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 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:** June 22, 2017	**INSP. TIME:** 10:00
OPERATOR: Climax Molybdenum Company	**OPERATOR REPRESENTATIVE:** Tim Haynes	**TYPE OF OPERATION:** 112d-3 - Designated Mining Operation	

REASON FOR INSPECTION: Normal I&E Program	**BOND CALCULATION TYPE:** Partial Bond	**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:** July 18, 2017

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---------- Y
(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	(CI) COMPLETE INSP---- N
(ES) OVERBURDEN/DEV. WASTE--------- N	(SC) EROSION/SEDIMENTATION--- N	(RS) RECL PLAN/COMP-- N
(AT) ACID OR TOXIC MATERIALS------- N	(OD) OFF-SITE DAMAGE----------N	(ST) STIPULATIONS------- N

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 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, Mrs. Amber Parmet, Mr. Tim Haynes and Mr. Alex Ungers with Climax Molybdenum - Henderson Operations (Henderson) were present during the inspection. The purpose of the inspection was to observe the 3 Dam embankment regrading project, re-inspect the storm water structures observed in May and inspect the storm water structures which were inaccessible in May.

The inspection started with a meeting to discuss the on-going and future permitting items at the site. The following topics were discussed: the original 3 Dam embankment regrade to 4H:1V (TR-27), the Ute Park Extraction Wellfield – Phase 3 (TR-28) and the stormwater outfall inspection conducted in May by the Division.

Henderson staff stated the Ute Creek Wellfield drilling project start was delayed from June until July 10, 2017.

The 3-Dam embankment regrading project was ongoing during the inspection. The project started on June 8, 2017 and is expected to be complete in early July. The slope regrading was progressing from north to south instead of the planned south to north. Approximately one third (1/3) of the embankment regrading was complete at the time of the inspection. Two dozers were working in tandem to regrade the embankment. The first dozer excavated material from the toe of the slope to the crest to rough grade. The second dozer, which was GPS controlled, completed the excavation at the finished grade for the embankment. The excess embankment material was stockpiled above the embankment crest. A front-end loader loaded the excess material into a haul truck. The haul truck transported the material to the setback bench. The material was placed on the bench in eight (8) inch lifts by a D8 dozer. The material was compacted by the dozer using a process method with moisture control to aid in compaction. Henderson stated there have not been changes in the piezometer readings in the embankment with the added ground pressure from the dozers and haul truck. The piezometer elevations will be reset following the completion of the regrading work.

During the May 25, 2017 inspection conducted by Michael Cunningham with the Division, the stormwater outfalls located along the ore haulage system were inspection. The Division was unable to inspect the outfalls located at the Portal Lay-down Yard or the outfall (OF-M2) located along the Williams Fork River due to inclement weather. Henderson staff conducted their own inspection of the stormwater structures after the Division's inspection and noted the same items for maintenance and repair.

The following is a list of outfalls which were identified as requiring maintenance or repair during the May inspection with comments from this inspection below each item:

OF-M4: BMP's at this outfall location consist of a rock dam. The rock dam at this outfall location had been overtopped during a runoff event. The Division observed sediment on top of and below the rock dam. The Operator will need to remove sediment from below the dam. In addition, the Operator will need to reconstruct the dam to a higher elevation to ensure stormwater does not overtop the structure.

Henderson is evaluating the outfall for reconstruction and expansion. The area above the outfall is used as storage area for snow when the road is plowed and as a vehicle turn around location, which may limit how the outfall is reconstructed.

OF-M22: BMP's at this outfall location consist of straw wattles and a rock dam. Water was being discharged through this outfall at the time of the inspection. The Division observed water flowing over the top of the straw wattle. The Operator should replace the existing straw wattle and ensure the replaced straw wattle is at an adequate elevation to capture all discharging stormwater.

Water was being discharged through the outfall at the time of the inspection. The water level had dropped since the May inspection to below the elevation of the straw waddle. Henderson plans to add an additional waddle to this outfall.

OF-M7: BMP's at this outfall location consist of straw wattles and a rock dam. Water was being discharged through this outfall at the time of the inspection. The Division observed water flowing over the top of the straw wattle. The Operator should replace the existing straw wattle and ensure the replaced straw wattle is at an adequate elevation to capture all discharging stormwater.

Water was being discharged through the outfall at the time of the inspection. The water level had dropped since the May inspection to the elevation of the straw waddle.

OF-M11: BMP's at this outfall location consist of straw wattles and a rock dam. Water was being discharged through this outfall at the time of the inspection. The Division observed sediment below the rock dam. In addition, the straw wattle was no longer anchored in place and was located on top of the rock dam. The Operator should replace the existing straw wattle and ensure the replaced straw wattle is at an adequate elevation to capture all discharging stormwater.

Water was not being discharged through the outfall at the time of the inspection. The water level had dropped since the May inspection. Sediment captured behind the outfall was observed.

PC2/PC3 Transfer Station: BMP's at the outfall location consist of a straw wattle placed immediately in front of the outfall. The ditch which receives drainage adjacent to the conveyor line should have additional BMP's in place. The Operator should consider installing silt fencing along the portion of the ditch, which is immediately adjacent to the outfall.

This outfall was unchanged since the May inspection.

Henderson stated the Colorado Department of Public Health and Environment requirements allow 60 days to repair damaged stormwater control structures. The Division will follow up on the status of the repairs during a future inspection of the site.

The outfalls located at the Portal Lay-down Yard and below the PC1/PC2 transfer station were inspected during this inspection.

OF-M15 is located by the south gate of the laydown yard. The outfall was dry and appeared to be functioning properly.

OF-M9 is located in the northwest corner of the laydown yard. The outfall was dry and appeared to be functioning properly.

OF-M16 is located in the northeast corner of the laydown yard. The outfall was dry and appeared to be functioning properly.

OF-M10 is located along the east fence line in the south portion of the laydown yard. The outfall was dry and appeared to be functioning properly. Areas of damp ground were observed behind the outfall. Henderson stated stormwater evaporates in the yard prior to reaching the outfall.

OF-M8 is located below and northeast of the PC1/PC2 transfer station. The BMP's at this outfall location consist of circular rock dam with a notch in the dam serving as the outlet. Water was being discharged through this outfall at the time of the inspection. The outfall was partially filled with sediment and needs to be cleaned out.

OF-M18 was dry and appeared to be functioning properly.

Inspection Contact Address
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Ec: Wally Erickson, DRMS

PHOTOGRAPHS

View of the placement of the excess material from the 3 Dam embankment on the setback bench

View of the regraded 3 Dam embankment from the north end looking south

View of the regrading of the 3 Dam embankment looking south

View of the placement of the excess material from the 3 Dam embankment on the setback bench

View of the southern portion of the setback bench from the SE corner of the bench

View of the regrading of the 3 Dam embankment looking north

Stormwater Outfall OF-M22

Stormwater Outfall OF-M7

Stormwater Outfall OF-M11

PC2/PC3 Transfer Station Outfall

Stormwater Outfall OF-M15

Stormwater Outfall OF-M9

Stormwater Outfall OF-M16

Stormwater Outfall OF-M10

Stormwater Outfall OF-M8

Stormwater Outfall OF-M18