury, nickel, selenium, silica, silver and zinc. The following compliance schedule shall be implemented in the event that any constituent exceeds the applicable water quality standards for the Rito Seco.

Compliance Action Taken: *Battle Mountain Resources, Inc. collected monthly surface water samples in October, November, December 2022 at location RS-2, as shown in Figure 3 of the permit. Results of analyses performed on these samples are shown in Table 7. The results of the laboratory analytical testing show that the applicable water quality standards were met for the Rito Seco during the months of October, November, December 2022. Site operations were in full compliance of Part I, Section 5.7 and there was no requirement(s) to initiate actions contained within the schedule of compliance for Section 5.7. Scheduled compliance monitoring will continue unchanged next quarter.*

Table 7 – RS-2 Surface Water Quality Results

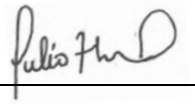
Analyte	Reporting Units	10/03/2022	11/01/2022	12/05/2022
Alkalinity	mg/L as $CaCO_3$	57.3	48.7	56.4
Aluminum, Dissolved	mg/L	LT 0.25	LT 0.25	LT 0.25
Aluminum, Total	mg/L	0.610	LT 0.25	LT 0.25
Ammonia as N	mg/L	LT 0.2	LT 0.2	LT 0.2
Arsenic, Dissolved	mg/L	LT 0.001	LT 0.001	LT 0.001
Arsenic, Total	mg/L	LT 0.001	LT 0.001	LT 0.001
Barium, Dissolved	mg/L	LT 0.035	LT 0.035	LT 0.035
Barium, Total	mg/L	LT 0.035	LT 0.035	LT 0.035
Bicarbonate as CaCO3	mg/L	57.3	48.7	56.4
Boron, Dissolved	mg/L	LT 0.1	LT 0.1	LT 0.1
Boron, Total	mg/L	LT 0.1	LT 0.1	LT 0.1
Cadmium, Dissolved	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Cadmium, Total	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Calcium, Total	mg/L	14.5	13.3	15.1
Carbonate as CaCO3	mg/L	LT 20	LT 20	LT 20
Chloride	mg/L	LT 2	4.36	LT 2
Chromium, Dissolved	mg/L	LT 0.002	LT 0.002	LT 0.002
Chromium, Total	mg/L	LT 0.002	LT 0.002	LT 0.002
Copper, Dissolved	mg/L	LT 0.002	LT 0.002	LT 0.002
Copper, Total	mg/L	LT 0.002	LT 0.002	LT 0.002
Cyanide, Total	mg/L	LT 0.01	LT 0.01	LT 0.01
Cyanide, WAD	mg/L	LT 0.01	LT 0.01	LT 0.01
Fluoride	mg/L	0.39	0.89	0.51
Hardness as CaCO3	mg/L	49.0	50	56
Iron, Dissolved	mg/L	0.167	0.160	LT 0.15
Iron, Total	mg/L	0.907	0.272	0.537
Lead, Dissolved	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Lead, Total	mg/L	0.00057	LT 0.0005	LT 0.0005
Magnesium, Total	mg/L	3.82	4.12	4.07
Manganese, Dissolved	mg/L	LT 0.05	LT 0.05	LT 0.05
Manganese, Total	mg/L	0.068	LT 0.05	LT 0.05
Mercury, Dissolved	mg/L	LT 0.001	LT 0.001	LT 0.001
Mercury, Total	mg/L	LT 0.001	LT 0.001	LT 0.001
Nickel, Dissolved	mg/L	LT 0.001	LT 0.04	LT 0.04
Nickel, Total	mg/L	LT 0.04	LT 0.04	LT 0.04
Nitrate+Nitrite as N	mg/L	LT 0.1	LT 0.1	LT 0.1
pH	SU	7.25	6.60	7.68
Potassium, Total	mg/L	1.20	1.13	1.01
Selenium, Dissolved	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Selenium, Total	mg/L	LT 0.00025	LT 0.00025	LT 0.00025
Silica, Total	mg/L	12.9	11.9	12.9
Silver, Dissolved	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Silver, Total	mg/L	LT 0.0005	LT 0.0005	LT 0.0005
Sodium, Total	mg/L	3.51	11.0	4.03
Sulfate	mg/L	2.21	16.6	4.33
Total Dissolved Solids	mg/L	78	96	80
Total Suspended Solids	mg/L	LT 20	LT 20	LT 20
Zinc, Dissolved	mg/L	LT 0.05	LT 0.05	LT 0.05
Zinc, Total	mg/L	LT 0.05	LT 0.05	LT 0.05

8) If any component of the groundwater control system is not performing within the limits set forth in this permit, the permittee will be required to initiate appropriate compliance schedule activities, including the preparation of a response plan, for any and all components of the groundwater control system that do not meet the applicable

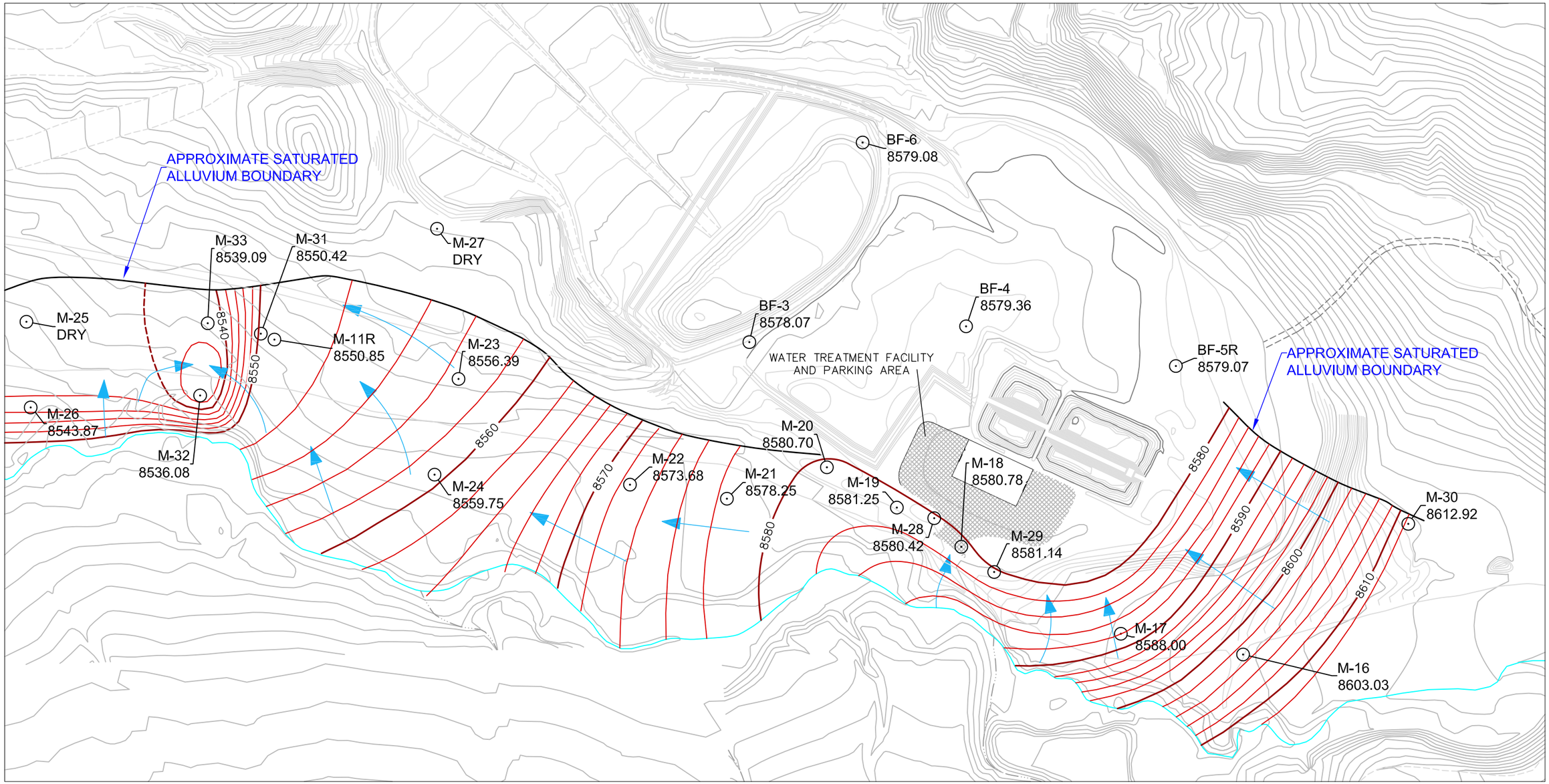
requirements. The permittee shall also conduct weekly sampling at RS-2 until such time as the other compliance schedule activity(ies) have been completed.

Compliance Action Taken: *As demonstrated by the information and data presented in this report, all components of the groundwater control system performed within the limits set forth in the permit. Therefore, site operations were in full compliance of Part I, Section 8 and there was no requirement(s) to initiate actions contained within the schedule of compliance for Section 8.*

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is to the best of my knowledge and belief, is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Julio Madrid Signature: 

Date: January 26, 2023



KEY

NORTH

SCALE IN FEET
0 200

GROUND WATER FLOW DIRECTION

LINE OF EQUIPOTENTIAL
HYDRAULIC HEAD
8560

M-23 8555.72
WELL NAME
WATER LEVEL

NO	REVISION DESCR.	DATE	BY
A			
B			
C			
1			
2			

ALLUVIAL GROUND WATER
POTENTIOMETRIC SURFACE MAP
FOURTH QUARTER (OCTOBER 2022)

SAN LUIS PROJECT

Battle Mountain Resources, Inc.
San Luis, California

ISSUED BY
Engineering Analytics, Inc.

Drawn By:	RDP
Designed By:	AF
Approved By:	AF
Date:	1/25/2023
Project:	21010506
Scale:	1" = 200'
Sheet Number:	1

O:_05 San Luis\POTENTIOMETRIC MAPS\GW Map 2022 4th qtr\Groundwater 2022 4th Qtr.dwg SAVED:10/16/22 PRINTED:1/25/23

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

October 21, 2022

Julio Madrid
Battle Mountain Resources, Inc.
P.O. Box 310
San Luis, CO 81152

Dear Julio:

Enclosed is the report for chronic biomonitoring tests performed for Battle Mountain Resources, Inc. on effluent from the 001B outfall. There was no statistically significant toxicity to either test species at any effluent concentration. The effluent passes WET (Whole Effluent Toxicity) testing requirements for this sampling period.

If you have any questions or concerns, please do not hesitate to contact me at (303) 661-9324.

Best regards,

Catherine McDonald
Laboratory Supervisor
Enclosure(s): Invoice
Report

REPORT OF CHRONIC BIOMONITORING TESTS CONDUCTED FOR BATTLE MOUNTAIN RESOURCES, INC. ON EFFLUENT FROM THE 001B OUTFALL

Prepared for:

Julio Madrid
Battle Mountain Resources, Inc.
P.O. box 310
San Luis, CO 81152

Prepared by:

Catherine McDonald
SeaCrest Group
500 S Arthur Ave. Suite 450
Louisville, Colorado 80027-3065
(303) 661-9324

October 21, 2022

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Chronic Toxicity Test Summary

Test:	7-day static renewal using *Ceriodaphnia dubia* 7-day static renewal using fathead minnow *(Pimephales promelas)*
Client:	Battle Mountain Resources, Inc.
Test Procedure Followed:	*Ceriodaphnia dubia*: EPA/821/R-02-013. Method 1002.0 (2002) fathead minnow: EPA/821/R-02-013. Method 1000.0 (2002)
Sample Number:	422492.B
Dilution Water:	moderately hard laboratory reconstituted water
Test Organism Source:	SeaCrest Group
Reference Toxicant:	Sodium Chloride

Sample	Time of Collection	Date of Collection	Time of Receipt	Date of Receipt
Effluent 1	0600	10-10-2022	1030	10-10-2022
Effluent 2	0600	10-12-2022	1035	10-12-2022
Effluent 3	0600	10-14-2022	1105	10-14-2022

	Ceriodaphnia dubia	fathead minnow
Test Initiation Time	1430	1430
Test Initiation Date	10-10-2022	10-10-2022
Test Completion Time	1400	1330
Test Completion Date	10-16-2022	10-17-2022

INTRODUCTION

Biomonitoring provides an effective means by which the toxicity of discharges from municipal, industrial, and mining operations can be tested. Among the advantages of biomonitoring is the ability to test complex effluents containing a broad range of contaminants. Biomonitoring, when used in conjunction with chemical analyses, can generate data capable of identifying a much wider range of contaminants.

The Colorado Water Quality Control Division requires certain NPDES permittees to perform acute and/or chronic biomonitoring tests. The chronic test measures significant differences in lethality and in reproduction (*Ceriodaphnia dubia*) or growth (fathead minnow – *Pimephales promelas*) between control and effluent-exposed organisms.

The present report discusses the results of chronic biomonitoring tests conducted on effluent from the Battle Mountain Resources, Inc. 001B discharge. These tests were conducted in accordance with EPA and State of Colorado procedures in October 2022.

MATERIALS AND METHODS

Sample Collection

Two gallons of the effluent were collected on three separate dates as specified in Permit CO-0045675. Samples were delivered chilled to the SeaCrest lab where they were held at 0-6°C. Chain of custody forms showing sample collection and laboratory arrival times are included (Appendix 1).

Dilution Water

Laboratory reconstituted water was used as both the dilution water source and the control for the tests. Reconstituted water for the *Ceriodaphnia dubia* test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, potassium chloride, and sodium selenate to deionized water. Reconstituted water for the fathead minnow test was produced by adding sodium bicarbonate, calcium sulfate, magnesium sulfate, and potassium chloride to deionized water.

Test Organisms

The biomonitoring test used *Ceriodaphnia dubia,* cultured in the SeaCrest laboratory. The organisms are cultured in brood culture boards from which individual females are monitored for survival and reproduction for periods of up to two weeks. Neonates less than 24-hours old, released from third or subsequent broods of eight or more within an 8-hour period, are collected from the brood chambers and used in tests. The animals are fed daily with a mixture of Yeast, Cereal Leaves, and Trout Chow (YCT), produced in-house. This is supplemented with cultured green algae *(Selenastrum capricornutum)* provided by Aquatic Biosystems.

Less than one-day-old fathead minnow, cultured in the laboratory, were also used in the test. Adult fish are maintained in 10-gallon aquaria where females deposit their eggs on the under-surface of split PVC pipe sections. The eggs are collected daily and transferred to aerated containers where they hatch after three to four days. The larval fish are fed newly hatched brine shrimp *(Artemia* sp.) at least twice per day.

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In-house organisms are tested monthly in a reference toxicant test using sodium chloride to monitor overall health and test reproducibility (Appendix 4).

Test Procedures

Upon receipt at the lab, samples were analyzed for alkalinity, ammonia, chlorine, conductivity, dissolved oxygen, hardness, and pH.

Methods used in chemical analysis

Alkalinity	EPA 310.2	Hach 8203	I-2030-85.2
Ammonia	SM4500-NH_3, C-E1997	ASTM D1426-08	
Chlorine	SM4500-Cl D	Hach 10026	
Conductivity	SM2510		
Dissolved Oxygen	SM4500-O	Electrode: G-2001	Winkler (QC): B-F-2001
Hardness	SM2340 B or C	Hach 8213	
pH	SM4500-H+ B-2000		

The test followed procedures in EPA[3] and CDPHE[4] guidelines. Exposure concentrations included control (0%), 13%, 26%, 52%, 76%, and 100% mixtures, diluted with moderately hard laboratory reconstituted water.

Individual *Ceriodaphnia dubia* were placed in 30ml plastic containers containing approximately 15ml of exposure medium. Ten replicates at each concentration were used. The animals were fed daily with the YCT mixture and an equal volume of the green algae *(Selenastrum capricornutum)*. The exposure medium was changed daily in each container and the number of young released overnight were counted and recorded. Young were removed from the containers daily and discarded. Routine measurements were made each day of temperature, dissolved oxygen, and pH before and after the water changes.

Fathead minnow were exposed in 500ml plastic cups to which 250ml of media was replaced daily. Four replicates were used at each concentration. Ten fish, less than 24-hours old, were placed in each cup. The fish were monitored daily for survival and fed live brine shrimp at least twice per day. After seven days, the fish were removed from the cups, euthanized with isopropyl alcohol, and then placed in aluminum pans and dried in an oven for a minimum of six hours at 100°C. The pans were then weighed on a five-place analytical balance to determine the average dry weight of the fish from each replicate.

Data Analysis

Data from the tests were analyzed on a personal computer using the CETIS program (developed by Tidepool Scientific Software). Statistical tests used in the analyses are shown in Table 1. Test acceptability was determined using control survival and reproduction/growth criteria, concentration-response relationships, and percent minimum significant differences (USEPA [5,6]).

Table 1. Statistical methods used in testing for significant differences in test parameters.

Variance	Distribution
Bartlett Equality of Variance Test	Shapiro-Wilk W Normality Test

Statistical Difference				
Species	Survival	Growth	Reproduction	IC_{25}
Ceriodaphnia dubia	Fisher Exact/Bonferroni-Holm Test	N/A	Dunnett Multiple Comparison Test	ICp
fathead minnow	Steel Many-One Rank Sum Test	Dunnett Multiple Comparison Test	N/A	ICp

RESULTS

Ceriodaphnia dubia Test Results

Test results for the *Ceriodaphnia dubia* are summarized in Table 2 and provided on the data sheets located in Appendix 2. Survival was 100% in the 100% effluent and was 100% in the remaining effluent concentrations. Control survival was 90%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL (No Observed Effect Level) for lethality was 100% and the LC_{25} (Lethal Concentration 25) for lethality was >100%.

Average number of neonates was 19.8 in the 100% effluent concentration and ranged from 19.6 – 21.6 in the remaining effluent concentrations. Average number of neonates in the control was 20.4 for statistical analyses and test acceptability criteria. No statistically significant differences in the number of neonates were found between the control and any effluent concentration. The NOEL for reproduction was 100% and the IC_{25} (Inhibition Concentration 25) for reproduction was >100%.

Table 2. Summary of *Ceriodaphnia dubia* test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Mean Neonates	Min.	Max.	Significant Difference	
					Lethality	Reprod.
Control (0%)	90	20.4	2	33		
13%	100	20.5	11	29		
26%	100	19.9	9	27		
52%	100	21.6	15	26		
76%	100	19.6	10	26		
100%	100	19.8	8	30		

Fathead Minnow Test Results

Fathead minnow results are summarized in Table 3 and are provided on data sheets in Appendix 3. Survival was 98% in the 100% effluent concentration and ranged from 98% - 100% in the remaining effluent concentrations. Control survival was 100%. No statistically significant lethality was measured in any effluent concentration when compared to the control. The NOEL for lethality was 100% and the LC_{25} for lethality was >100%.

Average weight in the 100% effluent concentration was 0.412mg and ranged from 0.366mg - 0.386mg per individual in the remaining effluent concentrations. Average weight for the control fish was 0.369mg for statistical analyses and test acceptability criteria. No statistically significant differences for growth were measured in any effluent concentration when compared to the control. The NOEL for growth was 100% and the IC_{25} for growth was >100%.

Table 3. Summary of fathead minnow test results. An asterisk (*) denotes a statistically significant difference from the control.

Concentration	Percent Survival	Average Weight (mg)	Min.	Max.	Significant Difference	
					Lethality	Growth
Control (0%)	100	0.369	0.339	0.413		
13%	98	0.384	0.354	0.412		
26%	98	0.386	0.365	0.406		
52%	100	0.366	0.327	0.391		
76%	100	0.374	0.356	0.405		
100%	98	0.412	0.383	0.448		

Test Acceptability

Acceptable control survival (80%) was achieved in both tests. Similarly, *Ceriodaphnia dubia* reproduction (average 15 neonates/organism) and fathead minnow growth (average 0.250mg/test container) in control organisms met required levels. PMSD was within the required limits for an acceptable test (Table 4).

Table 4. PMSD for chronic test parameters.

	fathead minnow growth		*C. dubia* reproduction	
	Lower bound	Upper bound	Lower bound	Upper bound
PMSD	12	30	13	47
(% Minimum significant difference)	12.9		33.3	

DISCUSSION

A failed test for this discharge occurs when there is an NOEL or IC_{25} less than the IWC (Instream Waste Concentration) of 52%. The NOEL represents the highest effluent concentration at which no statistically significant effect is observed. The IC_{25} represents an estimate of the effluent concentration that would cause a 25 percent reduction of a non-quantal biological measurement. A violation for this discharge occurs when both the NOEL and the IC_{25} are less than the IWC. Since neither test species demonstrated statistically significant differences meeting these criteria, the discharge passes WET testing requirements for this sampling period.

REFERENCES

1. **Hach Chemical Company.** 2008. *Hach's Water Analysis Handbook.* Fifth Edition. Hach Chemical Company, Loveland, Colorado. Digital Medium.
2. **APHA/AWWA/WEF.** 1998. *Standard Methods for the Examination of Water and Wastewater.* 20th Edition. American Public Health Association, Washington, D.C.
3. **USEPA.** 2002. *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms.* EPA-821-R-02-013. 335 pp.
4. **CDPHE (Colorado Department of Public Health and Environment).** 1998. *Laboratory Guidelines for Conducting Whole Effluent Toxicity Tests.* Water Quality Control Division.
5. **USEPA.** 2000. *Method of Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 CFR Part 136). EPA/821/B-00/004.
6. **USEPA**. 2000. *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications under the National Pollutant Discharge Elimination System Program.* EPA/833/R-00/003.

Appendix 1 – Chain of Custody with Sample Receipt Forms

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: BMRI
P. O./Project Number: San Luis
Contact: Julio Madrid
Address: P.O. BOX 310 San Luis, CO 81152
Phone # 719-379-0827 E-Mail: David.Carino@Newmont.com
Fax # N/A Sampler: David S Cariño
Report By: ☒ Mail ☐ PDF ☐ FAX

Analysis (Check all applicable)

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)				Number of Containers	Total Volume
W.E.T Test	10/10/22	0600	comp	422492.B-#1		X															2	2g

Turnaround Requirements (Analytical Testing Only)

_____ Standard (10 days) _____ 6-9 Day
_____ 3-5 Day _____ 1-2 Day
Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

Outfall -001B

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
David S Cariño	10/10/22 0600		10/10/22 10:30				

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2022

Project # 422 492.B
Date: 10/10/22
Sample #: 1
Initials: LR

Samples Were:

1. FedEx UPS Courier Hand Delivery (circle one)
   Notes:

2. Chilled to Ship — Ambient Chilled

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — Y N (NA)
   Notes: same day sample

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: clear, no visible pm
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
422492.B	5.9°C	7.4	7.8	277

Custody Seals:

1. Present on Outer Package — (Y) N
2. Unbroken on Outer Package — (Y) N NA
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — Y N

OM

Battle Mountain Gold Mine NPDES WET Test Log

Treatment System Flow Rate 540 GPM
ISCO Sampling Schedule 100 ml per 10 minutes
Start Sample Program: Time 0600
End Sample Program: Time 0600 Date 10/10/22 Circle One: (M) W F

Sampling Personnel: A. Taylor, R. Lucero, S. Maestas, D. Cariño

~3 Hour Time 0900 Observation good water flow, power on to Sampler, Sample Container on ice

~6 Hour Time 1200 Observation good water flow, power on to Sampler, Sample container on ice

~9 Hour Time 1500 Observation good water flow, power on to Sampler, Sample container on ice

~12 Hour Time 1800 Observation good water flow, power on to Sampler, Sample container on ice

~15 Hour Time 2100 Observation Good water flow, power on to Sampler, Sample Container on ice

~18 Hour Time 2400 Observation good water flow, power on to Sampler, Sample Container on ice

~21 Hour Time 0300 Observation good water flow, Power on to Sampler, Sample Container on ice

~24 Hour Time 0600 Observation good water flow, Power on to Sampler, Sample Container on ice

Total Volume Collected 4 gallons
Volume sent to lab 2 gallons

Samples packed on ice [X]
Completed COC [X]
Cooler Sealed [X]
~~UPS pick up on time~~ [ ]

BMRI Delivered [X]

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: BMRI

P. O./Project Number: San Luis

Contact: Julio Madrid

Address: P.O. BOX 310 San Luis, CO, 81157

Phone # 719-379-0827 E-Mail: David.Carino@Newmont.com

Fax # N/A Sampler: David S Cariño

Report By: ☒ Mail ☐ PDF ☐ FAX

Analysis (Check all applicable)

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)				Number of Containers	Total Volume
W.E.T. Test	10/12/22	0600	Comp	422923 #2		X															2	2

Turnaround Requirements (Analytical Testing Only)

_____ Standard (10 days) _____ 6-9 Day

_____ 3-5 Day _____ 1-2 Day

Requested Report Date:

Test Species: ☒ Fathead Minnow ☒ Cerio daphnia ☐ Daphnia magna ☐ Daphnia pulex ☐ Other (List Below)

Special Instructions/Comments:

outfall - 001B

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
David S Cariño	10/12/22 0600	D. Thainton	10/12/22 10:35				

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2022

Project # 422 492.B
Sample #: 2
Date: 101222
Initials: JT

Samples Were:

1. FedEx UPS Courier Hand Delivery (circle one)
   Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — Y N (NA)
   Notes: same day sample

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: clear, no visible pm
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
492.B #2	8.2°C	7.6	7.6	729

Custody Seals:

1. Present on Outer Package — (Y) N
2. Unbroken on Outer Package — (Y) N NA
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — (Y) N

Battle Mountain Gold Mine NPDES WET Test Log

Treatment System Flow Rate 540 GPM
ISCO Sampling Schedule 100 ml per 10 minutes
Start Sample Program: Time 0600
End Sample Program: Time 0600 Date 10/12/22 Circle One: M (W) F

Sampling Personnel: A. Taylor, D. Carino, S. Maestas, R. Lucero

~3 Hour Time 0900 Observation good water flow, Power on to Sampler, Sample container on ice

~6 Hour Time 1200 Observation good water flow, Power on to Sampler, Sample Container on ice

~9 Hour Time 1500 Observation good water flow, Power on to Sampler, Sample container on ice

~12 Hour Time 1800 Observation good water flow, Power on to Sampler, Sample Container on ice

~15 Hour Time 2100 Observation good water flow, Power on to Sampler, Sample Container on ice

~18 Hour Time 2400 Observation good water flow, Power on to Sampler, Sample Container on ice

~21 Hour Time 0300 Observation good water flow, Power on to Sampler, Sample Container on ice

~24 Hour Time 0600 Observation good water flow, Power on to Sampler, Sample Container on ice

Total Volume Collected 4 gallons
Volume sent to lab 2 gallons
Samples packed on ice X
Completed COC X
Cooler Sealed X
~~UPS pick up on time~~ ~~[ ]~~

BMRI Delivered X

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

CHAIN OF CUSTODY

500 S. Arthur Avenue, Unit 450 - Louisville, CO 80027
(303) 661.9324 - FAX (303) 661.9325

Client/Project Name: BMRI
P. O./Project Number: San Luis
Contact: Julio Madrid
Address: P.O. BOX 310 San Luis, CO 81152
Phone # 719-379-0827 E-Mail: David.Carino@Newmont.com
Fax # N/A Sampler: David S Carino
Report By: [X] Mail [ ] PDF [ ] FAX

Analysis (Check all applicable)

Sample Location or ID	Date	Time	Grab/ Comp	Lab ID (LAB Use Only)	WET: Acute (Indicate Below)	WET: Chronic (Indicate Below)	WET: Accelerated (Indicate Below)	WET: PTI/TIE/TRE (Indicate Below)		Metals (List Below)	Solids (TS/TDS/TSS) (Circle)	Anions (List Below)	Chromium III/VI (Circle)	Oil and Grease	Coliform (Total/Fecal/E-Coli) (Circle)	BOD/COD (Circle)	Other Analysis (List Below)				Number of Containers	Total Volume
W.E.T. Test	10/14/22	0600	COMP	422492.B#3		X															2	2gal

Turnaround Requirements (Analytical Testing Only)

_____ Standard (10 days) _____ 6-9 Day
_____ 3-5 Day _____ 1-2 Day
Requested Report Date:

Test Species: [X] Fathead Minnow [X] Cerio daphnia [ ] Daphnia magna [ ] Daphnia pulex [ ] Other (List Below)

Special Instructions/Comments:

Outfall - 001B

Relinquished By (1)		Received By (1)		Relinquished By (2)		Received By (2)	
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
David S Carino	10/14/22 0600	J. Thornton	10/14/22 1105				

SeaCrest Group
Louisville, CO

Sample Receipt Form

Form #: 42
Effective: January 2022

Project # 422492.B #3 Sample #: 3
Date: 10/14/22 Initials: FM
Samples Were:

1. FedEx UPS Courier (Hand Delivery) (circle one)
   Notes:

2. Chilled to Ship — Ambient (Chilled)

3. Cooler Received Broken or Leaking — Y (N) NA
   Notes:

4. Sample Received Broken or Leaking — Y (N)
   Notes:

5. Received Within 36hr Holding Time — (Y) N
   Notes:

6. Aeration necessary — Y (N)

7. pH adjustment necessary — Y (N)

8. Sample Received at Temperature between 0-6° C . — Y N (NA)
   Notes:

9. Description of Sample (Color, Odor, and/or Presence of Particulate Matter):
   Effluent: Clear, No visible PM
   Receiving: N/A
   Presence of native species: Y (N)

Lab #	Temp	D.O.	pH	Cond
492#3	8.1°C	8.1	7.8	230

Custody Seals:

1. Present on Outer Package — (Y) N
2. Unbroken on Outer Package — (Y) N NA
3. Present on Sample — Y (N)
4. Unbroken on Sample — Y N (NA)

Custody Documentation (Chain of Custody):

1. Present Upon Receipt of Sample — (Y) N

JM

Battle Mountain Gold Mine NPDES WET Test Log

Treatment System Flow Rate 540 GPM
ISCO Sampling Schedule 100 ml per 10 minutes
Start Sample Program: Time 0600
End Sample Program: Time 0600 Date 10/14/22 Circle One: M W (F)

Sampling Personnel: A. Taylor, S. Maestas, R. Lucero, D. Carino

~3 Hour Time 0900 Observation good water flow, power on to Sampler, Sample container on ice

~6 Hour Time 1200 Observation good water flow, power on to Sampler, Sample container on ice

~9 Hour Time 1500 Observation good water flow, power on to Sampler, Sample container on ice

~12 Hour Time 1800 Observation good water flow, power on to Sampler, Sample container on ice

~15 Hour Time 2100 Observation good water flow, power on to Sampler, Sample Container on ice

~18 Hour Time 2400 Observation good water flow, power on to Sampler, Sample Container on ice

~21 Hour Time 0300 Observation good water flow, power on to Sampler, Sample Container on ice

~24 Hour Time 0600 Observation good water flow, power on to Sampler, Sample Container on ice

Total Volume Collected 4 gallons
Samples packed on ice ☒
Completed COC ☒
Cooler Sealed ☒
~~UPS pick up on time ☒~~

Volume sent to lab 2 gallons
Contacts Lab: 303-794-8976 (Henry Latimer)

BmRI Delivered ☒

Appendix 2 – Data Sheets for the *Ceriodaphnia dubia* Test

WET TEST REPORT FORM – CHRONIC

Permittee: Battle Mountain Resources, Inc.

Permit No.: CO-0045675

Outfall: 001B – IWC: 52%

Test Type: Routine ☒ Accelerated ☐ Screen ☐

Test Species: *Ceriodaphnia dubia*

Test Start Time	Test Start Date	Test End Time	Test End Date
1430	10-10-2022	1400	10-16-2022

Test Results	Lethality/TCP3B	Reproduction/TKP3B
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	13%	26%	52%	76%	100%
Exposed organisms	10	10	10	10	10	10
Survival for day 1	10	10	10	10	10	10
Survival for day 2	10	10	10	10	10	10
Survival for day 3	10	10	10	10	10	10
Survival for day 4	10	10	10	10	10	10
Survival for day 5	9	10	10	10	10	10
Survival for day 6	9	10	10	10	10	10
Mean 3 Brood Total	20.4	20.5	19.9	21.6	19.6	19.8

Hardness (mg/L) – Receiving Water: N/A Effluent: 55/79/72 Recon Water: 94
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 20/11/16 Recon Water: 64
Chlorine (mg/L) – Effluent: <0.01 pH (initial/final) – Control: 8.2/8.1 100%: 7.9/7.9
Total Ammonia as NH_3 (mg/L) - Effluent: 0.03/<0.03/<0.03

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Lindsay Rutherford, Daniela Thornton, and Jason Nelson

Signature Cat McDonald *Date* October 21, 2022

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: March 2022

Permittee: BMRI **Lab #:** 422492.B **Site:** 001B

IWC %: 52 **Template #:** 5 **Dilution Water:** MH22-20 **Sample Date:** 101022

Age & Source: 101022 S126 **Test Start:** 101022 1430 **Test End:** 101622 1400

Test Conditions:

	0	1	2	3	4	5	6	7	Total
(C)	0	0	0	0	2	0 D			2 D
0	0	0	0	4	4	8	6		16
	0	0	0	1	3	9	10		23 5
	0	0	0	0	1	4	0		
	0	0	0	X 3	7	7	10		27
	0	0	0	1	5	10	10		26
	0	0	0	2	4	8	9		23
	0	0	0	2	6	4	9		26
	0	0	0	1	3	9	10		23
	0	0	0	2	9	10	12		33
DO	7.1	6.6 7.0	6.6 6.8	6.7 6.5	7.0 6.9	7.0 6.8	6.9		20.4
Temp	25.6	24.5 25.3	24.3 25.4	24.4 25.0	24.4 25.2	24.8 24.1	24.9		
pH	8.2	7.8 8.1	7.8 7.8	7.9 8.0	7.4 8.1	8.0 8.2	8.1		
Cond	348	341	344	333	355	327			
(1)	0	0	0	3	4	7	13		27
13	0	0	0	2	2	8	14		26
	0	0	0	0	3	9	13		25
	0	0	0	1	4	6	0		11
	0	0	0	1	7	9	12		29
	0	0	0	1	6	8	0		15
	0	0	0	7	5	8	13		20
	0	0	0	6	4	6	14		16
	0	0	0	0	2	8	12		22
	0	0	0	4	4	6	9		14
DO	7.1	6.6 7.2	6.6 7.2	6.7 6.8	7.0 7.2	7.0 6.9	6.9		20.5
Temp	25.6	24.5 25.3	24.3 25.4	24.4 25.0	24.4 25.2	24.8 24.1	24.9		
pH	8.2	7.8 8.1	7.8 7.9	7.9 8.0	7.7 8.1	7.9 8.2	8.1		
Cond	353	360	350	316	314	323			
(2)	0	0	0	5	3	8	11		27
26	0	0	0	1	2	6	0		9
	0	0	0	2	4	9	10		25
	0	0	0	3	2	8	10		23
	0	0	0	1	4	9	0		14
	0	0	0	2	6	6	0		14
	0	0	0	2	10	9	0		21
	0	0	0	1	5	8	9		23
	0	0	0	1	4	8	9		22
	0	0	0	0	4	6	11		21
DO	7.1	6.7 7.4	6.6 7.5	6.7 6.8	7.0 7.4	7.0 7.0	6.9		19.9
Temp	25.6	24.5 25.3	24.3 25.4	24.4 25.0	24.4 25.2	24.8 24.1	24.9		
pH	8.1	7.8 8.1	7.8 8.0	7.8 8.0	7.7 8.0	7.8 8.1	8.0		
Cond	346	351	317	310	311	320			
(3)	0	0	0	2	2	9	8		26
52	0	0	0	0	3	7	9		19
	0	0	0	1	4	6	12		23
	0	0	0	2	1	6	0		15
	0	0	0	1	5	10	10		26
	0	0	0	0	3	8	9		20
	0	0	0	0	4	7	8		20
	0	0	0	1	5	7	10		23
	0	0	0	1	2	6	11		20
	0	0	0	0	6	9	9		24
DO	7.2	6.7 7.6	6.6 7.7	6.7 6.9	7.0 7.6	7.1 7.1	7.0		21.6
Temp	25.6	24.5 25.3	24.3 25.4	24.4 25.0	24.4 25.2	24.8 24.1	24.9		
pH	8.0	7.7 8.0	7.8 8.0	7.8 8.0	7.7 8.0	7.7 8.0	8.0		
Cond	332	335	328	323	321	313			

HW

SeaCrest Group
Louisville, CO

Ceriodaphnia Chronic Benchsheet

Form #: 101a
Effective: March 2022

	0	1	2	3	4	5	6	7	Total
(4)	0	0	0	2	4 +1	0	10		17
	0	0	0	3	9	6	8		26
	0	0	0	2	2	8	11		~~12~~ 23
	0	0	0	0	3	7	0		10
76	0	0	0	1	4	7	9		21
	0	0	0	0	4	6	8		18
	0	0	0	2	6	6	10		24
	0	0	0	0	4	9	12		25
	0	0	0	2	2	8	10		~~12~~ 22
	0	0	0	0	+3	0	6		10
DO	7.2	6.8 | 7.8	6.6 | 7.8	6.7 | 7.3	7.0 | 7.7	7.1 | 7.2	7.0		19.6
Temp	25.6	24.5 | 25.3	24.3 | 25.4	24.4 | 25.0	24.4 | 25.2	24.8 | 24.1	24.1		
pH	8.0	7.1 | 7.9	7.8 | 7.9	7.8 | 7.9	7.7 | 7.9	~~7.8~~ 7.6 | 7.9	7.9		
Cond	288	288	283	213	230	305			
(5)	0	0	0	0	2	8	11		21
	0	0	0	0	2	7	11		20
	0	0	0	2	0	7	10		19
	0	0	0	0	2	6	0		8
	0	0	0	0	6	8	7		21
100	0	0	0	0	9	10	11		30
	0	0	0	2	6	10	11		29
	0	0	0	0	3	8	10		21
	0	0	0	3	3	7	7		~~13~~ 20
	0	0	0	0	4	0	5		9
DO	7.2	6.8 | 8.0	6.7 | 8.0	6.7 | 7.6	7.0 | 7.8	7.1 | 7.3	7.0		19.8
Temp	25.6	24.5 | 25.3	24.3 | 25.4	24.4 | 25.0	24.4 | 25.2	24.8 | 24.1	24.1		
pH	7.9	7.7 | 7.8	7.8 | 7.8	7.7 | 7.8	7.7 | 7.7	7.5 | 7.7	7.9		
Cond	271	270	261	203	219	240			
Algae	ABS	ABS	ABS	ABS	ABS	ABS			
YCT	2207	2207	2207	2207	2207	2207			
H_2O	1	1	2	2	2	3			
Initials	LR	LR	JN	JN	JN	DT	LR		

	Eff #1	Eff #2	Eff #3	Recon
Hardness	55	79	72	94
Alkalinity	20	11	16	14
Chlorine	<0.01	<0.01	<0.01	<0.01
Ammonia	0.03	<0.03	<0.03	<0.03

Exposure Chamber:
Total Capacity: 30mL
Total Solution Volume: 15mL

Feeding Schedule:
Fed daily
Food used: YCT, Algae

Units:
DO: mg/L
Temp: °C
pH: N/A
Cond: µS/cm³
Hardness: mg/L
Alkalinity: mg/L
Chlorine: mg/L
Ammonia: mg/L

Comments: Active and mobile

x:y:z = board #:row:column

1	2	3	4	5	6	7	8	9	10
B8	B10	C3	C5	C6	C8	C9	D1	D2	D3

HW

CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **SeaCrest Group**

Analysis ID:	02-7055-8759	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	17 Oct-22 9:40	**Analysis:**	STP 2xK Contingency Tables	**Status Level:**	1
Batch ID:	09-8929-4736	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	10 Oct-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	16 Oct-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	09-0129-7377	**Code:**	422492.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Oct-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	10 Oct-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU
Untransformed	C > T	100	>100	n/a	1

Fisher Exact/Bonferroni-Holm Test

Control vs	Group	Test Stat	P-Type	P-Value	Decision(α:5%)
Dilution Water	13	1.0000	Exact	1.0000	Non-Significant Effect
	26	1.0000	Exact	1.0000	Non-Significant Effect
	52	1.0000	Exact	1.0000	Non-Significant Effect
	76	1.0000	Exact	1.0000	Non-Significant Effect
	100	1.0000	Exact	1.0000	Non-Significant Effect

Data Summary

Conc-%	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
0	D	9	1	10	0.9	0.1	0.0%
13		10	0	10	1	0	-11.11%
26		10	0	10	1	0	-11.11%
52		10	0	10	1	0	-11.11%
76		10	0	10	1	0	-11.11%
100		10	0	10	1	0	-11.11%

Ceriodaphnia 7-d Survival and Reproduction Test

SeaCrest Group

Analysis ID:	12-3366-0284	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	17 Oct-22 9:40	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	09-8929-4736	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	10 Oct-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	16 Oct-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	09-0129-7377	**Code:**	422492.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Oct-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	10 Oct-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	595771	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
LC5	>100	n/a	n/a	<1	n/a	n/a
LC10	>100	n/a	n/a	<1	n/a	n/a
LC15	>100	n/a	n/a	<1	n/a	n/a
LC20	>100	n/a	n/a	<1	n/a	n/a
LC25	>100	n/a	n/a	<1	n/a	n/a
LC40	>100	n/a	n/a	<1	n/a	n/a
LC50	>100	n/a	n/a	<1	n/a	n/a

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	D	10	0.9000	0.0000	1.0000	0.3162	35.14%	0.0%	9/10	0.9833	0.0%
13		10	1.0000	1.0000	1.0000	0.0000	0.00%	-11.11%	10/10	0.9833	0.0%
26		10	1.0000	1.0000	1.0000	0.0000	0.00%	-11.11%	10/10	0.9833	0.0%
52		10	1.0000	1.0000	1.0000	0.0000	0.00%	-11.11%	10/10	0.9833	0.0%
76		10	1.0000	1.0000	1.0000	0.0000	0.00%	-11.11%	10/10	0.9833	0.0%
100		10	1.0000	1.0000	1.0000	0.0000	0.00%	-11.11%	10/10	0.9833	0.0%

CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **SeaCrest Group**

Analysis ID:	16-3271-4535	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.9.6
Analyzed:	17 Oct-22 9:40	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Batch ID:	09-8929-4736	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	10 Oct-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	16 Oct-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	09-0129-7377	**Code:**	422492.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Oct-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	10 Oct-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	100	>100	n/a	1	33.32%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water		13	-0.03368	2.289	6.797	18	CDF	0.8432	Non-Significant Effect
		26	0.1684	2.289	6.797	18	CDF	0.7785	Non-Significant Effect
		52	-0.4042	2.289	6.797	18	CDF	0.9262	Non-Significant Effect
		76	0.2694	2.289	6.797	18	CDF	0.7413	Non-Significant Effect
		100	0.2021	2.289	6.797	18	CDF	0.7664	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	26.4	5.28	5	0.1198	0.9874	Non-Significant Effect
Error	2380.2	44.0778	54			
Total	2406.6		59			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	9.482	15.09	0.0913	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9546	0.9459	0.0258	Normal Distribution

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	20.4	13.32	27.48	23	2	33	3.128	48.48%	0.00%
13		10	20.5	16.04	24.96	21	11	29	1.973	30.44%	-0.49%
26		10	19.9	15.83	23.97	21.5	9	27	1.798	28.57%	2.45%
52		10	21.6	19.14	24.06	21.5	15	26	1.087	15.92%	-5.88%
76		10	19.6	15.45	23.75	21.5	10	26	1.833	29.57%	3.92%
100		10	19.8	14.74	24.86	20.5	8	30	2.235	35.70%	2.94%

Ceriodaphnia 7-d Survival and Reproduction Test — **SeaCrest Group**

Analysis ID:	12-1254-4511	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.9.6
Analyzed:	17 Oct-22 9:40	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	09-8929-4736	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	10 Oct-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	16 Oct-22	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 0h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:**
Sample ID:	09-0129-7377	**Code:**	422492.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Oct-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	10 Oct-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1660882	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	n/a	n/a	<1	n/a	n/a
IC10	>100	n/a	n/a	<1	n/a	n/a
IC15	>100	n/a	n/a	<1	n/a	n/a
IC20	>100	n/a	n/a	<1	n/a	n/a
IC25	>100	n/a	n/a	<1	n/a	n/a
IC40	>100	n/a	n/a	<1	n/a	n/a
IC50	>100	n/a	n/a	<1	n/a	n/a

Reproduction Summary

			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	D	10	20.4	2	33	9.891	48.48%	0.0%	20.6	0.0%
13		10	20.5	11	29	6.241	30.44%	-0.49%	20.6	0.0%
26		10	19.9	9	27	5.685	28.57%	2.45%	20.6	0.0%
52		10	21.6	15	26	3.438	15.92%	-5.88%	20.6	0.0%
76		10	19.6	10	26	5.797	29.57%	3.92%	19.7	4.37%
100		10	19.8	8	30	7.068	35.70%	2.94%	19.7	4.37%

Appendix 3 – Data Sheets for the Fathead Minnow Test

WET TEST REPORT FORM – CHRONIC

Permittee: Battle Mountain Resources, Inc.

Permit No.: CO-0045675

Outfall: 001B – IWC: 52%

Test Type: Routine ☒ Accelerated ☐ Screen ☐

Test Species: fathead minnow

Test Start Time	Test Start Date	Test End Time	Test End Date
1430	10-10-2022	1330	10-17-2022

Test Results	Lethality/TCP6C	Growth/TKP6C
S code: NOEL	100%	100%
	PASS	**PASS**
P code: LC_{25}/IC_{25}	>100%	>100%
	PASS	**PASS**
T code:	>100%	>100%

Test Summary

Measurements	Control (0%)	13%	26%	52%	76%	100%
Exposed organisms	40	40	40	40	40	40
Survival for day 1	40	40	40	40	40	40
Survival for day 2	40	40	39	40	40	39
Survival for day 3	40	40	39	40	40	39
Survival for day 4	40	40	39	40	40	39
Survival for day 5	40	40	39	40	40	39
Survival for day 6	40	39	39	40	40	39
Survival for day 7	40	39	39	40	40	39
Mean Dry Wt. (mg)	0.369	0.384	0.386	0.366	0.374	0.412

Hardness (mg/L) – Receiving Water: N/A Effluent: 55/79/72 Recon Water: 97
Alkalinity (mg/L) – Receiving Water: N/A Effluent: 20/11/16 Recon Water: 60
Chlorine (mg/L) – Effluent: <0.01 pH (initial/final) – Control: 8.3/7.8 100%: 7.8/7.1
Total Ammonia as NH_3 (mg/L) - Effluent: 0.03/<0.03/<0.03

Were all Test Conditions in Conformance with Division Guidelines? YES ☒ NO ☐
If **NO**, list deviations from test specifications: N/A
Laboratory: SeaCrest Group
Comments:
Analyst's Name: Shanna Wepman, Julie McKenney, and Daniela Thornton

Signature [signature] *Date* October 21, 2022

SeaCrest Group
Louisville, CO

Fathead Minnow Chronic Benchsheet

Form #: 103a
Effective: March 2022

Client: BMRI Site: 0018 Lab #: 422 492.B Sample Date: 101022 IWC: 52 Dilution H_2O: MH22-031

Test Start: 101022-1430 Test End: 101722-1330 Species Info: IH 101022 Template: FHM Test Conditions:

Conc	Read	0	1		2		3		4		5		6		7
0	DO	6.8	5.4	6.8	6.0	6.9	5.9	7.0	5.8	7.0	5.5	7.0	6.4	7.0	5.2
	Temp	24.6	24.9	24.5	24.1	24.1	24.1	24.6	24.2	24.4	24.6	24.6	24.1	24.8	24.1
	pH	8.3	8.0	8.3	8.0	8.3	7.9	8.2	7.9	8.3	7.8	8.3	8.0	8.3	7.8
	Cond	349	349		337		377		373		321		339		
13	DO	6.9	5.4	6.9	6.9	6.9	5.9	7.1	5.8	7.2	5.5	7.0	6.1	7.0	5.1
	Temp	24.8	24.9	24.5	24.1	24.3	24.1	24.5	24.2	24.4	24.6	24.8	24.1	24.8	24.1
	pH	8.2	8.0	8.3	7.9	8.3	7.8	8.2	7.8	8.3	7.7	8.8	7.9	8.3	7.6
	Cond	339	340		336		366		363		317		324		
26	DO	7.0	5.4	6.9	5.8	6.9	5.8	7.2	5.8	7.4	5.4	7.1	5.8	7.1	5.0
	Temp	25.0	24.9	24.4	24.2	24.3	24.1	24.4	24.2	24.4	24.6	25.0	24.2	24.8	24.1
	pH	8.2	7.9	8.2	7.8	8.2	7.7	8.2	7.7	8.2	7.6	8.2	7.7	8.3	7.5
	Cond	329	327		325		350		352		309		314		
52	DO	7.1	5.4	7.0	5.7	7.0	5.8	7.3	5.9	7.6	5.4	7.1	5.5	7.1	4.8
	Temp	25.3	24.9	24.4	24.3	24.7	24.1	24.3	24.2	24.5	24.6	25.2	24.3	24.8	24.2
	pH	8.1	7.8	8.1	7.7	8.0	7.6	8.0	7.6	8.1	7.4	8.0	7.5	8.1	7.4
	Cond	303	304		310		322		321		295		291		
76	DO	7.2	5.4	7.0	5.6	7.0	5.7	7.4	5.9	7.8	5.3	7.2	5.2	7.2	4.6
	Temp	25.6	24.9	24.3	24.4	24.9	24.1	24.2	24.2	24.6	24.6	25.4	24.4	24.8	24.2
	pH	7.9	7.7	7.9	7.6	7.8	7.5	7.9	7.5	7.9	7.3	7.9	7.4	8.0	7.2
	Cond	295	286		293		299		301		282		270		
100	DO	7.4	5.4	7.1	6.5	7.0	5.7	7.6	5.9	8.0	5.3	7.2	4.7	7.2	4.5
	Temp	25.9	24.9	24.3	24.4	25.1	24.1	24.1	24.2	24.5	24.6	25.6	24.4	24.8	24.2
	pH	7.8	7.6	7.6	7.5	7.6	7.4	7.6	7.3	7.6	7.1	7.7	7.3	7.7	7.1
	Cond	277	265		277		279		281		267		227		
	DO														
	Temp														
	pH														
	Cond														
Initials		SW	SW		JM		JM		JM		JT		JM		SW
Water #		1	1		1		2		2		3		3		

	0	1	2	3	4	5	6	7
Feeding								
AM		✓	✓	✓	✓	✓	✓	✓
Initials		SW	JM	JM	JM	JT	JM	SW
PM	✓	✓	✓	✓	✓	✓	✓	
Initials	SW	SW	JM	JM	JM	JT	JM	

	Eff 1	Eff 2	Eff 3	Recon	Rcv 1	Rcv 2	Rcv 3	MR
Hard	55	79	72	97				
Alk	20	11	16	60				
Chlor	<0.01	<0.01	<0.01	<0.01				
NH_3	0.03	<0.03	<0.03	<0.03				

Exposure Chamber

Total Capacity:	500 mL
Test Solution Volume:	250 mL
Test Solution Surface Area:	50.2 cm
Water Depth (constant):	6.5 cm

Feeding Schedule

Fed:	2x per day
Food Used:	<24hr artemia

Units:

DO: mg/L	Hard: mg/L
Temp: °C	Alk: mg/L
pH: N/A	Chlor: mg/L
Cond: µS/cm³	NH_3: mg/L

Comments: active + mobile

	#	Fish & Tare	Tare	Fish Wt mg	Ave wt
0	10	10	10	10	#1	1.12850	1.12511	0.339	0.369
	10	10	10	10	#2	1.15837	1.15469	0.368	
	10	10	10	10	#3	1.13558	1.13145	0.413	
	10	10	10	10	#4	1.13567	1.13211	0.356	
13	10	10	10	10	#5	1.14129	1.13717	0.412	0.384
	10	10	10	10	#6	1.12860	1.12506	0.354	
	10	10	10	10	#7	1.14283	1.13874	0.409	
	10	10	10	10	#8	1.12863	1.12501	0.362	
26	10	10	9	9	#9	1.12373	1.11995	0.378	0.386
	10	10	10	10	#10	1.12807	1.12412	0.395	
	10	10	10	10	#11	1.14167	1.13802	0.365	
	10	10	10	10	#12	1.14145	1.13739	0.406	
52	10	10	10	10	#13	1.14296	1.13969	0.327	0.366
	10	10	10	10	#14	1.13993	1.13602	0.391	
	10	10	10	10	#15	1.13475	1.13114	0.361	
	10	10	10	10	#16	1.13767	1.13382	0.385	
76	10	10	10	10	#17	1.12720	1.12351	0.369	0.374
	10	10	10	10	#18	1.15523	1.15118	0.405	
	10	10	10	10	#19	1.13052	1.12696	0.356	
	10	10	10	10	#20	1.13529	1.13163	0.366	
100	10	10	10	10	#21	1.13769	1.13385	0.384	0.412
	10	10	9	9	#22	1.13024	1.12641	0.383	
	10	10	10	10	#23	1.12817	1.12386	0.431	
	10	10	10	10	#24	1.12360	1.11912	0.448	
	10				#				
	10				#				
	10				#				
	10				#				
pretest		#	1.11614	1.11588		

CETIS Analytical Report

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	08-9663-8597	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	18 Oct-22 15:04	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Batch ID:	08-6000-1971	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	10 Oct-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	17 Oct-22	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	01-1295-1426	**Code:**	422492.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Oct-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	10 Oct-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	C > T	100	>100	n/a	1	6.45%

Steel Many-One Rank Sum Test

Control	vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water		13	16	10	1	6	CDF	0.6105	Non-Significant Effect
		26	16	10	1	6	CDF	0.6105	Non-Significant Effect
		52	18	10	1	6	CDF	0.8333	Non-Significant Effect
		76	18	10	1	6	CDF	0.8333	Non-Significant Effect
		100	16	10	1	6	CDF	0.6105	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0099598	0.001992	5	0.6	0.7006	Non-Significant Effect
Error	0.0597585	0.0033199	18			
Total	0.0697182		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.6694	0.884	4.1E-06	Non-Normal Distribution

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
13		4	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	2.50%
26		4	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	2.50%
52		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
76		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
100		4	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	2.50%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%
13		4	1.371	1.242	1.501	1.412	1.249	1.412	0.04074	5.94%	2.89%
26		4	1.371	1.242	1.501	1.412	1.249	1.412	0.04074	5.94%	2.89%
52		4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%
76		4	1.412	1.412	1.412	1.412	1.412	1.412	0	0.00%	0.00%
100		4	1.371	1.242	1.501	1.412	1.249	1.412	0.04074	5.94%	2.89%

CETIS Analytical Report

Fathead Minnow 7-d Larval Survival and Growth Test — **SeaCrest Group**

Analysis ID:	19-7556-5864	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.9.6
Analyzed:	18 Oct-22 15:04	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	08-6000-1971	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	10 Oct-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	17 Oct-22	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	01-1295-1426	**Code:**	422492.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Oct-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	10 Oct-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	2015938	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
LC5	>100	n/a	n/a	<1	n/a	n/a
LC10	>100	n/a	n/a	<1	n/a	n/a
LC15	>100	n/a	n/a	<1	n/a	n/a
LC20	>100	n/a	n/a	<1	n/a	n/a
LC25	>100	n/a	n/a	<1	n/a	n/a
LC40	>100	n/a	n/a	<1	n/a	n/a
LC50	>100	n/a	n/a	<1	n/a	n/a

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	D	4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	1	0.0%
13		4	0.9750	0.9000	1.0000	0.0500	5.13%	2.5%	39/40	0.9875	1.25%
26		4	0.9750	0.9000	1.0000	0.0500	5.13%	2.5%	39/40	0.9875	1.25%
52		4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	0.9875	1.25%
76		4	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	40/40	0.9875	1.25%
100		4	0.9750	0.9000	1.0000	0.0500	5.13%	2.5%	39/40	0.975	2.5%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
13		1.0000	0.9000	1.0000	1.0000
26		0.9000	1.0000	1.0000	1.0000
52		1.0000	1.0000	1.0000	1.0000
76		1.0000	1.0000	1.0000	1.0000
100		1.0000	0.9000	1.0000	1.0000

Fathead Minnow 7-d Larval Survival and Growth Test — SeaCrest Group

Analysis ID:	16-1222-0498	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.6
Analyzed:	18 Oct-22 15:04	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Batch ID:	08-6000-1971	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	10 Oct-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	17 Oct-22	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	01-1295-1426	**Code:**	422492.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Oct-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	10 Oct-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	100	>100	n/a	1	12.85%

Dunnett Multiple Comparison Test

Control vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water	13	-0.7738	2.407	0.047	6	CDF	0.9688	Non-Significant Effect
	26	-0.8627	2.407	0.047	6	CDF	0.9751	Non-Significant Effect
	52	0.1523	2.407	0.047	6	CDF	0.7846	Non-Significant Effect
	76	-0.2536	2.407	0.047	6	CDF	0.8971	Non-Significant Effect
	100	-2.157	2.407	0.047	6	CDF	0.9995	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0055192	0.0011038	5	1.422	0.2637	Non-Significant Effect
Error	0.0139716	0.0007762	18			
Total	0.0194908		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	1.391	15.09	0.9253	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.941	0.884	0.1717	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.369	0.3186	0.4194	0.362	0.339	0.413	0.01583	8.58%	0.00%
13		4	0.3842	0.3357	0.4328	0.3855	0.354	0.412	0.01526	7.94%	-4.13%
26		4	0.386	0.3572	0.4148	0.3865	0.365	0.406	0.009062	4.70%	-4.61%
52		4	0.366	0.3198	0.4122	0.373	0.327	0.391	0.01453	7.94%	0.81%
76		4	0.374	0.34	0.408	0.3675	0.356	0.405	0.0107	5.72%	-1.35%
100		4	0.4115	0.3589	0.4641	0.4075	0.383	0.448	0.01654	8.04%	-11.52%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.339	0.368	0.413	0.356
13		0.412	0.354	0.409	0.362
26		0.378	0.395	0.365	0.406
52		0.327	0.391	0.361	0.385
76		0.369	0.405	0.356	0.366
100		0.384	0.383	0.431	0.448

Fathead Minnow 7-d Larval Survival and Growth Test — SeaCrest Group

Analysis ID:	16-2131-1905	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.9.6
Analyzed:	18 Oct-22 15:04	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Batch ID:	08-6000-1971	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Lab Tech
Start Date:	10 Oct-22	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Reconstituted Water
Ending Date:	17 Oct-22	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:**
Sample ID:	01-1295-1426	**Code:**	422492.B	**Project:**	WET Quarterly Compliance Test (4Q)
Sample Date:	10 Oct-22	**Material:**	POTW Effluent	**Source:**	NPDES Permit # (XX99999999)
Receipt Date:	10 Oct-22	**CAS (PC):**		**Station:**	001B
Sample Age:	n/a	**Client:**	BMRI		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	546635	1000	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	n/a	n/a	<1	n/a	n/a
IC10	>100	n/a	n/a	<1	n/a	n/a
IC15	>100	n/a	n/a	<1	n/a	n/a
IC20	>100	n/a	n/a	<1	n/a	n/a
IC25	>100	n/a	n/a	<1	n/a	n/a
IC40	>100	n/a	n/a	<1	n/a	n/a
IC50	>100	n/a	n/a	<1	n/a	n/a

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	D	4	0.369	0.339	0.413	0.03165	8.58%	0.0%	0.3818	0.0%
13		4	0.3842	0.354	0.412	0.03051	7.94%	-4.13%	0.3818	0.0%
26		4	0.386	0.365	0.406	0.01812	4.70%	-4.61%	0.3818	0.0%
52		4	0.366	0.327	0.391	0.02905	7.94%	0.81%	0.3818	0.0%
76		4	0.374	0.356	0.405	0.0214	5.72%	-1.35%	0.3818	0.0%
100		4	0.4115	0.383	0.448	0.03307	8.04%	-11.52%	0.3818	0.0%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.339	0.368	0.413	0.356
13		0.412	0.354	0.409	0.362
26		0.378	0.395	0.365	0.406
52		0.327	0.391	0.361	0.385
76		0.369	0.405	0.356	0.366
100		0.384	0.383	0.431	0.448

Appendix 4 – QA/QC and Reference Toxicant Test Chart

Quality Assurance Check List – Chronic Whole Effluent Toxicity Test

Client:	Battle Mountain Resources, Inc.
SeaCrest Sample No:	422492.B
Species Tested:	*Ceriodaphnia dubia* and fathead minnow

Sample Dates	**Start Date of Test (*Ceriodaphnia dubia*)**	**Start Date of Test (fathead minnow)**
10-10-2022		
10-12-2022		
10-14-2022	10-10-2022	10-10-2022

Sample received in lab properly preserved (0-6°C)?	**N***
Sample received at laboratory within 36 hours of collection?	**Y**
Sample delivered on ice or equivalent?	**Y**
Test initiated within 36-hours of collection?	**Y**
Test protocol conforms to CDPHE guidelines (*Ceriodaphnia dubia)*?	**Y**
Test protocol conforms to CDPHE guidelines (fathead minnow)?	**Y**
Average test temp. ±1°C (*Ceriodaphnia dubia*)?	**Y**
Average test temp. ±1°C (fathead minnow)?	**Y**
DO level ≥4.0mg/L; no super-saturation (*Ceriodaphnia dubia*)?	**Y**
DO level ≥4.0mg/L; no super-saturation (fathead minnow)?	**Y**
Survival in control ≥80% (*Ceriodaphnia dubia*)?	**Y**
Survival in control ≥80% (fathead minnow)?	**Y**
Ceriodaphnia dubia neonates <24-hours old?	**Y**
Fathead minnow larvae <24-hours old?	**Y**
Appropriate reference toxicity test conducted?	**Y**
Reference toxicity test results within the confidence limits for the lab?	**Y**

* Samples #2 and #3 were received at 8.2°C and 8.1°C on the same day as sampling.

Author Carl McDonald *Date* October 21, 2022
Position: Laboratory Supervisor

Quality Control Haley Ward *Date* October 21, 2022

SeaCrestGroup
AN ENVIRONMENTAL SERVICES COMPANY

METHOD QC

Method	Analyte	Date	LCS (rec)	%REC	%RPD	QC LIMITS
2320 B	Alkalinity - Total	9/1/2022	104.00%	98.38%	3.77%	± 5.00%
2320 B	Alkalinity - Total	9/6/2022	100.80%	99.25%	0.00%	± 5.00%
2320 B	Alkalinity - Total	9/14/2022	104.00%	97.91%	2.42%	± 5.00%
2320 B	Alkalinity - Total	9/21/2022	100.00%	101.60%	1.17%	± 5.00%
4500 NH_3 D	Ammonia	9/1/2022	99.40%	100.67%	-1.91%	± 10.00%
4500 NH_3 D	Ammonia	9/8/2022	96.20%	96.50%	-4.37%	± 10.00%
4500 NH_3 D	Ammonia	9/15/2022	103.00%	103.00%	-2.45%	± 10.00%
4500 NH_3 D	Ammonia	9/22/2022	97.20%	99.01%	0.82%	± 10.00%
4500 Cl D	Chlorine	9/20/2022	96.88%	87.10%	0.00%	± 5.00, ± 20.00%
2340 B	Hardness - Total	9/7/2022	104.00%	99.10%	1.29%	± 5.00%
2340 B	Hardness - Total	9/12/2022	103.00%	98.00%	1.26%	± 5.00%
2340 B	Hardness - Total	9/20/2022	103.51%	98.90%	-1.17%	± 5.00%
2340 B	Hardness - Total	9/27/2022	103.51%	99.90%	-4.51%	± 5.00%

			LCS (rec)	%REC M1	%REC M2	QC Limits
4500 O	DO - Winkler	9/9/2022	N/A	98.57%	98.57%	± 5.00%
4500 O	DO - Winkler	9/16/2022	N/A	100.00%	98.57%	± 5.00%
4500 O	DO - Winkler	9/22/2022	N/A	98.57%	98.57%	± 5.00%
4500 O	DO - Winkler	9/27/2022	N/A	100.00%	100.00%	± 5.00%

			Blank	%REC MR S	%RPD	QC Limits
2540 D	Suspended Solids (TTL)	9/21/2022	100.00%	98.48%	0.00%	± 15%
2540 C	Dissolved Solids (TTL)	9/21/2022	100.00%	107.90%	0.00%	± 15%

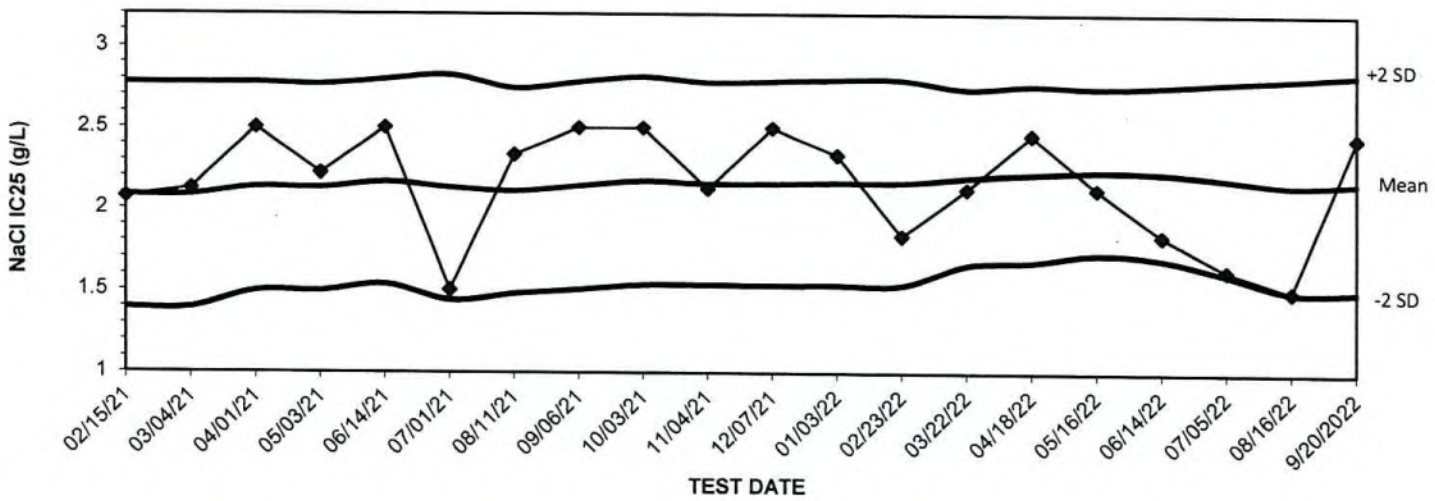
Signature: Cathy McDonald

Date: October 1, 2022

Signature: Haley West

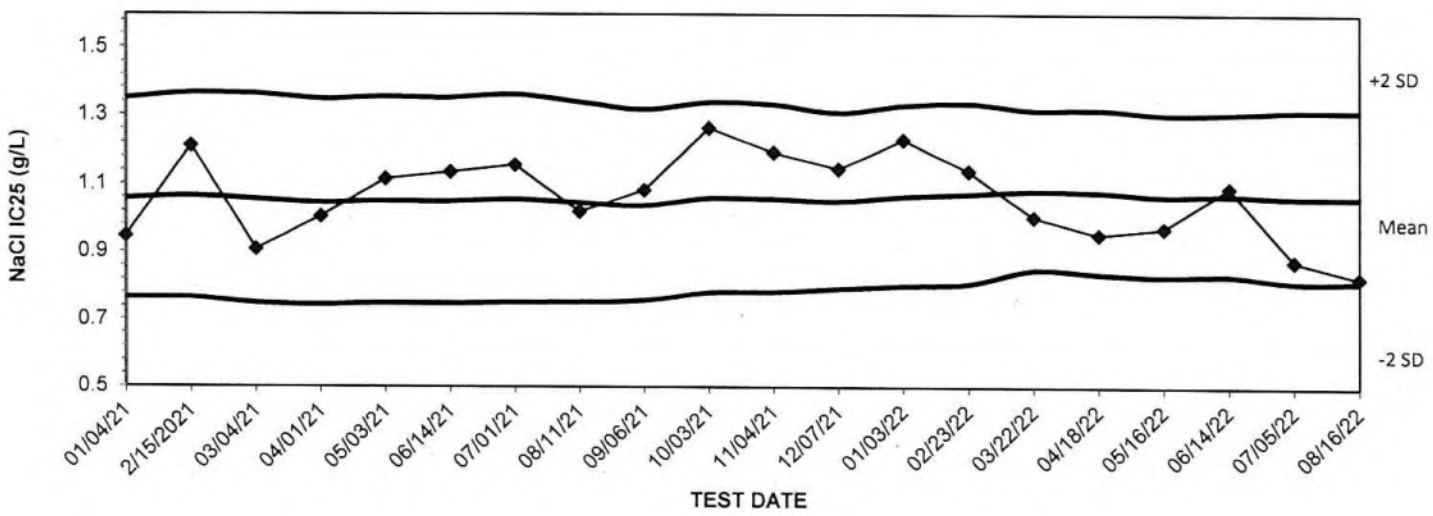
Date: October 1, 2022

CERIODAPHNIA SURVIVAL LC25 NaCl REFTOX



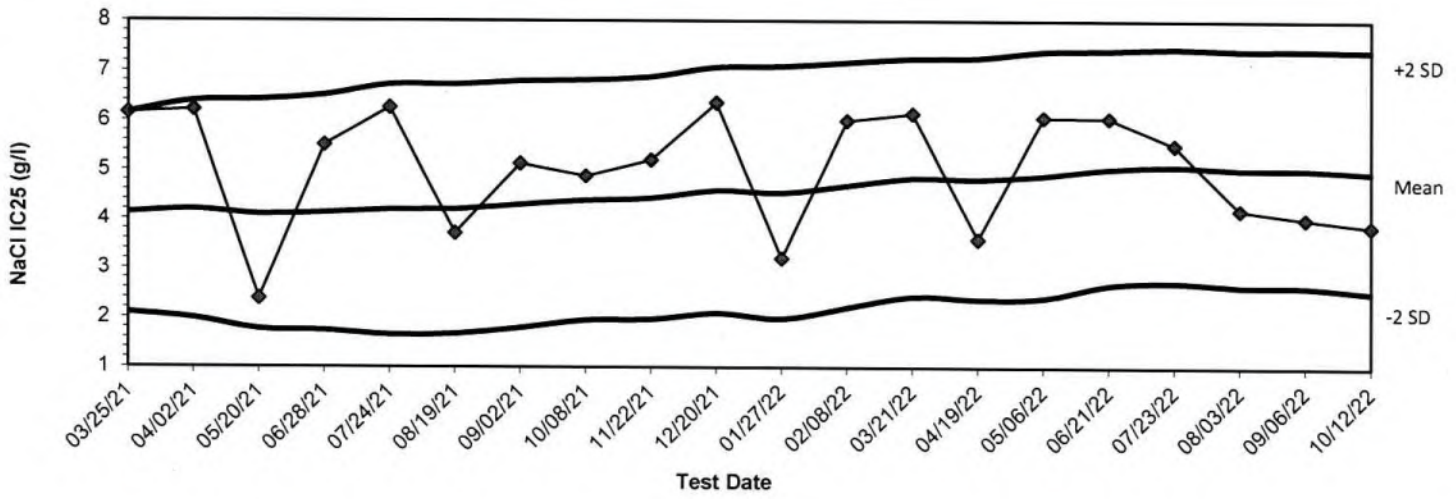
Date	IC25	Mean	-2 SD	+2 SD
02/15/21	2.0710	2.0843	1.3939	2.7747
03/04/21	2.1250	2.0843	1.3939	2.7747
04/01/21	2.5000	2.1359	1.4948	2.7769
05/03/21	2.2190	2.1304	1.4945	2.7664
06/14/21	2.5000	2.1661	1.5357	2.7966
07/01/21	1.5000	2.1319	1.4386	2.8252
08/11/21	2.3330	2.1101	1.4777	2.7425
09/06/21	2.5000	2.1429	1.5041	2.7816
10/03/21	2.5000	2.1746	1.5342	2.8150
11/04/21	2.1250	2.1568	1.5338	2.7797
12/07/21	2.5000	2.1592	1.5310	2.7874
01/03/22	2.3330	2.1656	1.5330	2.7982
02/23/22	1.8330	2.1656	1.5330	2.7982
03/22/22	2.1250	2.1982	1.6590	2.7374
04/18/22	2.4580	2.2200	1.6774	2.7626
05/16/22	2.1250	2.2355	1.7257	2.7453
06/14/22	1.8330	2.2267	1.6951	2.7582
07/05/22	1.6250	2.1930	1.6031	2.7828
08/16/22	1.5000	2.1506	1.4959	2.8054
9/20/2022	2.4440	2.1658	1.4989	2.8328

CERIODAPHNIA REPRODUCTION IC25 NaCl REFTOX



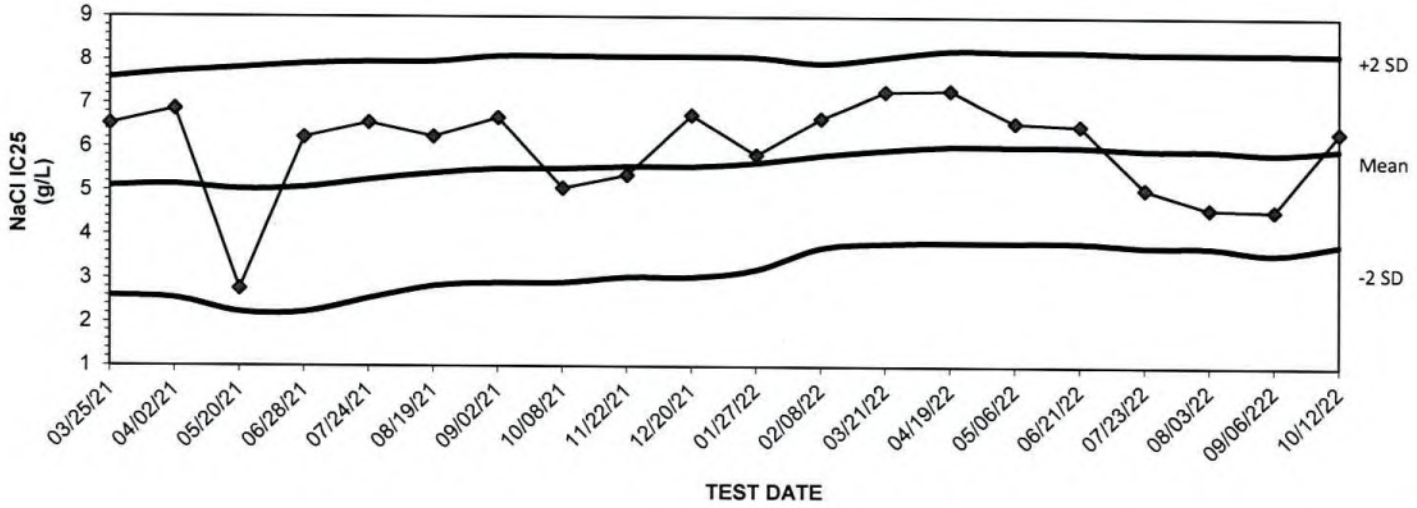
Date	IC25	Mean	-2 SD	+2 SD
01/04/21	0.9453	1.0562	0.7653	1.3470
2/15/2021	1.21	1.063535	0.764612146	1.362457854
03/04/21	0.9062	1.0540	0.7475	1.3605
04/01/21	1.0030	1.0450	0.7439	1.3461
05/03/21	1.1140	1.0496	0.7472	1.3521
06/14/21	1.1340	1.0487	0.7475	1.3499
07/01/21	1.1550	1.0553	0.7508	1.3599
08/11/21	1.0180	1.0445	0.7516	1.3375
09/06/21	1.0820	1.0368	0.7574	1.3162
10/03/21	1.2630	1.0587	0.7807	1.3367
11/04/21	1.1930	1.0570	0.7830	1.3311
12/07/21	1.1450	1.0503	0.7931	1.3076
01/03/22	1.2300	1.0650	0.8016	1.3284
02/23/22	1.1390	1.0719	0.8084	1.3354
03/22/22	1.0040	1.0821	0.8489	1.3154
04/18/22	0.9527	1.0775	0.8376	1.3174
05/16/22	0.9716	1.0659	0.8293	1.3025
06/14/22	1.0920	1.0691	0.8330	1.3053
07/05/22	0.8750	1.0628	0.8126	1.3129
08/16/22	0.8275	1.0630	0.8138	1.3123

FHM SURVIVAL LC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
03/25/21	6.1583	4.1258	2.0920	6.1596
04/02/21	6.2160	4.1887	1.9849	6.3925
05/20/21	2.3750	4.0888	1.7621	6.4155
06/28/21	5.5000	4.1223	1.7345	6.5101
07/24/21	6.2580	4.1844	1.6465	6.7224
08/19/21	3.7000	4.1935	1.6644	6.7226
09/02/21	5.1250	4.2901	1.7899	6.7904
10/08/21	4.8750	4.3788	1.9442	6.8135
11/22/21	5.2000	4.4210	1.9620	6.8799
12/20/21	6.3570	4.5781	2.0849	7.0713
01/27/22	3.2000	4.5318	1.9736	7.0900
02/08/22	6.0000	4.6848	2.2009	7.1688
03/21/22	6.1400	4.8361	2.4258	7.2464
04/19/22	3.5870	4.8140	2.3657	7.2622
05/06/22	6.0670	4.8914	2.3955	7.3872
06/21/22	6.0500	5.0353	2.6626	7.4081
07/23/22	5.5000	5.0819	2.7150	7.4488
08/03/22	4.1820	5.0220	2.6328	7.4112
09/06/22	4.0000	5.0185	2.6233	7.4137
10/12/22	3.8420	4.9507	2.5089	7.3925

FHM GROWTH IC25 NaCl REFTOX



Date	IC25	Mean	-2 SD	+2 SD
03/25/21	6.5280	5.0905	2.5891	7.5919
04/02/21	6.8650	5.1345	2.5395	7.7295
05/20/21	2.7590	5.0217	2.2272	7.8162
06/28/21	6.2200	5.0690	2.2267	7.9113
07/24/21	6.5530	5.2483	2.5384	7.9582
08/19/21	6.2310	5.3933	2.8247	7.9619
09/02/21	6.6650	5.4939	2.8982	8.0895
10/08/21	5.0481	5.4990	2.9074	8.0905
11/22/21	5.3520	5.5543	3.0315	8.0771
12/20/21	6.7310	5.5549	3.0309	8.0788
01/27/22	5.8200	5.6387	3.2082	8.0692
02/08/22	6.6580	5.8193	3.7120	7.9266
03/21/22	7.2690	5.9425	3.8121	8.0729
04/19/22	7.2990	6.0314	3.8358	8.2271
05/06/22	6.5630	6.0225	3.8376	8.2074
06/21/22	6.5000	6.0225	3.8376	8.2074
07/23/22	5.0500	5.9498	3.7409	8.1587
08/03/22	4.6040	5.9482	3.7354	8.1611
09/06/222	4.5630	5.8716	3.5812	8.1620
10/12/22	6.3570	5.9716	3.7966	8.1465

APPENDIX D
REPORT REQUEST

O 303.837.5229

NEWMONT.COM

From: Julio Madrid <Julio.Madrid@newmont.com>
Sent: Wednesday, February 22, 2023 1:52 PM
To: Melissa Chalona <mchalona@enganalytics.com>
Cc: Karen DeAguero <Karen.DeAguero@newmont.com>
Subject: FW: [EXTERNAL] Annual Fee, Report, and Map Due

From: Division of Reclamation, Mining and Safety <dnr_drms_permitadmin@state.co.us>
Sent: Tuesday, February 21, 2023 11:35 PM
To: Julio Madrid <Julio.Madrid@newmont.com>
Subject: [EXTERNAL] Annual Fee, Report, and Map Due
Importance: High

02/21/23

Annual Fee, Report, and Map Due

Under the terms of your NOI or Permit and Colorado Statutes, you must submit an Annual Fee and Annual Report (including a map). You must pay the Annual Fee and submit an Annual Report each year until reclamation responsibility release is granted. The Annual Fee is not a renewal fee. The Fee and Report are for last year's exploration or mining and reclamation season, and must be paid even if your operation was inactive.

If you have requested reclamation responsibility release from the Division of Reclamation, Mining and Safety ("Division") but release has not been granted by the anniversary date listed below, the Annual Fee, Report and Map must be submitted. If the permit is released before the anniversary date, then by Statute, it is not necessary to pay an Annual Fee or submit an Annual Report for that year. The annual fee, report, and map are due on or before the Anniversary Date for the following operation:

Permit: M1988112

ePermit Number: 127925

Operation Name: San Luis Project

Anniversary Date: 03/23/23

Total Fee Due: $1,150.00

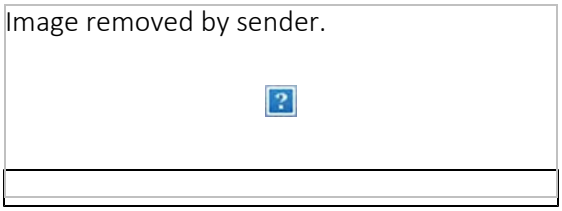
As of January 1, 2018, all annual reports, maps and fees must be filed electronically. If you have not yet set up your ePermitting account, click on the link below to get started:

https://drms.colorado.gov/information/epermitting

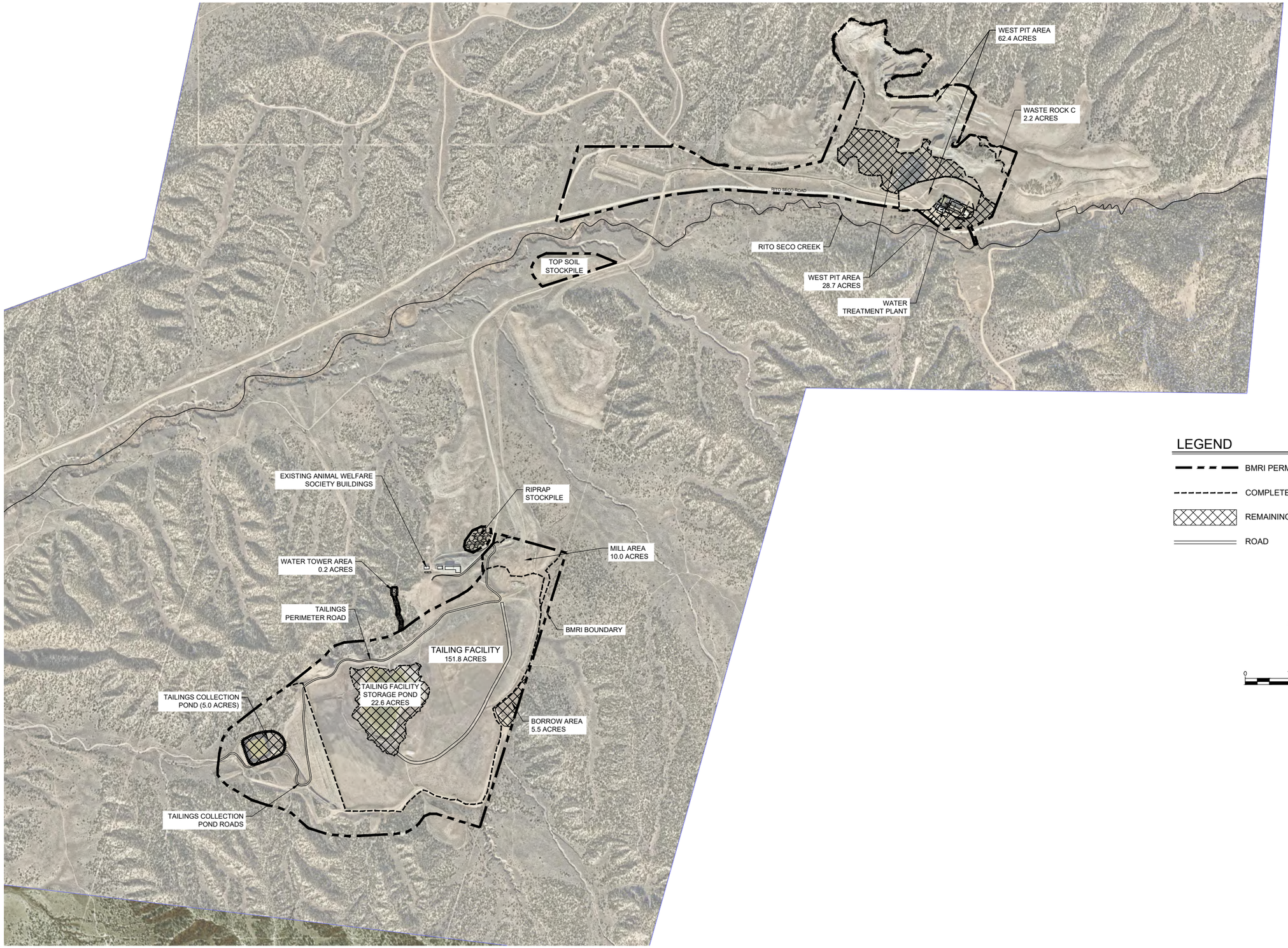
If you have already established your ePermitting account, click on the link below to file your report, upload your map, and pay your fee online now.

https://dnrlaserfiche.state.co.us/Forms/DRMSeForms_LandingPage

If you need additional information or have any questions, please contact Lucas West at the Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at (303) 866-3567 x8187, or by email at lucas.west@state.co.us.



APPENDIX E
2022 SITE MAP



LEGEND

- BMRI PERMIT BOUNDARY
- COMPLETED RECLAMATION AREAS
- REMAINING RECLAMATION AREAS
- ROAD

N

0 700' 1,400'

NO	REVISION/DESCR.	DATE	BY

BATTLE MOUNTAIN RECLAMATION

2022 SAN LUIS PERMIT AREA

SITE MAP

Engineering Analytics, Inc.
1600 Specht Point Road, Suite 209
Fort Collins, CO 80525
(970) 488-3111

ISSUED BY:

Project Number:	210105.06
Drawn By:	RDP
Designed By:	MLC
Approved By:	MLC
Date:	2/24/2023
Scale:	1" = 1400'
Drawing Number:	1.0