COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: Climax Mine	**MINE/PROSPECTING ID#:** M-1977-493	**MINERAL:** Molybdenum	**COUNTY:** Lake
INSPECTION TYPE: Monitoring	**WEATHER:** Clear	**INSP. DATE:** February 18, 2025	**INSP. TIME:** 13:00
OPERATOR: Climax Molybdenum Company	**OPERATOR REPRESENTATIVE:** Eric Detmer	**TYPE OF OPERATION:** 112d-3 - Designated Mining Operation	
REASON FOR INSPECTION: Normal I&E Program	**BOND CALCULATION TYPE:**	**BOND AMOUNT:** $284,783,656.00	
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** None	**JOINT INSP. AGENCY:** None	
INSPECTOR(S): Dustin Czapla	**INSPECTOR'S SIGNATURE:** 	**SIGNATURE DATE:** February 20, 2025	

GENERAL INSPECTION TOPICS

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

(AR) RECORDS---------- Y	(FN) FINANCIAL WARRANTY-------- N	(RD) ROADS---------- N
(HB) HYDROLOGIC BALANCE---------- Y	(BG) BACKFILL & GRADING---------- N	(EX) EXPLOSIVES--------- N
(PW) PROCESSING WASTE/TAILING---- N	(SF) PROCESSING FACILITIES------- Y	(TS) TOPSOIL---------- N
(MP) GENL MINE PLAN COMPLIANCE- Y	(FW) FISH & WILDLIFE---------- N	(RV) REVEGETATION---- N
(SM) SIGNS AND MARKERS---------- N	(SP) STORM WATER MGT PLAN---- N	(RS) RECL PLAN/COMP-- N
(ES) OVERBURDEN/DEV. WASTE--------- N	(SC) EROSION/SEDIMENTATION--- N	(ST) STIPULATIONS------- N
(AT) ACID OR TOXIC MATERIALS------- Y	(OD) OFF-SITE DAMAGE----------N	

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

OBSERVATIONS

This inspection was conducted as part of the Division of Reclamation, Mining and Safety's (Division) normal monitoring program. Eric Detmer, representing the Operator, was present during this inspection.

Climax Mine is a 112d-3 molybdenum mining and milling operation located in Summit, Eagle, and Lake counties, and is accessed from Hwy 91 at the top of Fremont Pass. The permit area consists of approximately 14,000 acres, of which approximately 8,000 have been affected. The Division currently holds a financial warranty amount of $284,783,656 for this site.

Adequate mine identification signage was noted at the entrance to the site.

The inspection was focused on the following areas:

- Property Discharge Water Treatment Plant (PDWTP)
- Molybdenum Removal Water Treatment Plant (MRWTP)

Property Discharge Water Treatment Plant (PDWTP)

The PDWTP began operating in 2014 and provides second stage metals removal in order to comply with the discharge permit requirements for Tenmile Creek. The plant uses a high-density-sludge process, which recirculates sludge to maximize the neutralization potential of the added lime and improve coagulation and settling. Lime is added to the incoming water in the metals reactors. The resulting precipitate is thickened and then filtered by sand filters in the metals filter building to remove any remaining precipitate solids. Sulfuric acid is added to provide the final pH adjustment before discharge. The PDWTP is designed to treat flows up to 14,000 gpm. The PDWTP building has dedicated sumps to catch spills and return water to the treatment system. Lime is stored at the PDWTP in a silo. The silo appeared to be in good working condition. Within the PDWTP, the sulfuric acid is stored in an enclosed room with an epoxy coated sump, in a 4,300-gallon carbon steel tank. The room and tank appeared to be in good condition. No problems were noted at the PDWTP.

Molybdenum Removal Water Treatment Plant (MRWTP)

Construction of the MRWTP was approved through TR34 in 2022. The facility has been constructed and is currently operating in the commissioning stage. Oxidized molybdenum found in the Climax ore is not recovered during the milling process and ends up in the tailings. The MRWTP provides a supplementary process to the PDWTP for removal of molybdenum from the effluent in order to meet discharge requirements. Like the PDWTP, the MRWTP is also designed to process up to 14,000 gpm. Flow to the MRWTP is routed from the Mayflower Tailings Pond to the influent feed tank, and then sent to the Moly Reactor Tanks. Ferric sulfate is used to promote iron coprecipitation. Sulfuric acid and lime feeds are used for pH control. From the reactor tanks flows are sent to the Moly Thickeners. Clarified overflow is then sent to the Moly Effluent Vault. The sludge is either recycled to the reactor tanks or hauled to the Moly Sludge Tank for final disposal.

Chemicals used in the MRWTP process are similar to those used at the PDWTP and include lime and ferric sulfate for metals precipitation, flocculant to facilitate the settling of precipitated solids, and sulfuric acid to lower the pH of the treated water. The MRWTP utilizes the lime slaking facility that is part of the PDWTP. Lime is fed from the silo to the Metals Removal Building in an enclosed screw conveyor, fed to the lime slaker where the lime is hydrated, mixed with water to create a slurry, and then fed into a lime slurry tank for transfer from the PDTWP to the MRWTP. The system appeared to be in good working condition and no problems were noted.

The granular ferric sulfate is also stored in a silo, which sits on a concrete apron that contains a sump to capture any spilled material. The ferric sulfate storage area appeared to be in good working condition and no problems were noted.

The sulfuric acid is stored in a dual-contained 4,400 gallon polyethylene tank in an isolated room on the southeast side of the MRWTP building. The tank is located within an epoxy-coated concrete secondary containment area. The sulfuric acid storage area appeared to be in good working condition and no problems were noted.

Inspection Contact Address

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