




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: Henderson Mine	MINE/PROSPECTING ID#: M-1977-342	MINERAL: Molybdenum	COUNTY: Clear Creek, Grand
INSPECTION TYPE: Monitoring	INSPECTOR(S): Peter Hays	INSP. DATE: August 30, 2021	INSP. TIME: 09:30
OPERATOR: Climax Molybdenum Company	OPERATOR REPRESENTATIVE: Geoff Niggeler	TYPE OF OPERATION: 112d-3 - Designated Mining Operation	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$134,155,028.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: October 1, 2021	

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>NA</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>Y</u>	(SF) PROCESSING FACILITIES----- <u>N</u>	(TS) TOPSOIL----- <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</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>N</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 Russ Means with the Division of Reclamation, Mining and Safety (Division/DRMS) as part of the Division's monitoring inspection program. Mr. Geoff Niggeler with Climax Molybdenum - Henderson Operations (Henderson) was present during the inspection.

The following aspects of the mill site were inspected and are discussed below:

Tailings Impoundment:

The 1-Dam and 3-Dam Tailings Impoundments were inspected with a Henderson staff engineer. The inspection followed the general guidelines of the Henderson Mill Tailings Storage Facilities Monthly Inspection Report form. Active tailings deposition was not occurring during the inspection.

The following aspects of the 1-Dam and 3-Dam Tailings Impoundments were observed and discussed during the inspection; Dam Crests, Downstream Faces, Beaches and Dam Toe/Abutments. The dam crests were observed for crest condition, settlement, cracking, other signs of movement, tailings delivery line and instrumentation readings. The downstream faces were observed for dam condition, settlement, cracking, erosion, other signs of movements and vegetation growth. The beaches were observed for beach condition, estimated beach width, freeboard, signs of movement, deposition and beach erosion. The dam toes and abutments were observed for toe condition, signs of movement, abutment condition, seepage condition and drain condition.

The Seepage Collection System was observed for amount of seepage flow, diversion of seepage, seepage water properties and seepage pond condition.

The impoundment water pool location is estimated by Henderson based on monuments located in the impoundment. A minimum 500 feet beach offset from the crest of the impoundment is required by AECOM. A minimum 1,000 feet offset is required by Henderson. The beach distance was reported at between 2,800 to 3,000 feet during the inspection. Tailings deposition via spigot in the 1-Dam cells is progressing from south to north. Recent tailings deposition was observed in cell 5 during the inspection. Deposition will continue in cells 6 through 9, before changing to leadoff deposition in 3-Dam. The change from spigot to lead-off deposition is schedule to occur in mid-November.

Henderson stated no additional horizontal drains were planned to be installed this year. The foundation drains under the impoundments were discussed and several of the active drains were observed during the inspection.

3-Dam Crest Raise:

The 3-Dam crest raise construction was observed during the inspection. Two engineers from AECOM were on-site observing the 3-Dam crest raise and performing the monthly tailings impoundment inspection. The crest raise was estimated at a ninety (90) foot offset from the previous face and six (6) feet in height. The 3-Dam crest raise will be completed to allow leadoff deposition on 3-Dam through the winter. The 1-Dam crest raise is schedule to occur over next summer.

TDL Leak:

On August 12, 2021, the Division received the required written follow-up notice for a Mill TDL leak. The notice stated on August 6, 2021 a leak in the HDPE section of the TDL was discovered during a routine inspection. Henderson staff estimated approximately 150 to 200 gallons of tailings leaked out of the TDL and onto the TSF access road between the No. 1 Cutout and the 3-Dam crest. The leaked tailings were fully contained on the TSF access road. A small hole near a fused joint in the HDPE was patched with epoxy after the tailings flow was diverted to the No. 1 Cutout. The repaired section of TDL is scheduled to be replaced as part of the 3-Dam crest raise.

Drop Tower 4:

Evidence of the routine maintenance on drop tower 4 including the replacement of the splash curtain was observed during the inspection.

Photographs taken during the inspection are attached. If you need additional information or have any questions, please contact me at the Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at 303.866.3567 x 8124, or by email at peter.hays@state.co.us.

Inspection Contact Address

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

Ec: Jared Ebert, DRMS

PHOTOGRAPHS



View of the TDL from the drop box



View of the drop tower 4, the ECO and the TDL



View of the repaired HDPE section of the TDL



View of the southern portion of the 3-Dam crest raise



View of the new setback created by the 3-Dam crest raise



View of the 3-Dam crest raise construction looking north



View of the 3-Dam crest raise looking south toward the TSF access road



View of the seepage collection ditch below 3-Dam



View of recent spigot deposition in cell 5 on 1-Dam



View of the plunge pool from the cell 5 lead off on 1-Dam



View of the seepage collection ditch and horizontal drains below 1-Dam



View of the seepage collection ditch and horizontal drains below 1-Dam