

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/PROSPECTING ID#:	MINERAL:	COUNTY:	
	M-1977-342	Molybdenum	Clear Creek, Grand	
	INSPECTOR(S):	INSP. DATE:	INSP. TIME:	
	Michael A. Cunningham	August 31, 2017	09:00	
	OPERATOR REPRESENTATIVE:	TYPE OF OPERATION:		
	Tim Haynes	112d-3 - Designated Mining Operation		
REASON FOR INSPECTION: BOND CALCULATION TYPE: BOND AMOUNT:				
	BOND CALCULATION TYPE:	BOND AMOUNT:		
	None	\$37,993,785.00		
	POST INSP. CONTACTS:	JOINT INSP. AGE	NCY:	
	None	None		
INSPECTOR'S SIGNATURE:		SIGNATURE DATE:		
U	il C.f	September 13, 2017		
	INSPE	M-1977-342 INSPECTOR(S): Michael A. Cunningham OPERATOR REPRESENTATIVE: Tim Haynes BOND CALCULATION TYPE: None POST INSP. CONTACTS: None	M-1977-342 Molybdenum INSPECTOR(S): INSP. DATE: Michael A. Cunningham August 31, 2017 OPERATOR REPRESENTATIVE: TYPE OF OPERATOR Tim Haynes 112d-3 - Designated BOND CALCULATION TYPE: BOND AMOUNT: None \$37,993,785.00 POST INSP. CONTACTS: JOINT INSP. AGE None None	

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 <u>Y</u>	(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 Mill inspection was conducted by Michael Cunningham of the Division of Reclamation, Mining and Safety (Division) as part of the Division's monitoring inspection program. Mr. Tim Haynes of Climax Molybdenum - Henderson Operation (Henderson) was also present for the inspection.

Hydrologic Balance:

On June 14, 2017, the Division approved Technical Revision No. 28 (TR28), which authorized the Operator to install two additional extraction wells (MLEX-4 and MLEX-5) below the tailings impoundment. The additional extraction wells will be used to capture seepage affected groundwater below 1-Dam. The captured groundwater is pumped into the seepwater collection canals, where it is then pumped into the tailings storage facility and recirculated back into the Mill process water system. Construction and installation of MLEX-4 and MLEX-5 is ongoing, with work expected to be complete by the end of October. The wells have been drilled and the remaining work includes trenching and installing the pipeline from the wells to the seepwater collection canals, completing electrical work, and installing concrete vaults. In addition to the extraction wells, the Operator also installed a new monitoring well (MLGW-26) downgradient of 1-Dam. The installation of MLGW-26 was completed in August of 2017 and the well will be used to monitor the effectiveness of the extraction wellfield.

During the May 25, 2017 inspection, the Division identified several stormwater outfalls which required repair or replacement of BMP's. The Division inspected the following stormwater outfalls to ensure the necessary maintenance was performed:

OF-M4: The rock check dam was reconstructed to a higher elevation and straw wattles were placed in front of the rock dam.

OF-M22: Two sets of straw wattles were replaced.

OF-M7: Straw wattles were replaced in front of the rock dam.

OF-M11: Straw wattles were replaced in front of the rock dam.

PC2/PC3 Transfer Station: Additional straw wattles were placed along the conveyor line and along the ditch adjacent to the PC2/PC3 Transfer Station.

The Division found the BMP's at all of the stormwater outfalls had been repaired or replaced. There was no discharge of water from the outfalls at the time of the inspection.

<u>Topsoil:</u>

During the inspection conducted on May 25, 2017, the Division inspected the topsoil stockpile located in Ranger Gulch and found it lacked the appropriate BMP's to ensure there was no loss of topsoil into the drainage system. The Division cited a problem and required the Operator to stabilize the topsoil stockpile by September 18, 2017. The topsoil stockpile in Ranger Gulch was visited during this inspection and the Division found the Operator had constructed stormwater diversion channels with rock check dams along the perimeter of the stockpile. The Diversion channels terminated in a sediment pond below the topsoil stockpile. An earthen berm was constructed on the downgradient side of the sediment pond, with a riprap spillway installed to allow storm water to continue to flow through Ranger Gulch. The problem cited during the May 2017 inspection is considered to be resolved.

The Division also inspected the topsoil stockpile located along the northwest side of the tailings impoundment. As previously noted, the topsoil stockpile exhibited little vegetative growth following hydroseeding in 2016. Following the last inspection, the Operator reduced the grade of the outward facing slope from 2H:1V to 3H:1V. The reduced slope will aid in the establishment of vegetation. The Operator will hydroseed the stockpile in September or October of 2017.

PERMIT #: M-1977-342 INSPECTOR'S INITIALS: MAC INSPECTION DATE: August 31, 2017

PHOTOGRAPHS



1. MLGW-26.



2. MLEX-5.



3. HDPE pipe for MLEX-5.



4. MLEX-4



5. OF-M4 (Note: rock dam replaced and raised in elevation)



6. OF-M22 (Note: straw wattles replaced)



7. OF-M7 (Note: straw wattles replaced)



8. OF-M11 (Note: straw wattles replaced)



9. PC2/PC3 Transfer Station (Note: straw wattles added along conveyor)



10. PC2/PC3 Transfer Station (Note: straw wattles added along ditch)



11. TSF Topsoil Stockpile (Note: outward facing slope regraded)



12. Ranger Gulch Topsoil Stockpile (Note: stormwater diversion channel)



13. Ranger Gulch Topsoil Stockpile (Note: sediment pond below stockpile)

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