




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: August 18, 2016	INSP. TIME: 08:30
OPERATOR: Cripple Creek & Victor Gold Mining Company	OPERATOR REPRESENTATIVE: 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: November 21, 2016

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>Y</u>	(TS) TOPSOIL----- <u>N</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- PB,	(RV) REVEGETATION---- <u>N</u>
	PB	
(SM) SIGNS AND MARKERS----- PB	(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: Fish & Wildlife

PROBLEM 1: A significant volume of process solution was ponded in the Squaw Gulch Valley Leach Facility. This is a potential attractant to wildlife. The surface area of the exposed fluid exceeded the permit condition (not to exceed 3 feet x 3 feet area).

CORRECTIVE ACTIONS: Provide the Division with photographic evidence that measures were taken to allow the solution within this area to infiltrate into the pad or other wildlife mitigation measures have been employed.

CORRECTIVE ACTION RESOLVED ON: October 27, 2016

INSPECTION TOPIC: Fish & Wildlife

PROBLEM 1: A significant amount of potentially impacted water was observed in several stormwater sumps on the Arequa Gulch Valley Leach Facility. This is a potential attractant to wildlife. The surface area of the exposed fluid exceeded the permit condition (not to exceed 3 feet x 3 feet area).

CORRECTIVE ACTIONS: Provide the Division with photographic evidence that measures were taken to allow the water within the sumps to infiltrate into the pad or other wildlife mitigation measures have been employed.

CORRECTIVE ACTION RESOLVED ON: September 6, 2016

INSPECTION TOPIC: Processing Facilities

PROBLEM 3: Signs delineating the edge of the Arequa Gulch Valley Leach Facility liner are missing and/or damaged.

CORRECTIVE ACTIONS: Provide the Division with photographic evidence that the Edge of Liner Signs have been replaced before the corrective action due date.

CORRECTIVE ACTION DUE DATE: December 21, 2016

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, representing the Operator, accompanied 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:

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

SGADR Inspection:

The Division and Mr. Munroe were accompanied by Mr. Zach Cook for the Squaw Gulch Adsorption, Desorption, and Recovery facility inspection/tour (**Photo 1**). The SGVLF and SGADR were approved under AM-10 and these facilities function the same as the AGVLF and AGADR. The ADRs receive pregnant solution from the VLFs, remove the gold in solution by absorption onto activated carbon, strip/desorption the gold from the activated carbon to create a concentrated gold solution, and recover the gold in an electrowinning circuit. The SGADR includes four carbon-in-column trains; Carbon Trains F and G were in operation while I and H, which are designed to handle the increase in ore and solution in the SGVLF as the leach pad develops, were inactive. The SGADR and chemical storage has been constructed within the Pregnant Solution Storage Area (PSSA) lined area of the SGVLF, which serves as secondary and tertiary containment.

SGVLF Inspection:

Mr. Cook also accompanied the Division and Mr. Munroe around the lower portions of the SGVLF. The Low Volume

Solution Collection System (LVSCS) building, located south of the SGADR in the southwest corner of the SGVLF, was inspected. This building contains three risers which pump solution from between the two geomembranes of the PSSA. The pumps (Leachate Pump 1 and Leachate Pump 2) are run continuously to maintain less than 24 inches of head on the lower geomembrane liner. During the inspection, at approximately 0945, Leachate Pump 1 was at 13.2 inches and Leachate Pump 2 was at 14.4 inches, well below the maximum limit.

On top of the first ore lift, the Division observed a significant amount of standing solution caused from a broken drip line port on one of the smaller distribution lines (**Photo 2**). Mr. Cook radioed process personnel to inspect the drip line and make repairs. Later, during the inspection, the Division observed that the drip line was repaired but the standing solution, which was greater than 9 square feet in size, had yet to infiltrate into the pad. This is cited as compliance problem 1 of this report; however, this problem was resolved during the Division's October 27, 2016 inspection as there was no longer standing solution in this area.

In the higher portion of the SGVLF, the Division observed active construction of the Soil Liner Fill (SLF) and the geomembrane liner. Crews were working just below the SGVLF haul road and the HGM (**Photo 3**). Once this section of liner is completed, Phase I will be finished. Phase II is located above the SGVLF Haul Road and with TR82, construction is deferred until Q2 of 2019 and is expected to be completed in Q3 of 2020.

HGM Inspection:

The Division and Mr. Munroe were accompanied by Mr. Ron DiDonato around the HGM. Liner crews were preparing the SGVLF liner to tie into the HGM liner. The HGM liner was exposed and SLF was being placed so the geomembrane from SGVLF could be deployed and tied into the HGM liner with an extrusion weld (**Photos 4 - 8**).

AGVLF Inspection:

The Division and Mr. Munroe inspected the AGVLF. The Division observed several storm water sumps along road between the Lout Out Bin and the AGADR, which contained standing water (**Photo 9**). It appears these sumps had collected sediment which was causing them to retain water instead of allowing water to infiltrate into the pad. Located on the AGVLF, the standing water within these sumps is considered impacted and thus not in compliance with the Wildlife Protection Plan. This is cited as Compliance Problem 2 of this report; however, this problem was resolved on September 6, 2016 when the operator emailed photographs showing that the AGVLF sumps on the ADR road were clean out.

The eastern portion of the AGVLF, near the South Cresson Mine, was inspected. The Division observed approximately 3,800 feet of the edge of the AGVLF, between the Phase V Pumps and the Crusher, which no longer had signs delineating the edge of liner (**Photos 10 & 11**). It appears the wind caused the metal signs, which were secured to the metal posts with one bolt, to be blown off over time. These signs help ensure that off-liner equipment does not damage the containment berm nor the liner. These signs also help delineate the edge of liner if any incidents occur causing an off-liner impact. This is cited as Compliance Problem 3 of this report, requiring the signs to be replaced. The Division recommends that two bolts are used to secure the signs as this will likely help the signs being damaged by the wind again.

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. SGADR; looking northwest.



Photo 2. Damaged drip line causing standing solution; looking east.



Photo 3. SLF placement and liner deployment occurring below the SGVLF haul road; looking south.



Photos 4. Exposed HGM liner; looking north.



Photo 5. Exposed HGM liner; looking south.



Photos 6. SLF between the SGVLF and HGM liners; looking northeast.



Photo 7. Installation of an anchor trench between the SGVLF and HGM liners; looking northeast.



Photo 8. Overview of the HGM area showing where the liners will be tied in to each other; looking north.



Photo 9. AGVLF stormwater sump along the ADR road with standing water; looking south.



Photo 10. Missing edge of liner signage along the perimeter of the AGVLF east of the Phase V Pumps; looking northeast.



Photo 11. Missing edge of liner signage along the perimeter of the AGVLF east of the Crusher; looking northwest.

Inspection Contact Address

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