




**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.

<b>MINE NAME:</b> Climax Mine	<b>MINE/PROSPECTING ID#:</b> M-1977-493	<b>MINERAL:</b> Molybdenum	<b>COUNTY:</b> Lake, Summit
<b>INSPECTION TYPE:</b> Monitoring	<b>WEATHER:</b> Clear	<b>INSP. DATE:</b> May 22, 2024	<b>INSP. TIME:</b> 09:00
<b>OPERATOR:</b> Climax Molybdenum Company, Climax Mine	<b>OPERATOR REPRESENTATIVE:</b> Eric Detmer	<b>TYPE OF OPERATION:</b> 112d-3 - Designated Mining Operation	
<b>REASON FOR INSPECTION:</b> Normal I&E Program	<b>BOND CALCULATION TYPE:</b> None	<b>BOND AMOUNT:</b> \$91,011,850.00	
<b>DATE OF COMPLAINT:</b> NA	<b>POST INSP. CONTACTS:</b> None	<b>JOINT INSP. AGENCY:</b> None	
<b>INSPECTOR(S):</b> Todd Jesse	<b>INSPECTOR'S SIGNATURE:</b> 	<b>SIGNATURE DATE:</b> June 21, 2024	

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

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 Colorado Division of Reclamation, Mining, and Safety (Division) normal monitoring program. Climax Mine is a 112d-3 Molybdenum mine and milling operation located in Summit, Eagle, and Lake Counties and is accessible from CO State Highway 91. The site consists of 14,000 permitted acres, of which 8,000 acres have been affected. The Division currently holds \$91,011,850.00 in Financial Warranty for the site. Eric Detmer represented Climax Molybdenum Company and accompanied the Division on the inspection. The weather was sunny during the inspection with good visibility and temps in the 30s. A series of winter storms moved through the area in the days leading up to the inspection. The mine site was mostly snow covered during the inspection.

The following areas were inspected:

- Mill Building
- 5 Dam Seepwater Collection System Construction
- Property Discharge Water Treatment Plant (PDWTP)
- Molybdenum Removal Water Treatment Plant (MRWTP).

### **Mill Facility**

At the Mill Facility, chemicals are stored in three areas, the Reagent Storage Room, bulk storage under the flotation cells, and the internal and external lime storage areas. The floors throughout the mill are designed to be secondary containment structures by using sloping, a series of curbs and in floor sumps to contain and reintroduce any spilled materials.

Containments under the crushing circuit had some sediment being washed down and returned to the process. (Photo 1). No cracks, fractures or evidence of compromise was noted. Some chemicals are stored under the floatation circuit in IBC Totes (Photo 2). The floor in this area was mostly dry and the sump was clean at the time of the inspection. Water was entering the sumps below the floatation cells. This overflow material is returned to the process. Sumps observed below the floatation circuit were free from obstruction and able to function as designed with sprayers directing materials into the sumps. Minor amounts of water were also observed beneath the thickener. The thickener sump was free of obstruction and functioning as designed (Photo 3)

The external lime storage silo was also observed to be in excellent condition (Photo 4). No evidence of spillage or lime scaling was observed on or around the silo. Secondary containment for the silo is achieved by the pads surrounding the Mill Facility that would contain any possible spillage. A lime truck was about to unload into the silo during the inspection.

The reagent transfer bay displayed good housekeeping. The pipes and delivery systems appeared to be in good working order and no evidence of spillage during transfer was noted. The sump associated with the transfer station was clean and free from obstruction. The transfer bay is sloped towards the interior of the mill facility providing for secondary containment should any spillage occur.

The Reagent Storage room is a separate room attached to the Mill Facility to provide containment of the chemicals and is accessed from an exterior man door. No evidence of spillage or containment concerns were observed, the sump is clean and clear from obstructions (Photo 5). No cracks, fractures, or evidence of compromise were noted.

The operator has also installed a new Non-Fluorine Fire Fighting unit in the mill facility (Photo 6). This is a proactive action ahead of regulations on PFAS. The operator invested significant time and financial resources to modify the fire suppression system so that it could be run with PFAS free foam.

### 5 Dam Seepwater Collection System

Construction has resumed on the 5 Dam Seepwater Collection System, approved under TR-36. The project was delayed due to difficulty procuring a transformer. The Operator is working with their contractor to complete construction this summer. Contractor crews are currently working around the 72" RCP Wet Well below the Secondary Seepage Pump Station (Photo 7). Crews are also working on achieving the proper grade to tie lines into the well. The completed work appears to be consistent with the approved designs and no issues were noted within the construction area.

### Property Discharge Water Treatment Plant

The PDWTP was operational at the time of the inspection. The operator plans to draw down the ponds and will stop discharge sometime in June until a call is made on the river. The PDWTP is located below 5 Dam and is intended to remove metals such as manganese, iron, copper, and zinc. The plant discharges to Tenmile Creek and provides final treatment before affected water leaves the property. The facilities were clean and well kept. Secondary containment is adequate and floor drains/sumps appear free of obstruction. The treatment process utilizes lime, flocculant, and sulfuric acid as reagent chemicals. Reagent lines and containers were clearly labeled. The lime is turned into a slurry and mixed with affected water in reactor tanks to raise the pH. There was a leak in one of the lines at the time of inspection, but the operator was in the process of repairs and leaked material was captured by secondary containment (Photo 8). The Slurry and Reactor Tanks are in good condition. Solids from the PDWTP are transported via a cement truck to the sludge cells. The filter press in the facility is not being utilized. Once the water leaves the reactor tanks it enters clarifiers and is dosed with flocculant. The clarifiers were in good working conditions and operating at the time of the inspection. Adjacent to the clarifiers is the Filter Building which houses a series of sand filters. Filter tanks appear in good condition. Sulfuric acid is also used in this facility to lower the pH before water is discharged. The sulfuric acid storage is isolated from the rest of the plant and located in an epoxy coated containment area (Photo 9). No spills or other problems were noted within the PDWTP during the inspection.

### Molybdenum Removal Water Treatment Plant

Construction continues on the new MRWTP building approved under TR-34. This is a supplementary process to Climax's PDWTP. Once online the raw water will first go into the Moly building, then water will go to the existing PDWTP building. A crane and several crews were observed working on the thickener tanks. The building still on schedule to be online in the first quarter of 2025. Construction progress can be seen in Photo 10.

All inspected areas were in excellent condition at the time of the inspection. In general, the site exhibits excellent housekeeping. Access roads throughout the site were plowed and well maintained. No problems or possible violations were noted. In general, the site exhibits excellent housekeeping.

All responses to this report should be directed to Todd Jesse at the Colorado Division of Reclamation, Mining, and Safety at Room 215, 1001 East 62<sup>nd</sup> Ave. Denver, CO 80216. Direct contact can be made at the Division's Grand Junction Field Office, by phone at 720-688-0626 or by email at [todd.jesse@state.co.us](mailto:todd.jesse@state.co.us)

## PHOTOGRAPHS



Photo 1: View to the north of containment beneath the crushing circuit.

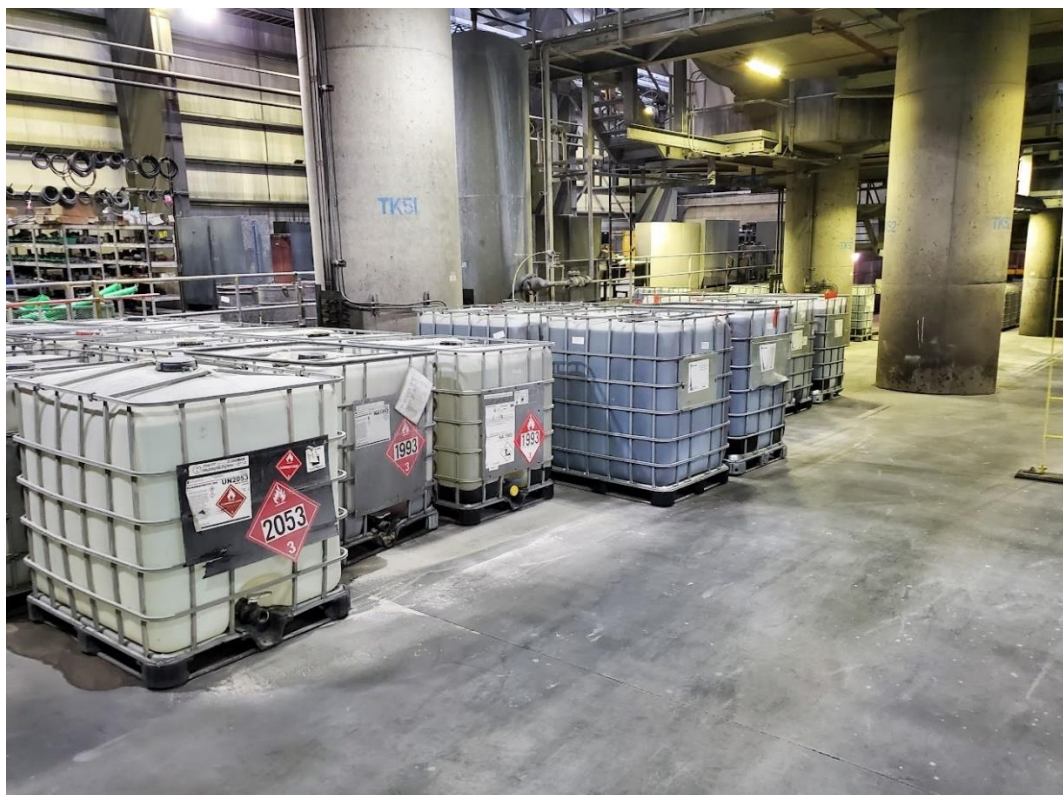


Photo 2: View to the west of chemical totes stored beneath the floatation circuit.





Photo 3: View to the east of sump below the thickener.



Photo 4: View to the southwest of lime silo at Mill Facility. Truck was waiting to unload.



Photo 5: View to the north of containment in reagent storage area.



Photo 6: View to the east of NFFF unit in the Mill Facility.





Photo 7: View to the west of progress on the 5 Dam Seepwater Collection System.



Photo 8: View to the west of leak in slurry line. Secondary containment is functioning properly.





Photo 9: View to the west of Sulfuric Acid storage in PDWPT



Photo 10: View to the north of progress on the MRWTP.



**Inspection Contact Address**

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