Climax Molybdenum
A Freeport-McMoRan Company

Climax Mine
Highway 91 - Fremont Pass
Climax, CO 80429
Phone (719) 486-7718
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October 10, 2022

Mr. Lucas West
Environmental Protection Specialist
Division of Reclamation, Mining and Safety
Department of Natural Resources
1001 E 62nd Ave., Room 215
Denver, Colorado 80216

RE: Climax Mine, Permit No. M-1977-493, Written Evaluation of August 5, 2022 Event and Related Corrective Action Plan

Dear Mr. West,

The purpose of this submittal is to provide details on the event that occurred at Climax on August 5, 2022 and the related corrective actions that Climax will implement to prevent potential future occurrences. This submittal is in response to the inspection conducted by DRMS at Climax on August 8, 2022 and subsequent request from DRMS for a written evaluation of the failure, steps being taken to mitigate potential future failures in the area, and to provide the full water quality results from the sample taken at the time of the event. In addition, this submittal also contains an evaluation of the secondary containment facilities related to the failure.

Evaluation of the Failure

The failure occurred in a pressurized pipeline system that conveys seepage collected from near the toe of Mayflower Tailings Storage Facility (TSF) (also known as 5 Dam), back to the Mayflower TSF operating pool. More specifically, the failure occurred in a coupler fitting on a section of pipeline that leads to a pigging station entry point. The coupler fitting that failed is a Mega-Coupling Series 3800 Restrained Coupling, manufactured by EBAA Iron, Inc. Climax has been unable to determine if the fitting failed due to service unsuitability or if it was defective. Climax has not experienced prior failures of other similar fittings of the same material and manufacturer.

Based on visual observations and estimated times, it was approximated that 1,800 gallons of seepage leaked from the failed fitting into the nearby drainage that eventually leads to Climax's CDPS Outfalls 002A and 001A, and the beginning of Tenmile Creek. Upon discovery of the leak at 11:45 am on August 5, 2022, Climax took immediate action and diverted the leak back into the adjacent Mayflower Clear Pond by 12:00 pm and had shut down the pressurized pipeline by 12:15 pm. Repairs were immediately implemented and completed by 6:30 pm the same day.

Mitigation of Potential Future Failures

Climax will undertake the following actions to prevent potential future failures:

- Confirm with the fitting manufacturer to determine if the failed fitting types are suitable for the intended service. If those fittings are determined not suitable for continued service, then Climax will identify and replace those fittings with a fitting suitable for the intended service.
- Climax will complete an engineering study this winter to evaluate options for secondary containment and additional storage/pumping capacity for the Mayflower Pump Station area.

Climax anticipates the final option that is chosen will require modification to or will require a new Environmental Protection Facility (EPF) and will submit a technical revision (TR) for the chosen option, as required.

Water Quality Sample Results

Two samples were collected at Climax CDPS Permit Outfall 001A during the event. The first sample was a grab sample collected at 12:45 pm on the day of the event and analyzed at the onsite analytical lab for pH (7.7 standard units [s.u.]) and total manganese (300 µg/l).

The second sample was a fixed-laboratory grab sample collected at 12:50 pm at Outfall 001A (the compliance point on Tenmile Creek) on the day of the event and analyzed for Climax's CDPS Permit analytical suite. Those data were previously reported to DRMS on August 17, 2022, via e-mail (Diana Kelts to Dustin Czapla with DRMS). They are summarized below in Table 1 with comparison to applicable CDPS permit limits at Outfall 001A.

Table 1. Outfall 001A Sample Analytical Results

Analyte	Analytical Method	Units	08/05/2022 12:50 PM	CDPS Permit CO0000248 Limit*
Conductivity	Field	µmhos/cm	1203	
pH	Field	Standard units	7.6	6.5-9.0
Temperature	Field	°C	12.1	
Boron, Total	M200.8 ICP-MS	mg/l	0.0028	
Cadmium, PD	M200.8 ICP-MS	mg/l	0.000251	0.0012
Chromium, PD	M200.8 ICP-MS	mg/l	ND [0.0005]	
Iron, TR	M200.8 ICP-MS	mg/l	0.167	
Manganese, PD	M200.8 ICP-MS	mg/l	0.136	2.618
Molybdenum, TR	M200.8 ICP-MS	mg/l	0.0242	
Nickel, PD	M200.8 ICP-MS	mg/l	0.00125	
Selenium, PD	M200.8 ICP-MS	mg/l	0.00012	
Zinc, PD	M200.8 ICP-MS	mg/l	0.0456	
Sulfide as S	SM4500S2-D	mg/l	ND [0.02]	

Notes:
ND [0.02] – The constituent was analyzed for, but was not detected above the level of the associated value.
PD – potentially dissolved
TR – total recoverable
S – sulfur
°C – degrees Celsius
µmhos/cm – micromhos per centimeter
mg/l – milligrams per liter
* - Limits listed are most conservative (lowest) value of 30-Day Average or Daily Maximum, if available.

Full water quality results are contained in Attachment A to this submittal.

Secondary Containment Device Evaluation

Seepage from Mayflower TSF is intercepted and collected via a network of shallow drainage collection pipes along the TSF dam and abutments. This seepage is daylighted to the surface and routed to two lined seepage collection ponds (Mayflower Seepage Collection Ponds). The Mayflower Seepage Collection Ponds serve as initial seepage collection basins that then

route/convey water to the Mayflower Clear Pond (also lined) via gravity. The event that this submittal covers occurred adjacent to the Mayflower Clear Pond emergency spillway. The two Mayflower Seepage Collection Ponds and the Mayflower Clear Pond are concrete-lined basins intended to store Mayflower TSF seepage water until it can be pumped back to the Mayflower TSF operating pool. None of the three ponds described have secondary containment, rather they are impermeable basins. The pump-back pipeline also does not have secondary containment. Under emergency flow conditions, the Mayflower Clear Pond has a concrete emergency spillway that routes water to a drainage that eventually leads to Tenmile Creek.

The purpose of the Mayflower Clear Pond is to serve as an equalization basin. Water in Mayflower Clear Pond is pumped to the Mayflower TSF via the Mayflower Seepage Pump-back System, consisting of a redundant pump system and buried pipeline. The average flow of seepage into the Mayflower Seepage Collection Ponds and the Mayflower Clear Pond since 2015 is approximately 1,100 gallons per minute (gpm). Mayflower Clear Pond is normally operated at a nominal depth of 6.5 feet and is maintained through level monitoring instrumentation. Mayflower Clear Pond has a total capacity of 5.9 million gallons and has remaining capacity of 2.2 million gallons when the level is at 6.5 feet. At the average inflow rate, the pond has approximately 31 hours of capacity until the water level would reach the emergency spillway (at 9.33 feet).

Mayflower Clear Pond has 4 electric pumps to convey water back to the Mayflower TSF operating pool; in normal operations two of the four pumps are in operation and a third operates when flow rates are higher (e.g., runoff season). The fourth pump is a spare. There are also a series of instruments that function to monitor critical elements of the system including a level instrument, flow meter and pressure gauge. Alarms exist for the Mayflower Clear Pond level, flow rate and the pump-back pipeline pressure. Alarms report to the main water operations control room in the Property Discharge Water Treatment Plant (PDWTP). The pump-back system also has emergency generator power should an electricity power outage occur.

As described above, Climax is committed to completing an engineering study and submitting a TR for the preferred option from that study.

Please contact me at (719) 486-7633 if you need additional information.

Sincerely,

Eric Detmer, PE
Chief Environmental Engineer

Attachment

Attachment A

Sample Analytical Results

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

Analytical Report

August 17, 2022

Report to:
Meagan Graham
FMI- Climax Mine Company
Hwy 91 - Fremont Pass
Climax, CO 80429

cc: Elaine Dubois

Bill to:
Accounts Payable
FMI- Climax Mine Company
P.O. Box 13407
Phoenix, AZ 85002

Project ID: ZH0000076W
ACZ Project ID: L75071

Meagan Graham:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 10, 2022. This project has been assigned to ACZ's project number, L75071. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L75071. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after February 13, 2023. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

Sue Webber has reviewed and approved this report.

FMI- Climax Mine Company
Project ID: ZH0000076W
Sample ID: OUTFALL 001A

ACZ Sample ID: ***L75071-01***
Date Sampled: *08/05/22 12:50*
Date Received: *08/10/22*
Sample Matrix: *Surface Water*

Field Data

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1	1203			umhos/cm			08/05/22 12:50	sw
pH (Field)	Field Measurement	1	7.6			units			08/05/22 12:50	sw
Temperature (Field)	Field Measurement	1	12.1			C			08/05/22 12:50	sw

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidify and filter (Potentially Dissolved)	Colorado 5 CCR 1002-31.5.31 (2009)								08/12/22 10:35	ssr/gjl
Total Hot Plate Digestion	M200.2 ICP-MS								08/11/22 14:39	kja
Total Recoverable Digestion	M200.2 ICP-MS								08/11/22 14:40	kja

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, total	M200.8 ICP-MS	1	0.0028	B	*	mg/L	0.001	0.005	08/12/22 16:15	mfm
Cadmium, potentially dissolved	M200.8 ICP-MS	1	0.000251			mg/L	0.00005	0.00025	08/12/22 12:42	mfm
Chromium, potentially dissolved	M200.8 ICP-MS	1	<0.0005	U		mg/L	0.0005	0.002	08/12/22 12:42	mfm
Iron, total recoverable	M200.8 ICP-MS	1	0.167		*	mg/L	0.007	0.02	08/11/22 17:40	mfm
Manganese, potentially dissolved	M200.8 ICP-MS	1	0.136			mg/L	0.0004	0.002	08/12/22 12:42	mfm
Molybdenum, total recoverable	M200.8 ICP-MS	1	0.0242			mg/L	0.0002	0.0005	08/11/22 17:40	mfm
Nickel, potentially dissolved	M200.8 ICP-MS	1	0.00125			mg/L	0.0004	0.001	08/12/22 12:42	mfm
Selenium, potentially dissolved	M200.8 ICP-MS	1	0.00012	B		mg/L	0.0001	0.00025	08/12/22 12:42	mfm
Zinc, potentially dissolved	M200.8 ICP-MS	1	0.0456			mg/L	0.006	0.015	08/12/22 12:42	mfm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfide as S	SM4500S2-D	1	<0.02	U	*	mg/L	0.02	0.1	08/12/22 13:00	jck

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:
https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf

REP001.03.15.02

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ACZ Project ID: ***L75071***

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

Boron, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548446													
WG548446ICV	ICV	08/12/22 15:47	MS220701-3					101	90	110			
WG548446ICB	ICB	08/12/22 15:49				U	mg/L		-0.003	0.003			
WG548264LRB	LRB	08/12/22 16:05				U	mg/L		-0.0022	0.0022			
WG548264LFB	LFB	08/12/22 16:07	MS220722-2	.01001		.0092	mg/L	92	85	115			
L74988-05LFM	LFM	08/12/22 16:11	MS220722-2	.01001	.242	.2537	mg/L	117	70	130			
L74988-05LFMD	LFMD	08/12/22 16:13	MS220722-2	.01001	.242	.2528	mg/L	108	70	130	0	20	

Cadmium, potentially dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548413													
WG548413ICV	ICV	08/12/22 12:16	MS220701-3	.05		.05362	mg/L	107	90	110			
WG548413ICB	ICB	08/12/22 12:18				U	mg/L		-0.00011	0.00011			
WG548413LFB	LFB	08/12/22 12:19	MS220722-2	.05005		.04755	mg/L	95	85	115			
WG547918PBW	PBW	08/12/22 12:21				U	mg/L		-0.00015	0.00015			
WG547966PBW	PBW	08/12/22 12:25				U	mg/L		-0.00015	0.00015			
WG548392PBW	PBW	08/12/22 12:29				U	mg/L		-0.00015	0.00015			
L75040-06AS	AS	08/12/22 12:33	MS220722-2	.05005	U	.048616	mg/L	97	70	130			
L75040-06ASD	ASD	08/12/22 12:35	MS220722-2	.05005	U	.048248	mg/L	96	70	130	1	20	

Chromium, potentially dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548413													
WG548413ICV	ICV	08/12/22 12:16	MS220701-3	.05		.05292	mg/L	106	90	110			
WG548413ICB	ICB	08/12/22 12:18				U	mg/L		-0.0011	0.0011			
WG548413LFB	LFB	08/12/22 12:19	MS220722-2	.0501		.04705	mg/L	94	85	115			
WG547918PBW	PBW	08/12/22 12:21				U	mg/L		-0.0015	0.0015			
WG547966PBW	PBW	08/12/22 12:25				U	mg/L		-0.0015	0.0015			
WG548392PBW	PBW	08/12/22 12:29				U	mg/L		-0.0015	0.0015			
L75040-06AS	AS	08/12/22 12:33	MS220722-2	.0501	U	.04556	mg/L	91	70	130			
L75040-06ASD	ASD	08/12/22 12:35	MS220722-2	.0501	U	.0452	mg/L	90	70	130	1	20	

Iron, total recoverable M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548347													
WG548347ICV	ICV	08/11/22 16:42	MS220701-3	.10016		.108	mg/L	108	90	110			
WG548347ICB	ICB	08/11/22 16:44				U	mg/L		-0.021	0.021			
WG548265LRB	LRB	08/11/22 16:46				U	mg/L		-0.0154	0.0154			
WG548265LFB	LFB	08/11/22 16:48	MS220722-2	.04975		.0445	mg/L	89	85	115			
L75065-05LFM	LFM	08/11/22 17:36	MS220722-2	.04975	.185	.23	mg/L	90	70	130			
L75065-05LFMD	LFMD	08/11/22 17:38	MS220722-2	.04975	.185	.2307	mg/L	92	70	130	0	20	

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ACZ Project ID: ***L75071***

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

Manganese, potentially dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548413													
WG548413ICV	ICV	08/12/22 12:16	MS220701-3	.05		.055	mg/L	110	90	110			
WG548413ICB	ICB	08/12/22 12:18				U	mg/L		-0.00088	0.00088			
WG548413LFB	LFB	08/12/22 12:19	MS220722-2	.0498		.0485	mg/L	97	85	115			
WG547918PBW	PBW	08/12/22 12:21				U	mg/L		-0.0012	0.0012			
WG547966PBW	PBW	08/12/22 12:25				U	mg/L		-0.0012	0.0012			
WG548392PBW	PBW	08/12/22 12:29				U	mg/L		-0.0012	0.0012			
L75040-06AS	AS	08/12/22 12:33	MS220722-2	.0498	.011	.05821	mg/L	95	70	130			
L75040-06ASD	ASD	08/12/22 12:35	MS220722-2	.0498	.011	.0578	mg/L	94	70	130	1	20	

Molybdenum, total recoverable M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548347													
WG548347ICV	ICV	08/11/22 16:42	MS220701-3	.02		.0199	mg/L	100	90	110			
WG548347ICB	ICB	08/11/22 16:44				U	mg/L		-0.0006	0.0006			
WG548265LRB	LRB	08/11/22 16:46				U	mg/L		-0.00044	0.00044			
WG548265LFB	LFB	08/11/22 16:48	MS220722-2	.05005		.04361	mg/L	87	85	115			
L75065-05LFM	LFM	08/11/22 17:36	MS220722-2	.05005	.00096	.04707	mg/L	92	70	130			
L75065-05LFMD	LFMD	08/11/22 17:38	MS220722-2	.05005	.00096	.0464	mg/L	91	70	130	1	20	

Nickel, potentially dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548413													
WG548413ICV	ICV	08/12/22 12:16	MS220701-3	.05		.05285	mg/L	106	90	110			
WG548413ICB	ICB	08/12/22 12:18				U	mg/L		-0.00088	0.00088			
WG548413LFB	LFB	08/12/22 12:19	MS220722-2	.05005		.04655	mg/L	93	85	115			
WG547918PBW	PBW	08/12/22 12:21				U	mg/L		-0.0012	0.0012			
WG547966PBW	PBW	08/12/22 12:25				U	mg/L		-0.0012	0.0012			
WG548392PBW	PBW	08/12/22 12:29				U	mg/L		-0.0012	0.0012			
L75040-06AS	AS	08/12/22 12:33	MS220722-2	.05005	.00054	.04449	mg/L	88	70	130			
L75040-06ASD	ASD	08/12/22 12:35	MS220722-2	.05005	.00054	.04404	mg/L	87	70	130	1	20	

Selenium, potentially dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548413													
WG548413ICV	ICV	08/12/22 12:16	MS220701-3	.05		.05489	mg/L	110	90	110			
WG548413ICB	ICB	08/12/22 12:18				U	mg/L		-0.00022	0.00022			
WG548413LFB	LFB	08/12/22 12:19	MS220722-2	.05		.0495	mg/L	99	85	115			
WG547918PBW	PBW	08/12/22 12:21				U	mg/L		-0.0003	0.0003			
WG547966PBW	PBW	08/12/22 12:25				U	mg/L		-0.0003	0.0003			
WG548392PBW	PBW	08/12/22 12:29				U	mg/L		-0.0003	0.0003			
L75040-06AS	AS	08/12/22 12:33	MS220722-2	.05	.00013	.05357	mg/L	107	70	130			
L75040-06ASD	ASD	08/12/22 12:35	MS220722-2	.05	.00013	.0538	mg/L	107	70	130	0	20	

CLIMAX

ACZ Project ID: ***L75071***

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

Sulfide as S SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548426													
WG548426ICV	ICV	08/12/22 12:42	WC220811-3	.352		.356	mg/L	101	90	110			
WG548426ICB	ICB	08/12/22 12:46				U	mg/L		-0.05	0.05			
WG548426LFB	LFB	08/12/22 12:51	WC220811-6	.2257733		.255	mg/L	113	80	120			
L75112-01AS	AS	08/12/22 13:52	WC220811-6	.2257733	U	.144	mg/L	64	75	125			M2
L75112-01ASD	ASD	08/12/22 13:57	WC220811-6	.2257733	U	.165	mg/L	73	75	125	14	20	M2

Zinc, potentially dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548413													
WG548413ICV	ICV	08/12/22 12:16	MS220701-3	.05		.0521	mg/L	104	90	110			
WG548413ICB	ICB	08/12/22 12:18				U	mg/L		-0.0132	0.0132			
WG548413LFB	LFB	08/12/22 12:19	MS220722-2	.050075		.0481	mg/L	96	85	115			
WG547918PBW	PBW	08/12/22 12:21				U	mg/L		-0.018	0.018			
WG547966PBW	PBW	08/12/22 12:25				U	mg/L		-0.018	0.018			
WG548392PBW	PBW	08/12/22 12:29				.0176	mg/L		-0.018	0.018			
L75040-06AS	AS	08/12/22 12:33	MS220722-2	.050075	.0216	.0653	mg/L	87	70	130			
L75040-06ASD	ASD	08/12/22 12:35	MS220722-2	.050075	.0216	.0649	mg/L	86	70	130	1	20	

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Inorganic Extended Qualifier Report

FMI- Climax Mine Company

ACZ Project ID: ***L75071***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75071-01	WG548426	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI- Climax Mine Company ACZ Project ID: ***L75071***

Metals Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Boron, total	M200.8 ICP-MS
Iron, total recoverable	M200.8 ICP-MS

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Sample Receipt

FMI- Climax Mine Company
ZH0000076W

ACZ Project ID: L75071
Date Received: 08/10/2022 10:57
Received By:
Date Printed: 8/11/2022

Receipt Verification

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

Samples/Containers

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

Some parameters were received past hold time.

NA indicates Not Applicable

Chain of Custody Related Remarks

The 'Relinquished By' field on the COC was not completed. The project manager is contacting the client.

Client Contact Remarks

Please rush results

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
3885	0.3	<=6.0	15	N/A

Was ice present in the shipment container(s)?

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

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Sample Receipt

FMI- Climax Mine Company
ZH0000076W

ACZ Project ID: L75071
Date Received: 08/10/2022 10:57
Received By:
Date Printed: 8/11/2022

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

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

ACZ Laboratories, Inc. L75071

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CHAIN of CUSTODY

Report to:

Name: Meagan Graham	Address: Highway 91 - Fremont Pass
Company: Climax Molybdenum Company	Climax, CO 80429
E-mail: mgraham1@fmi.com	Telephone: 719-486-7543

Copy of Report to:

Name: Elaine DuBois	E-mail: edubois@fmi.com
Company: Climax Molybdenum Company	Telephone:

Invoice to:

Name: Accounts Payable	Address:
Company: Freeport-McMoRan Copper & Gold	
E-mail: Freeport@bscs.basware.com	Telephone:

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

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

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

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

Sampler's Name: E. DuBois **Sampler's site Information** **State:** CO **Zip code** 80429 **Time Zone** MST

Check box if observe Daylight Savings Time [X]

PROJECT INFORMATION

Quote #: CDPS-001M

PO#: ZH0000076W

Reporting state for compliance testing:

Check box if samples include NRC licensed material? [ ]

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	CDPS-001M							
Outfall 001A	8-5-22 1250	SW	3	X							

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

REMARKS

Field parameter Outfall 001A composite

Temp: 12.1

pH: 7.62

Conductivity: 1203

** Please RUSH analysis. Thank you!**

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
			8/10/22
			11:37

FRMAD050.12.12.12 White - Return with sample. Yellow - Retain for your records.

L75071 Chain of Custod