




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: Cresson Project	MINE/PROSPECTING ID#: M-1980-244	MINERAL: Gold	COUNTY: Teller
INSPECTION TYPE: Monitoring	INSPECTOR(S): Elliott R. Russell	INSP. DATE: October 27, 2016	INSP. TIME: 8:00
OPERATOR: Cripple Creek & Victor Gold Mining Company	OPERATOR REPRESENTATIVE: Gary Horton & Erik Munroe	TYPE OF OPERATION: 112d-3 - Designated Mining Operation	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$173,434,420.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: February 10, 2017

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected

(AR) RECORDS----- <u>Y</u>	(FN) FINANCIAL WARRANTY----- <u>N</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>N</u>	(BG) BACKFILL & GRADING----- <u>N</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>N</u>	(SF) PROCESSING FACILITIES----- <u>PB</u>	(TS) TOPSOIL----- <u>N</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- <u>Y</u>	(RV) REVEGETATION---- <u>N</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SP) STORM WATER MGT PLAN---- <u>NA</u>	(CI) COMPLETE INSP---- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) SEDIMENT CONTROL----- <u>Y</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>NA</u>

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / **PB = Problem cited** / PV = Possible violation cited

PROBLEMS/POSSIBLE VIOLATIONS

INSPECTION TOPIC: Processing Facilities

PROBLEM 1: Drain Cover Fill (DCF) has eroded on a northwest portion of the Arequa Gulch Valley Leach Facility and the liner is exposed. The DCF was transported into the trough between the perimeter berm and the toe of the pad, reducing the capacity of this area.

CORRECTIVE ACTIONS: Provide the Division with photographic evidence that erosion feature has been backfilled and the trough appropriately re-established

CORRECTIVE ACTION DUE DATE: March 13, 2017

OBSERVATIONS

The Division of Reclamation, Mining and Safety (Division) conducted an inspection of the Cresson Project (Permit File No. M-1980-244), a Regular 112d(3) Designated Mining Operation Reclamation Permit with 5,989.7 permitted acres and an approved post-mining land use of Rangeland and Wildlife Habitat. The mine, operated by the Cripple Creek & Victor Golding Mining Company (CC&V), is located southeast of Cripple Creek, Colorado and north of Victor, Colorado. Elliott Russell, with the Division, inspected the site. Erik Munroe and Gary Horton, representing the Operator, accompanied the Division at various times during the inspection. This inspection was carried out as a part of the Division's normal monitoring program. The primary focus of this inspection was to monitor ongoing construction projects on site. The following facilities were inspected during this site visit:

- High Grade Mill (HGM)
- Arequa Gulch Valley Leach Facility (AGVLF)
- Squaw Gulch Valley Leach Facility (SGVLF)
- Altman Backfill Reclamation
- Arequa Gulch Adsorption, Desorption, and Recovery facility (AGADR)

HGM Inspection:

The Division and Mr. Horton were accompanied by Mr. Don Rodabough around the HGM. Mr. Rodabough showed and informed the Division about the recently constructed containment curbing for the lime silo and neutral pH tank (**Photos 1 & 2**). A new pump had been installed for the HGM pad liner and the mill return pipe had been buried while heat tape had been placed on the portions of the pipes exposed to the winter elements. The HGM infiltration trench was backfilled and graded (**Photo 3**).

AGVLF Inspection:

The Division and Mr. Horton inspected the AGVLF. The Division observed an area where Drain Cover Fill (DCF) had been eroded and exposed a small section of the liner (**Photo 4**) near the water tank located southwest of the HGM, in the northwest portion of AGVLF. The DCF was transported to the trough-like area between the VLF perimeter berm/liner and the toe of the heap leach pad. Due to the amount of DCF transported, the capacity of this trough has been reduced from several feet in height to approximately 6" (**Photo 5**). This has been cited as Compliance Problem #1 requiring CC&V to re-establish the trough between the perimeter berm and the toe of the pad, and backfill the exposed liner.

Farther southwest of the area discussed above is another area of concern. The access road which comes from the pad to off-liner crosses the edge of liner in an area that is sloped outward toward the edge of liner (**Photo 6**). The Division will re-inspect this area at a later time to ensure that stormwater from AGVLF stays on the liner system and does not have a change to leave the liner via the access road.

SGVLF Inspection:

The Division and Mr. Horton inspected the SGVLF (**Photo 7**). There was no longer any standing solution in the area where a Compliance Problem was cited following the August 18, 2016 inspection. The Division observed the new Edge

of Liner signage located near the Low Volume Solution Collection System (LVSCS) building, located south of the SGADR in the southwest corner of the SGVLF.

Altman Backfill Reclamation:

The Division and Mr. Munroe inspected portions of the Altman Backfill which were in various stages of reclamation. Bristlecone pine tree seedlings had recently been planted on the easterly aspect on areas just above the old access road to the American Eagles Overlook (**Photos 8 & 9**). The trees are marked with small flags to help locate them while watering. Mr. Munroe explained that these seedlings were grown from seeds that were locally harvested. The upper portion of the Altman Backfill had recently been seeded and vegetation is beginning to establish. The Division observed minor erosion in this area, but expects the vegetation will stabilize this area within the next growing season or two. The Division observed large area that had yet to be backfilled and graded near the interface of the backfill and native ground (**Photo 10**).

AGADR Inspection:

The Division and Mr. Munroe were accompanied by Mr. Jay Ballard for the Arequa Gulch Adsorption, Desorption, and Recovery facility inspection/tour. The AGADR receives pregnant solution from the AGVLF, the gold is removed in solution by absorption onto activated carbon, the gold is stripped (desorption) from the activated carbon to create a concentrated gold solution, and then the gold recovered in an electrowinning circuit. The AGADR includes five carbon-in-column trains. Similar to the AGVLF, the AGADR is underlain by synthetic liner systems.

Just west of the AGADR facility is the Process Solution Enhancement System (PSES). This facility was not operational during the inspection. The PSES was designed to stabilize and clarify the barren solution by utilizes a coagulation/sedimentation process. The proposed removal of the persistent accumulation of metal precipitate solids in the solution would improve flow rates through the AGVLF and AGADR, improve gold recovery, and ultimately ease the AGVLF closure associated with metals. CC&V is currently working on improvements to the PSES and hopes to have it operational sometime in 2017.

Farther west of the ADADR and PSES is the External Storage Pond (ESP). The ESP was constructed in the early 2000s to provide approximately 20 million gallons of additional storage capacity beyond what is provided in the Pregnant Solution Storage Ponds (PSSA). The ESP is similarly constructed as a PSSA with a triple-lined containment system with leak detection. The ESP was inspected and the liner showed no signs of wear or damage (**Photo 11**). At 12:41pm the Division recoded the following readings: water level at 6.8 feet, Pump XDCR #1-EXT (AUTO) at 11.8 inches, and Pump XDCR #2-EXT (AUTO) at 17.5 inches. Mr. Ballard stated he thought the pond was last used in 2013. Hydrogen peroxide is used to destruct the cyanide in the solution prior being routed to the ESP.

Close Out Meeting

At 1:50pm, the Division did a close out meeting with Mrs. Meg Burt, Mr. Cheyne Mann, and Mr. Munroe. The site inspection was discussed as well as TR-81 and AM-11 permitting.

This concludes the Division's Inspection Report; a subset of photographs taken during the time of the inspection are included below. 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 x8132**, or by email at elliott.russell@state.co.us.

PHOTOGRAPHS



Photo 1. Containment curbing on lime silo; looking southwest.



Photo 2. Containment curbing on the neutral pH tank; looking northwest.



Photo 3. Backfilled and graded HGM infiltration trench; looking west.



Photos 4. Eroded DCF and exposed liner; looking northeast.



Photo 5. Transported DCF causing limited capacity between perimeter berm (edge of liner) and the VLF's toe; looking southwest.



Photos 6. Northwestern AGVLF access road which crosses from pad to off-liner; looking southwest.



Photo 7. Overview of the SGVLF; looking northwest.



Photo 8. Bristlecone pine tree seedling on the Altman-Backfill; looking north.



Photo 9. Bristlecone pine tree seedling on the Altman-Backfill; looking south.



Photo 10. Area needing to be backfilled and graded; looking northeast.



Photo 11. External Storage Pond; looking southeast.

Inspection Contact Address

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EC: Cheyne Mann; CC&V
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