




MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety 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: Henderson Mine	MINE/PROSPECTING ID#: M-1977-342	MINERAL: Molybdenum	COUNTY: Clear Creek, Grand
INSPECTION TYPE: Monitoring	INSPECTOR(S): Peter S. Hays	INSP. DATE: April 17, 2019	INSP. TIME: 10:00
OPERATOR: Climax Molybdenum Company	OPERATOR REPRESENTATIVE: Aaron Hilshorst	TYPE OF OPERATION: 112d-3 - Designated Mining Operation	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$37,993,785.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: May 8, 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>Y</u>	(FN) FINANCIAL WARRANTY----- <u>N</u>	(RD) ROADS----- <u>Y</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>Y</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>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>Y</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

The Henderson Mill was inspected by Peter Hays and Stephanie Mitchell with the Division of Reclamation, Mining and Safety (Division/DRMS) as part of the Division's monitoring inspection program. Mr. Aaron Hilshorst with Climax Molybdenum - Henderson Operations (Henderson) was present during the inspection.

Designated Chemical Storage:

The designated chemical storage facilities were inspected by the Division. The current Environmental Protection Plan (EPP) for the Mill was approved by the Division under TR-08 on November 2, 2012. The Environmental Protection Facilities (EPF) for designated chemicals at the Henderson Mill include enclosed buildings, tanks, bins and berms used singly or in combination to contain the designated chemicals at the site. The following EPF facilities were observed during the inspection; Mill EPF 1.2 – Mill Process Water Storage Tanks, Mill EPF 2.1 – Nokes Building, Mill EPF 2.2 Hydrochloric Acid Storage, Mill EPF 2.3a – Flotation Chemical Storage (OrePrep F-579), Mill EPF 2.3b – Flotation Chemical Storage (Orform D8 Depressant), Mill EPF 2.4 – Pine Oil Storage, Mill EPF 2.5 – Collector Oil Storage (vapor oil and diesel #2), Mill EPF 2.6 – Syntex Storage, Mill EPF 2.7 – Sodium Lauryl Sulfate Storage, Mill EPF 2.8 – Tergitol NP-9/9N9 Surfactant Storage, Mill EPF 2.9 – Coherex Storage and the Mill Lime Slaker storage tank.

Henderson is in the process of revising the EPP to update the storage capacities listed in the plan and include the lime slaker into the plan. The following items require updated tank capacities; the pine oil tank is listed in the EPP at 14,000 gallons should be 32,000 gallons, the syntax storage tanks are listed at 5,700 and 13,200 gallons for the mixing and storage tanks, respectively should be listed at 17,000 and 32,000, respectively and the 21,800 gallon mixed Nokes reagent tank was not labeled. Henderson is in the process of evaluating the removal of the existing Nokes and Hydrochloric Acid storage facilities due to the possible removal of the leach circuit and due to improved flotation processes.

Ultimate Canal:

Henderson was in the process of excavating the Ultimate Canal to remove debris and ice ahead of the spring runoff.

3-Dam Seep Collection System:

Henderson intends to submit a technical revision to revise the existing 3-Dam Seepwater Collection System to add three (3) additional cleanouts.

Fire Hydrant Leak:

The fire hydrant leak reported by Henderson on November 2, 2018 is scheduled to be repaired this summer. The 6" diameter line remained isolated through the winter since isolating the line does not affect the operation of the fire water system. The fire hydrant leak area was inspected and appeared unchanged since it was reported by Henderson.

East Branch Dam:

On April 9, 2019, Henderson staff informed the Division of a sink hole along the left abutment of the East Branch Dam. The dam is listed as an EPF with the Division, however since it was determined not to be a failure or imminent failure of the EPF the sink hole was not reported under Rule 8.1(b) by Henderson. Henderson reported the sink hole to the Dam Safety office and is coordinating with the Dam Safety staff regarding the investigation and repair of the sink hole. The source of the sink hole is believed to be a pipe failure from Ute

Creek Reservoir. Water from Ute Creek Reservoir is piped through two (2) eight (8) inch diameter pipes under County Road 3 and along the left abutment of the East Branch Dam to the East Branch pump house. The sink hole area was potholed by Henderson the day before this inspection, however the pipeline was not located. Henderson intends to excavate the area to locate the pipe once the appropriate notice and permits are received from Grand County to operate in County Road 3.

1-Dam Seep Water Project:

The 1-Dam Seep Water Collection and Return System Improvements project approved under TR-30 by the Division on November 1, 2018 is scheduled to be completed this year with the completion of the road raise.

3-Dam Buttress Project:

The 3-Dam Buttress – Stage 1 project approved under TR-29 by the Division on April 4, 2018 is scheduled to be completed this year with the placement of the remaining tailings abutment material.

Photographs taken during the inspection are attached.

Inspection Contact Address

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

Ec: Michael Cunningham, DRMS

PHOTOGRAPHS



View of sink hole above the East Branch Dam left abutment along CR 3 shoulder



View of sink hole along the left abutment of the East Branch Dam from CR 3