




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 Hays	INSP. DATE: November 5, 2020	INSP. TIME: 10:00
OPERATOR: Climax Molybdenum Company	OPERATOR REPRESENTATIVE: Miguel Hamarat	TYPE OF OPERATION: 112d-3 - Designated Mining Operation	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$49,690,538.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: November 10, 2020	

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>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>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>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 with the Division of Reclamation, Mining and Safety (Division/DRMS) as part of the Division's monitoring inspection program. Mr. Miguel Hamarat with Climax Molybdenum - Henderson Operations (Henderson) was present during the inspection.

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

3-Dam Buttress Project - Phase 2:

The 3-Dam Buttress Project - Phase 2 was approved by the Division under TR-32 on July 20, 2020. The second phase of the 3-Dam Buttress Project is scheduled to be constructed during the summers of 2020 and 2021. Phase 2 of the Buttress Project includes the placement of an estimated 75,520 cubic yards of buttress material, 1,000 cubic yards of rock fill and 900 cubic yards of filter material. The added buttress material will be compacted and graded to a 3H:1V slope. The buttress material will be taken from the excess tailings material on the benches of 1-Dam.

A geotechnical investigation was completed in June 2020 to verify some localized phreatic conditions at the toe of the original dam used in the original analyses. Minor modifications to the geometry of the buttress may be required based upon the findings and will be documented in the as-built drawings.

Phase 2 will not impact any existing horizontal or foundation drains. The existing piezometers impacted by Phase 2 will be extended to keep them functional through all phases of the buttress construction and will be available for monitoring during construction activities.

The Phase 2 buttress construction is complete for the south and north areas of 3-Dam. The Operator estimates 80,000 cubic yards of material was placed during the Phase 2 buttress construction. The two upper buttress benches of the north area were combined into one bench with the extension of the lower bench into the upper bench. The modification was approved by AECOM and will be incorporated into the as-built drawings for the project. The 3-Dam buttress area was surveyed last week according to the Operator. All of the buttress benches were treated with coherex and the toe of all the benches have been graded to a 3H:1V slope and compacted with a sheepsfoot compactor perpendicular to the slope to prevent erosion. All instrumentation affected by the project has been raised according to the Operator.

Ultimate Canal:

The Ultimate Canal is included in Mill EPF 3.1 - Storm Water Diversion System. The canal diverts un-impacted storm water from the west and north ends of the tailings storage facility (TSF) around the north end of the property to the Williams Fork River. The canal was inspected from south to north during the inspection. The canal surface was partially ice covered at the time of the inspection, however sections of the canal were ice free and water was flowing freely. The gabion structures, culverts and inlet structures were observed and appeared to be working as designed.

3-Dam Seepwater Collection and Pumpback System:

The 3-Dam Seepwater Collection and Pumpback System were observed during the inspection. The vegetation in the collection area was well-established and no erosion features were observed during the inspection. The pumpback system, which consists of two pipelines, vaults and pumps was operational at the time of the inspection.

Fire Water Line Incident Repair:

On November 5, 2019, the Division received written follow-up notice of a release of process water from the fire water line from the Mill Process Water Storage Tanks to the fire water distribution and suppression systems. The repair of the fire water line near hydrant #7 was observed during the June inspection. During the repair the Operator discovered another possible leak near fire hydrant #6 located west of the first repair area. The Operator later determined two leaks were located near hydrant #6. The repair of one of the leaks located east of hydrant #6 was completed as of the last inspection and the surface of the repair area was paved with asphalt. The Operator stated the second leak area located south of hydrant #6 was repaired and a closure report for the repairs would be submitted to the Division when available.

Photographs taken during the inspection are attached. If you need additional information or have any questions, please contact me at 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

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

Ec: Jared Ebert, DRMS

PHOTOGRAPHS



Ice covered section of the Ultimate Canal



Open section of the Ultimate Canal



Gabion structure along the Ultimate Canal



Inlet weir from the Ultimate Canal to the tailings impoundment



View of the final outlet structure for the Ultimate Canal



View of the upper bench of the upper face of the 3-Dam south area buttress



View of the upper bench of the upper face of the 3-Dam north area buttress



View of the vegetation in the 3-Dam seepwater collection area



View of the 3-Dam seepwater collection vault covers