




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: Summit
INSPECTION TYPE: Monitoring	INSPECTOR(S): Lucas J. West	INSP. DATE: December 12, 2018	INSP. TIME: 10:05
OPERATOR: Climax Molybdenum Company	OPERATOR REPRESENTATIVE: Diana Kelts	TYPE OF OPERATION: 112d-3 - Designated Mining Operation	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$78,246,088.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: January 4, 2019	

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>N</u>	(BG) BACKFILL & GRADING----- <u>N</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>N</u>	(SF) PROCESSING FACILITIES----- <u>N</u>	(TS) TOPSOIL----- <u>N</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- <u>N</u>	(RV) REVEGETATION---- <u>N</u>
(SM) SIGNS AND MARKERS----- <u>N</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>Y</u>
(AT) ACID OR TOXIC MATERIALS----- <u>Y</u>	(OD) OFF-SITE DAMAGE----- <u>N</u>	

Y = Inspected and found in compliance / 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 normal monitoring program established by the Colorado Division of Reclamation, Mining and Safety. Climax is a 112d-3 Molybdenum mining and milling operation located primarily in Summit County. The site consist of 14,000 permitted acres with approximately 8,000 acres of affected lands. The site is bisected by Colorado State Highway 91 and public access is controlled by a guard station at the main gates. The Division currently holds \$78,246,088.00 in Financial Warranty for the site. Along with Division Staff listed on page one of this report, Diana Kelts and James Haag of Climax Molybdenum were present during the inspection. Six Photos accompany this report to illustrate the current site conditions.

The site was active during the inspection, and the main purpose of this inspection was to observe and verify the major secondary containment devices in key Environmental Protection Facilities (EPF's). The containment structures that were observed were in the Mill building, including the Lube Room, containment devices in the flotation and drying circuit, the hazardous materials storage building, reagent room, warehouse lube room, and the Property Discharge Water Treatment Plant (PDWTP). As part of the inspection records and engineered schematics were observed for each of the above listed facilities. The drawings and calculations show that each one of the secondary containment devices is more than sufficient to contain all materials stored in that area, and included the demonstration of the various recirculation sumps and blind sumps designed in the structures. The inspection followed the flow of material as it moves through the processes of the site.

The Mill Room is a dry process, however the floor and apron of the building is designed as its own secondary containment device. Within the Mill building is the Lube room that contains various oils, lubricants, solvents and other hazardous materials. The room itself is designed with a watertight seal on the doors and built in concrete berms on the floor to provide secondary containment for all materials stored in the room. All drums, buckets and other storage vessels are also stored on mobile containment pallets designed to capture and contain any spillage. An example of these pallet devices can be seen in Photo One. Within the Mill Building there is also a glycol based cooling system for the milling equipment. The glycol cooling system has its own containment berm built into the floor, and any overflow would be caught in the containment device that is the floor and apron of the mill building. The entire floor of the mill building is sloped and reports to a recirculation sump that can return material back into the milling circuit. This is demonstrated in Photo Two.

The next area that was observed was the area around the Rougher Flotation Circuit, Cleaner Flotation Circuit, drying area and thickener. Similar to the mill area the entire floor acts as secondary containment. The floor within the circuit area is sloped towards a series of recirculation sumps that return material into the process. An example of the sloped floor and sump is seen in Photo Three. The Thickener is the first step in tailings being prepped to be sent to one of the various Tailing Storage Facilities. The thickener exists within a separate concrete apron equipped with blind sumps that do not recirculate material but capture it to prevent a loss of containment.

The Warehouse Lube Room and Reagent room were also observed. Similar to the Mill Building Lube Room the door is equipped with water tight seals as well as blind sumps to contain any spillage. Adjacent to the Lube Room is the Reagent Storage Room. This room has a separate containment structure that is completely isolated from other systems. The tanks in the reagent room are double walled as secondary containment and the room itself is designed as tertiary containment that also contains blind sumps. An example of the double walled tanks can be seen in Photo Four.

The Climax Mine facility is registered as a small quantity generator in compliance with all rules and regulations under the Resource Conservation and Recovery Act (RCRA). All hazardous waste that is generated by the site is stored in the Hazardous Waste Storage Building. During this inspection an active shipment of material was taking place. The material was being cataloged, sealed and loaded for transport to an appropriate hazardous waste disposal facility. Similar to the other buildings on site, the floor and apron of the building are designed as secondary containment. Most of the materials stored in the building are dry, however some liquids are stored. Some of the material being staged for transport can be seen in Photo Five.

The Sludge Densification Plant was not inspected during this inspection because that facility exists within the footprint of the Tailings Storage Facility. Any loss of containment from that system would be contained within the Tailings Storage Facility and therefore was not inspected at this time. The final area that was inspected was the Property Discharge Water Treatment Plant (PDWTP). The floor of the PDWTP is designed with a 6 foot concrete apron, floor drains and recirculation sumps that function as secondary containment. The drawings and calculations observed during this inspection verify that there is sufficient storage capacity within the plant. The floor drain, tanks and concrete floor can be seen in Photo Six. As part of the water treatment process, sulfuric acid is used to alter the pH of the water prior to discharge. All lines, tanks and monitoring systems for the acid was inspected and verified to have several levels of containment beyond secondary containment. Also, adjacent to the PDWTP is the events pond which is a separate structure designed to capture any and all spillage that may come from the PDWTP. The capacity of the pond was verified and compared to the reported quantities of material within the plant. From the events pond that material would be recirculated into the system to prevent any possible loss of containment into Tenmile creek.

The overall footprint of the site is in good condition and no problems or possible violations were observed during this inspection. All structures, facilities and equipment appeared to be in good working condition. The sumps, grates and drains that were inspected were all cleared of debris and appeared to be functioning as designed. All responses to this report should be directed to Lucas West at the Colorado Division of Reclamation, Mining and Safety at 1313 Sherman Street, Room 215, Denver, CO 80203, by phone at (970)-243-6368 or by email at lucas.west@state.co.us.

Inspection Contact Address

Diana Kelts
Climax Molybdenum Company
Highway 91, Fremont Pass
Climax, CO 80429

PHOTOGRAPHS

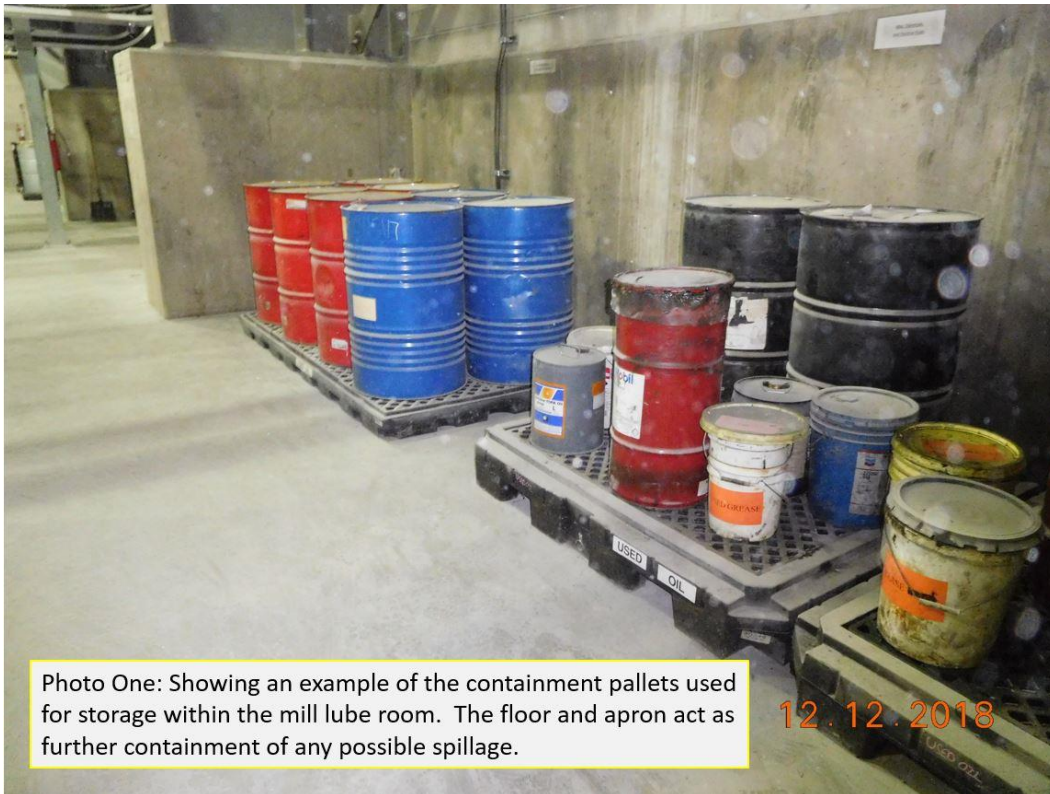




Photo Three: Showing one of the recirculation sumps located in the floor of the flotation circuit area.

12.12.2018

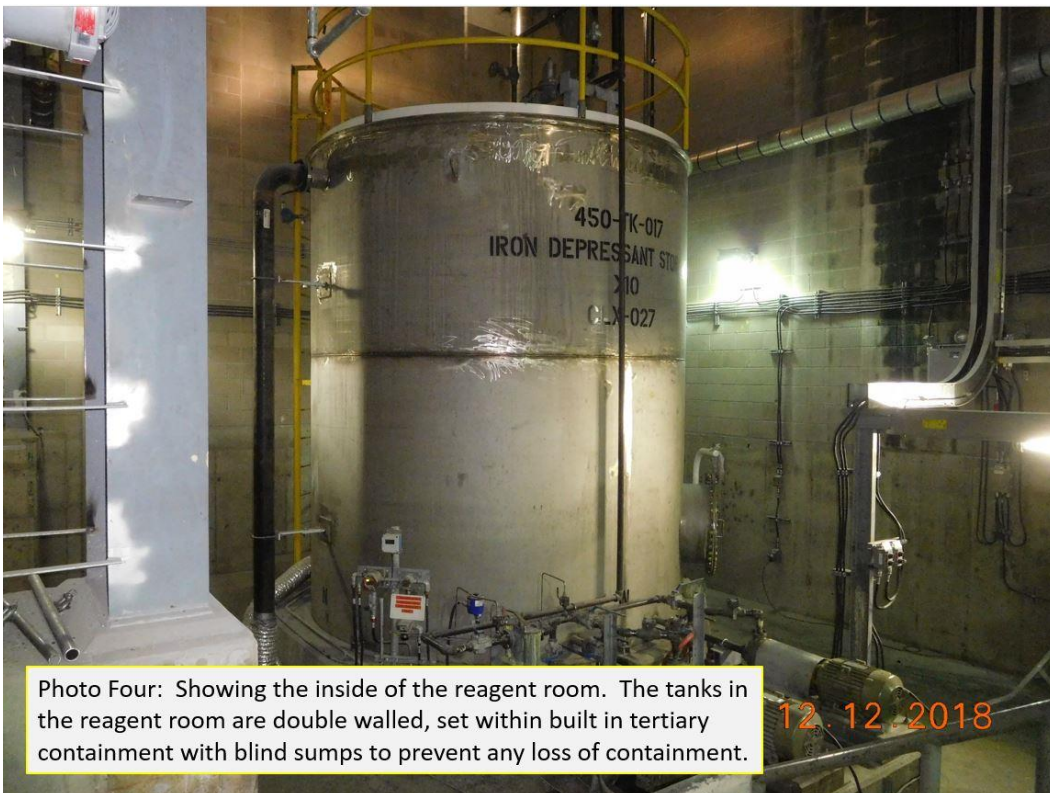


Photo Four: Showing the inside of the reagent room. The tanks in the reagent room are double walled, set within built in tertiary containment with blind sumps to prevent any loss of containment.

12.12.2018

