




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): Jared L. Ebert	INSP. DATE: November 16, 2018	INSP. TIME: 08:45
OPERATOR: Climax Molybdenum Company	OPERATOR REPRESENTATIVE: Diana Keltz	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: November 20, 2018	

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>Y</u>	(SF) PROCESSING FACILITIES----- <u>N</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>N</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>Y</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 and found in compliance / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

OBSERVATIONS

This was a monitoring inspection of the Climax Mine, Division of Reclamation, Mining and Safety ("DRMS") Permit No. M-1977-493, operated by Climax Molybdenum Company ("Climax"). I, Jared Ebert with DRMS conducted the inspection. Ms. Diana Keltz with Climax accompanied me during the field inspection. The inspection began with a meeting between myself and members of the Climax staff to discuss the required monitoring reports for the Overburden Storage Facilities ("OSF") and the Tailings Storage Facilities ("TSF") as well as the review of the reclamation cost estimate for the site. I met with Diana Keltz, Tim Richards, Logan Tydryszewski and Ray Lazuk with Climax.

Excess Spoil and Dev. Waste:

The first, second and third quarter, 2018 OSF inspection reports were reviewed with Diana Keltz and Logan Tydryszewski. These reports provide a summary of the volume/tonnage of material placed in the various OSF piles. Based on the reports, waste was placed in the McNulty 11940 & 840, N40 11505 Low-Grade and the N50 Waste areas. Each of these areas are observed and any maintenance and operations recommendations are noted in the report. The foundation of the OSF piles are monitored with three GPS units. Based on the reports no significant movement was noted. InSAR monitoring occurred during the second and third quarter of this year, no significant movement concerns were noted and the movement observed is indicative of settling and possibly active dumping areas.

Climax and their Engineer of Record ("EoR"); Golder, conducted an annual OSF inspection on October 11, 2018. DRMS reviewed the Inspection Report resulting from that inspection. The EoR found the GPS data indicates no significant trends or movement to signify foundation instability along the toe of the N40 OSF. Based on the EoR review of the InSAR monitoring, they found the data indicates normal settlement with no unusual displacement observed. According to the report, the development of the N40W, N50W and the McNulty OSF's are occurring in general accordance with the design and with the requirements of the approved Operation and Monitoring Plan.

Hydrologic Balance:

The repairs to the West Interceptor approved with Technical Revision No. 28 (TR28) have been completed. The majority of the West Interceptor was snow covered, but no problems were noted with the areas observed. The inlet and outlet structures installed at the intersection of Searle Creek were observed and appeared functional.

Processing Waste:

The August, September and October, 2018 TSF Inspection reports were reviewed with Diana Keltz and Tim Richards with Climax. Based on these reports, it appears Climax is monitoring the many piezometers installed on these facilities and installing horizontal drains as needed. Also, no significant issues were noted in the reports.

The Climax staff did indicated they had temporarily deposited tailings in the Tenmile TSF beginning on Monday, November 12 and ending Thursday evening, November 15. This was done to provide some additional pH treatment. During this inspection Climax was discharging tailings at the Mayflower TSF at the Clinton Cutoff. The beach width of the Mayflower TSF appeared greater than the required 800 feet.

1 Dam, 3 Dam and 5 Dam were observed. These facilities were snow covered but appeared stable. The Robinson Lake Dam was also observed. This dam was snow covered but appeared stable.

PHOTOGRAPHS



Figure 1. 3 Dam, from the east side looking west.



Figure 2. Outlet structure at the intersection of the West Interceptor and Searle Creek.



Figure 3. Outlet structure at the intersection of the West Interceptor and Searle Creek.



Figure 4. From the toe of 5 Dam looking southwest.



Figure 5. From the toe of 5 Dam looking southeast.



Figure 6. From the toe of 1 Dam looking northwest.



Figure 7. From the toe of Robinson Dam looking south.

Inspection Contact Address

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