

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:		MINE/PROSPECTING ID#:	MINERAL:	COUNTY:
Henderson Mine		M-1977-342	Molybdenum	Clear Creek, Grand
INSPECTION TYPE:		INSPECTOR(S):	INSP. DATE:	INSP. TIME:
Monitoring		Michael A. Cunningham	April 19, 2018	09:30
OPERATOR:		OPERATOR REPRESENTATIVE:	TYPE OF OPERAT	FION:
Climax Molybdenum Company		Amber Parmet	112d-3 - Designated	Mining Operation
			_	
REASON FOR INSPECTION:		BOND CALCULATION TYPE:	BOND AMOUNT:	
Normal I&E Program		None	\$37,993,785.00	
DATE OF COMPLAINT:		POST INSP. CONTACTS:	JOINT INSP. AGE	NCY:
NA		None	None	
WEATHER:	INSPE	CTOR'S SIGNATURE:	SIGNATURE DAT	E:
Clear	U	il C.f	May 10, 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>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>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>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 and found in compliance / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

OBSERVATIONS

The Henderson Mill inspection was conducted by Michael Cunningham and Stephanie Mitchell of the Division of Reclamation, Mining and Safety (Division) as part of the Division's monitoring inspection program. Ms. Amber Parmet and Mr. Kasey Martin of Climax Molybdenum - Henderson Operation (Henderson) were also present for the inspection. The purpose of the inspection was to evaluate the Environmental Protection Facilities (EPFs) at the Henderson Mill.

Discussion Topics

The inspection commenced with a meeting during which the following topics were discussed:

Aspen Canyon Well

The Operator will submit a report addressing the iron levels in the Aspen Canyon Well following the next sampling event which is to occur in May 2018.

Technical Revisions

In the Inspection Report dated April 12, 2018, the Division noted the Operator was preparing a Technical Revision which would address raising the level of the roadway adjacent to the seep collection area to increase freeboard capacity of the collected seep water. Following the previous inspection, the Operator clarified the purpose of raising the road was to increase storage capacity for stormwater. In addition, the previous Inspection Report incorrectly noted the Operator was automating the seep gates on the Ultimate Canal. The seep gates which will be automated are located in the Seep Water Collection and Return System at the toe of the tailings dam. The Operator informed the Division the location of the seep gates would change as a result of the road raise project. The Operator will submit a Technical Revision which addresses both the road raise project and the changes to seep gates in the Seep Water Collection and Return System.

The Operator has completed the review of the tank capacity signs on the Designated Chemicals Storage Facilities and will submit a Technical Revision to update the Environmental Protection Plan (EPP). The Technical Revision will also incorporate the Lime Slaker as an EPF into the EPP.

3 Dam Buttress Project

The Operator informed the Division the 3-Dam Buttress Project, approved under Technical Revision No. 29, is currently on schedule and is expected to commence in June 2018.

Acid And Toxic Materials

The inspection focused on the EPFs at the Henderson Mill which involve process water, tailings circuit, and designated chemical storage. A complete list and discussion of the EPFs can be found under Technical Revision No. 18.

East Branch Reservoir System

The East Branch Reservoir System includes the reservoir, dam, pump station, and process water line. The water stored in the reservoir consists of recycled process water, which is pumped to the process water tanks and is then pumped to the Mill. Stormwater up gradient of the East Branch Reservoir is diverted to an underground diversion pipeline which discharges through outfall (OF-M2) to the Williams Fork River. Stormwater was being routed around the East Branch Reservoir at the time of the inspection and the diversion intake and outfall were free of obstructions and were functioning properly. The Division also inspected the barge pump station which is a component of the tailings storage facility. The 3 pumps in the barge pump station were operational and decant water from the tailings storage facility was being delivered back to the East Branch Reservoir.

Seep Water Collection and Return System

The Seep Water Collection and Return System was inspected and was found to be functioning properly. The seep water is collected in a main canal and then is routed into two diversion ditches which convey the seep water to the Ute Park Pump Station. No blockages were observed in system and seep water was being conveyed through both diversion ditches.

Ute Park Pump Station

The Ute Park Pump Station was inspected and was found to be functioning properly. The pump station contains three pumps which are used to deliver the seep water back to the pool on the tailings storage facility.

Groundwater Intercept System

The Groundwater Intercept System is comprised of five wells which collect seepage affected groundwater below 1-Dam. The collected groundwater is pumped into the seep water collection canals, where it is then pumped into the tailings storage facility and recirculated back into the Mill process water system. All of the wells were operational at the time of the inspection. The Operator informed the Division that wells MLEX-4 and MLEX-5 both had a corroded steel pipe located between the well head and electrical panel which have been scheduled for replacement.

Coherex Storage

The Operator utilizes Coherex for dust suppression at the Mill. Coherex is stored in two 10,000 gallon doublewalled tanks near the tailings storage facility maintenance building. The signage on the tanks correctly identified the capacity of the tanks. Coherex was being applied to the tailings storage facility during the inspection.

Inspection Contact Address

Miguel Hamarat Climax Molybdenum Company 19302 County Rd. #3 Parshall, CO 80468

CC: Wally Erickson, DRMS

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PHOTOGRAPHS



1. East Branch Reservoir - Discharge from barge pump station.



2. East Branch Reservoir - Stormwater diversion discharge point.



3. Tailings Storage Facility - Barge pump station.



4. Seep Water Collection - main collection canal.

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5. Seep Water Collection - seep water gate connecting main canal to diversion ditch.



6. Seep Water Collection - Diversion ditches discharging to Ute Park Pump Station.



7. Groundwater Intercept System - Pending repair on MLEX-4.



8. Coherex Storage Tanks.