

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	November 8, 2016	09:30
OPERATOR:		OPERATOR REPRESENTATIVE:	TYPE OF OPERAT	FION:
Climax Molybdenum Company		Miguel Hamarat, Alex Ungers	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	November 29, 2016	

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 Y	(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>Y</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>	(CI) COMPLETE INSP <u>N</u>
(ES) OVERBURDEN/DEV. WASTE <u>N</u>	(SC) EROSION/SEDIMENTATION <u>N</u>	(RS) RECL PLAN/COMP <u>N</u>
(AT) ACID OR TOXIC MATERIALS <u>N</u>	(OD) OFF-SITE DAMAGE <u>N</u>	(ST) STIPULATIONS <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 Mine was inspected by Michael Cunningham of the Division of Reclamation, Mining and Safety (Division) as part of the Division's monitoring program. Mr. Miguel Hamarat and Mr. Alex Ungers with Climax Molybdenum - Henderson Operations (Henderson) were present during the inspection. The purpose of the inspection was to evaluate the storm water controls at the Henderson Mill.

Surface and Storm Water Control:

The Henderson staff completed the biannual inspection of the surface and storm water facilities at the Henderson Mill in October 2016. The Henderson staff inspections consist of a review of all disturbed areas, areas used for material storage or handling that are exposed to precipitation and other areas with potential sources of pollution. In addition, Henderson staff inspects all water diversion structures, outfalls, sediment and erosion control structures and other Best Management Practices (BMPs) identified in the Storm Water Management Plan.

The facilities at the Henderson Mill consist of the mill complex, tailings impoundment, several remote storage yards and the above ground portion of the ore haulage system. The majority of the storm water at the Henderson Mill reports to the mill process water system and is recirculated through the mill. Process water from the mill does not discharge from the site and is managed under a Colorado Discharge Permit System permit issued by the Colorado Department of Public Health and Environment.

The inspection commenced with the ore haulage system, which extends for approximately five miles from the Henderson Mine Portal to the Henderson Mill. The outfalls along the conveyor route report to the Williams Fork River. The potential sources of pollution along the conveyor route include sediment from erosion, ore from the ore haulage system, and oil and grease from equipment. The storm water outfalls along the conveyor route utilize BMP's including rock check dams and straw wattles. In addition to inspecting the individual outfalls along the conveyor route, the Division inspected the PC2/PC3 Transfer Station Area and the Portal Laydown Yard and found these areas to be clean and well maintained. The Division found the outfalls and storm water diversions along the conveyor route were free of obstructions and the BMPs were functioning as designed. The Division did not observe any pollutants leaving the site.

Following the inspection of the conveyor route, the Division and Henderson staff inspected the Ultimate Canal which intercepts storm water along the west and north sides of the tailings impoundment. Storm water collected in the Ultimate Canal reports to the Williams Fork River. The potential sources of pollution along the Ultimate Canal include sediment from the mountain drainages surrounding the tailings impoundment. In addition, several outfalls along the access road which follows the Ultimate Canal were inspected. The Ultimate Canal is unlined and discharges through a single outfall. There are several gates along the Ultimate Canal which can be manually opened to allow storm water to flow to wetland areas as well as into the tailings impoundment; the gates are operated on an as-needed basis. At the time of the inspection, there was water flowing through the diversion ditch. The banks of the diversion ditch are vegetated and the Division did not observe any signs of erosion. The Division observed cattails within several areas of the Ultimate Canal. The presence of cattails is not unexpected; however, if left uncontrolled they could significantly reduce the carrying capacity of the Ultimate Canal. According to Henderson staff, the cattails are manually removed each year. Removal of the cattails did not occur in 2016, but Henderson staff plans on conducting removal activities in 2017. The Division found the Ultimate Canal to be well maintained and functioning as designed.

Topsoil:

The topsoil stockpile located along west side of the Ultimate Canal was inspected. The Operator has recently stabilized the topsoil stockpile by benching and hydroseeding the lower portion of the stockpile. Henderson staff will bench and hydroseed the upper portion of the stockpile in 2017. No signs of erosion were observed on the topsoil stockpile.

PHOTOGRAPHS



1. Typical outfall BMP's.



2. Topsoil stockpile stabilization.



3. Topsoil stockpile stabilization.



4. Cattails within Ultimate Canal.



5. Cattails within Ultimate Canal.

Inspection Contact Address Miguel Hamarat

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

CC: Wally Erickson, DRMS Peter Hays, DRMS Stephanie Mitchell, DRMS