

# 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/PROSPECTING ID#:	MINERAL:	COUNTY:
	M-1977-493	Molybdenum	Lake, Summit
INSPECTION TYPE:		INSP. DATE:	INSP. TIME:
	Lucas West	February 28, 2022	10:32
	<b>OPERATOR REPRESENTATIVE:</b>	TYPE OF OPERATION:	
	Diana Kelts	112d-3 - Designated Mining Operation	
<b>REASON FOR INSPECTION:</b>		BOND AMOUNT:	
Normal I&E Program		\$91,011,850.00	
DATE OF COMPLAINT:		JOINT INSP. AGENCY:	
	None	None	
INSPECTOR'S SIGNATURE:		SIGNATURE DATE:	
Mar		March 2, 2022	
	INSPEC	M-1977-493 INSPECTOR(S): Lucas West OPERATOR REPRESENTATIVE: Diana Kelts BOND CALCULATION TYPE: None POST INSP. CONTACTS: None	M-1977-493MolybdenumINSPECTOR(S):INSP. DATE:Lucas WestFebruary 28, 2022OPERATOR REPRESENTATIVE:TYPE OF OPERATORDiana Kelts112d-3 - DesignatedBOND CALCULATION TYPE:BOND AMOUNT:None\$91,011,850.00POST INSP. CONTACTS:JOINT INSP. AGEINoneNone

### **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 $\underline{Y}$	(TS) TOPSOIL <u>N</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE N	(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>Y</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 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. In addition to the Inspector listed on page one of this report Eric Detmer of Climax accompanied the inspection and represented the Operator. 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 \$91,011,850.00 in Financial Warranty for the site. Sixteen Photos accompany this report to illustrate the current site conditions.

This inspection was focused on the following areas:

- Mill Facility Chemical Storage and Transfer Areas
- Sludge Densification Plant (SDP) Chemical Storage and Transfer Areas
- Property Discharge Water Treatment Plant (PDWTP) Chemical Storage and Transfer Areas

### Mill Facility Chemical Storage and Transfer Area

The Mill Facility Chemical storage is concentrated in three areas, the Reagent Storage Room, bulk storage under the flotation cells, and the internal and external lime storage areas. The Reagent Storage Room and transfer bay were observed to be in excellent condition. The transfer bay was clean, neat and well kept. The actual transfer station can be seen in Photo One. All 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 bay can be seen in Photo Two. 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. The interior of the room is in excellent condition and can be seen in Photo Three. No evidence of spillage or containment concerns was observed, the sump is clean and clear from obstructions providing more than adequate containment for all materials stored in the room.

Located below the flotation cells within the Mill Facility, various chemicals are stored in IBC totes. The materials stored in this area range from chemical deicer to flocculants and various other items. An example of the bulk storage can be seen in Photo Four. All items stored in this area are neat and well kept, separated and clearly labeled. Secondary containment for these chemicals is achieved by the greater secondary containment of the Mill Facility and appears to be more than adequate.

Concentrated lime storage is achieved in two locations of the Mill Facility. The internal lime storage tank which is connected to the mill feed lines, and the bulk lime storage silo located just outside the Mill Building. The internal lime storage tank can be seen in Photo Five. Evidence of use and lime scaling was observed around the tank, which is consistent with normal operations. No evidence of significant spillage was observed, and because the tank is located within the Mill Facility, secondary containment is achieved through the greater secondary containment of the Mill Facility. The external lime storage silo was also observed to be in excellent condition and can be seen in Photo Six. 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.

### SDP Chemical Storage and Transfer Areas

The Sludge Densification Plant (SDP) is a 2 part facility consisting of a lime storage and mixing facility, and the treatment facility. Both facilities are located adjacent to the Tenmile Tailings Storage Facility (TSF). The lime storage and mixing facility is the ancillary facility, referred to as the McNulty Lime Station and is used for storing large quantities of hydrated lime, where it is mixed with makeup water and fed to the SDP to be used in the treatment facilities. The exterior of the facility can be seen in Photo Seven. The interior of the lime storage building is in excellent condition, neat orderly and well kept. The interior can be seen in Photos Eight. Lime is fed from the silos to the holding tanks, and on to the mixing tanks where a slurry is created. The floor of the building is equipped with in floor troughs and sumps to contain any spilled material generated from operations. An example of the troughs can be seen in Photo Nine. Greater secondary containment is achieved by way of gravitational flow into the Tenmile TSF. All materials stored within the facility are in good condition.

The lime slurry is directed to the SDP, where it is mixed with seepage water in a series of neutralization tanks. The neutralization tanks are large steel tanks set on concrete foundations with agitators and pumps to lower the pH. The tanks were not operating at the time of inspection, and all tanks appeared to be in excellent condition. An example of the tanks can be seen in Photo Ten. Once the target pH is achieved a polymer flocculent is added to assist in metals precipitation and the slurry pumped to the clarifier. The polymer flocculent is stored and mixed for use in the plant. The storage and mixing tanks can be seen in Photo Eleven. A small steel containment berm is located on the floor surrounding the tanks to contain minor spillage. No evidence of spillage was observed in that area.

Within the SDP several locations are used for fuel and oil storage, as well as containing a backup generator station. All fuels and oils are stored properly with secondary containment, and the generator set is in good working condition. Additionally, a small tank of chlorine used in potable water treatment is stored within the SDP. The tank and all components are in excellent condition and no evidence of spillage was noted. Like the lime storage facility, secondary containment of the SDP is achieved by way of a series of troughs and sumps. Greater secondary containment is achieved by its proximity to the Tenmile TSF meaning that any catastrophic failure would report directly to TSF. Throughout the SDP, the facility is well kept, clean, neat and organized.

### PDWTP Chemical Storage and Transfer Areas

The Property Discharge Water Treatment Plant is located near the most down gradient area of the permit area and houses the final water treatment facility prior to discharge. Similar to the SDP, the facility contains a lime storage area used for pH adjustment during water treatment operations. The lime silo can be seen in Photo Twelve and is in excellent condition. The interior of the PDWTP contains several tanks where lime is mixed creating a slurry, mixed with process water, has polymer added for precipitation, and sent to the clarifiers for polishing prior to discharge. All tanks, reactors and mixing facilities are in excellent condition, the main facility is very well kept, clean neat and organized. The main facility has a series of troughs leading to main sump for secondary containment. A view of the troughs and tanks can be seen in Photo Thirteen. After water runs through the reactors and undergoes pH adjustment it is sent to the primary and secondary clarifiers.

Connected by an underground man-way, the filter building is located adjacent to the clarifier tanks. The filter building is in good condition and contains various chemicals used during the water treatment process. Most notable is sulfuric acid, used for pH adjustment. The sulfuric acid injection station can be seen in Photo Fourteen. Photo Fifteen shows the sulfuric acid storage area which is its own separate room equipped with

sump, spill kits and readily accessible PPE. The tank and sump are in excellent condition. Located just outside the filter building is the sulfuric acid loading station. The loading station is equipped with secondary containment for possible spills that may happen during the unloading process. The station has been cleared of snow and is good operating condition. It can be seen in Photo Sixteen.

All inspected areas were in excellent condition at the time of the inspection, no problems or possible violations were noted. 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. Direct contact can be made at the Division's Grand Junction Field office, by phone at 303-866-3567 Ext. 8187 or by email at lucas.west@state.co.us.

### **Inspection Contact Address**

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

CC: Travis Marshall, DRMS Dustin Czapla, DRMS

## **PHOTOGRAPHS**



Photo One: View southwest, showing the Reagent Transfer Station within the transfer bay. The transfer station and associated sump is in excellent condition, clean and well kept.

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Photo Three: View north, showing the confined reagent storage room. All tanks, piping and equipment stored within the room are in excellent condition and the secondary containment is clean and well kept.



Photo Four: View north, showing an example of bulk storage of IBC totes underneath the flotation cells. All materials are organized, separated and stored within secondary containment of the Mill Facility.









Photo Eight: View northeast, showing the inside of the McNulty Lime Station. The lime is fed into a series of tanks and mixed with process water before proceeding to the SDP. All tanks and lines show signs of heavy use but are well maintained.







Photo Eleven: View northeast, showing the polymer storage and mixing area within the SDP. A small containment berm surrounds the tanks and the area is well maintained.

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Photo Thirteen: View west, showing the tanks and troughs leading to the main sump of the PDWTP. All troughs and sumps were clear, unobstructed and functioning as designed at the time of the inspection.





