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 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:** July 13, 2021	**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:** $134,155,028.00
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** None	**JOINT INSP. AGENCY:** None
WEATHER: Clear	**INSPECTOR'S SIGNATURE:** 	**SIGNATURE DATE:** July 22, 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---------- Y	**(FN) FINANCIAL WARRANTY-------- N**	**(RD) ROADS---------- N**
(HB) HYDROLOGIC BALANCE---------- N	**(BG) BACKFILL & GRADING---------- N**	**(EX) EXPLOSIVES--------- N**
(PW) PROCESSING WASTE/TAILING---- N	**(SF) PROCESSING FACILITIES------- N**	**(TS) TOPSOIL---------- N**
(MP) GENL MINE PLAN COMPLIANCE- Y	**(FW) FISH & WILDLIFE---------- N**	**(RV) REVEGETATION---- N**
(SM) SIGNS AND MARKERS---------- Y	**(SP) STORM WATER MGT PLAN---- N**	**(RS) RECL PLAN/COMP-- N**
(ES) OVERBURDEN/DEV. WASTE--------- N	**(SC) EROSION/SEDIMENTATION--- N**	**(ST) STIPULATIONS------- N**
(AT) ACID OR TOXIC MATERIALS------- N	**(OD) OFF-SITE DAMAGE----------N**	

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 current Environmental Protection Plan (EPP) for the Mill was approved by the Division under technical revision no. 18 (TR-18) on November 2, 2012. Henderson submitted a revised EPP on March 5, 2021 as technical revision no. 34 (TR-34). The focus of the 2021 inspections of the Henderson Mine and Mill facilities will be to verify the accuracy of the revised EPP. The Division issued an adequacy letter for TR-34 on July 7, 2021.

The purpose of this inspection was to observe and inspect the Environmental Protection Facilities (EPF) at the Mine, other aspects of the EPP and the approved permit including the following;

- MNGW-1 Low pH Status Update and No Name Creek
- The surface water sampling locations on the West Fork of Clear Creek
- Mine EPF 1.2 - Stormwater Diversion System
- URAD WTP Designated Chemicals

Henderson submitted a status update report for the Henderson Mine Point of Compliance (POC) Well MNGW-1 dated April 7, 2021. The monitoring of MNGW-1 in accordance with the Henderson Groundwater Monitoring Plan (GWMP), approved under TR-16, identified low pH levels beginning in early 2012. Henderson initiated additional water quality monitoring and investigations due to the low pH levels. In 2013, Henderson increased the monitoring frequency at MNGW-1 to monthly to better evaluate pH trends and the underlying groundwater chemistry. In 2014, Henderson continued the investigation with the installation of two additional monitoring wells in the area, MNGW-3 and MNGW-4. In 2015, Henderson expanded the investigation and started to monitor No Name Gulch.

The results of the addition testing and investigations was Henderson submitting the status update which included a report from Ajax and Clear Creek Associates. The report concludes the naturally occurring low pH water conveyed by No Name Gulch off of Red Mountain contributes to or is the direct cause of the low pH conditions in MNGW-1. Henderson stated their intent to return to triannual monitoring of MNGW-1 as required by the GWMP beginning in April 2021 and will no longer perform confirmation sampling, which is currently required by the GWMP. The Division reviewed the report and provided an adequacy review memo by Patrick Lennberg dated June 21, 2021. No Name Creek, the division channel and MNGW-1 were observed during the inspection. The contents of the memo were also discussed during the inspection. Henderson stated they would submit a response to the Division's April memo.

The two surface water sampling points on the West Fork of Clear Creek, CC-10 and CC-40, were observed during the inspection. The signage for the sample points was either outdated or missing, however the locations are well defined.

The stormwater diversion system (Mine EPF 1.2) is constructed on the south side of the Mine office and surface operations. The purpose of the ditch is to convey un-impacted stormwater around the industrial area to the east end of the property according to the revised EPP. The ditch runs from Butler Gulch to the west to

the West Fork of Clear Creek to the east. The western portion of the ditch from the old adit to Butler Gulch contained standing water. The middle portion of the ditch from the old adit to No Name Creek was dry or mostly dry. The eastern portion of the ditch from No Name Creek to Clear Creek contained flowing water.

The Revised EPP states all water is conveyed to the east, however during the inspection it appeared the old adit divided the ditch with water flowing west from the adit to Butler Gulch and east from the adit to Clear Creek. The Division requests the Operator review the construction of the ditch and revise the wording in the Revised EPP if required.

As stated in the adequacy review memo for TR-34 dated July 7, 2021, the permit boundary for the Henderson Mine was increased to include the URAD WTP and water conveyance pipeline from the Henderson Mine to the URAD WTP in Amendment No. 7 (AM-07). The URAD WTP is an Environmental Protection Facility (EPF) and uses designated chemicals to removed metals from the mine water. The Division requested Henderson update the revised EPP to state designated chemicals are used at the Henderson Mine in the URAD WTP and provide a list, description and storage location for the chemicals.

The designated chemicals including; lime, a chemical flocculant and sulfuric acid were observed during the inspection. Henderson stated the revised EPP would be updated to include the designated chemicals used at the URAD WTP and the proposed Mill WTP.

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.

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PHOTOGRAPHS

View of Mine EPF 1.2 looking west toward the old adit

View of Mine EPF 1.2 looking east from the old adit

View of Mine EPF 1.2 looking east toward the old adit

View of CC-10 location

View of CC-30 location

View of No Name Creek at intersection with the division canal

View of Mine EPF 1.2 east of No Name Creek looking east

View of Mine EPF 1.2 adjacent to MNGW-1

View of MNGW-1

View of the URAD WTP sulfuric acid tank

View of the URAD WTP lime silos

View of chemical flocculant storage inside the URAD WTP