



COLORADO

Division of Reclamation,
Mining and Safety


Department of Natural Resources

MINERALS PROGRAM INSPECTION REPORT

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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): Timothy A. Cazier	INSP. DATE: July 19, 2016	INSP. TIME: 09:35
OPERATOR: Cripple Creek & Victor Gold Mining Company	OPERATOR REPRESENTATIVE: Clara Trippel	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: Cloudy	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: August 2, 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 and gives a categorical evaluation of each

(AR) RECORDS----- <u>N</u>	(FN) FINANCIAL WARRANTY----- <u>N</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>N</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>Y</u>	(SF) PROCESSING FACILITIES----- PB	(TS) TOPSOIL----- <u>Y</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>N</u>	(SP) STORM WATER MGT PLAN---- <u>NA</u>	(CI) COMPLETE INSP---- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>Y</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>Y</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

PROBLEMS/POSSIBLE VIOLATIONS

INSPECTION TOPIC: Support Facilities On-site

PROBLEM/POSSIBLE VIOLATION: Problem: The SGVLF PSSA piezometer outside the drawdown cone area indicated the water level outside the pump drawdown area was ~17 feet lower than in the pump drawdown area, a trend opposite of what would be expected.

CORRECTIVE ACTIONS: CC&V must resolve to the Division's satisfaction the apparent discrepancy in the SGVLF PSSA piezometer limit with respect to the 80 percent storage capacity.

CORRECTIVE ACTION DUE DATE: 8/17/16

OBSERVATIONS

The Division conducted a monitoring inspection of the site on July 19, 2016. Ms. Clara Trippel represented the Operator during various parts of the inspection. Tim Cazier represented the Division. The following facilities and areas were inspected during this site visit:

- High Grade Mill – platform seep, spill observations, status, field investigation;
- Ironclad Maintenance Shops – petroleum products, general housekeeping;
- Squaw Gulch Valley Leach Facility (SGVLF) – HVSCS water levels;
- Select stormwater channels and sediment ponds,
- Acreage Release No. 3 (AR-03) – areas near shelf road.

On Site Meetings:

Meeting: After the inspection the Division representative met with Ms. Meg Burt and Ms. Trippel to discuss the following permit related issues:

- I. Temporary fresh water supply pipe line for the High Grade Mill. The Division requires a separate TR from the permanent fresh water line design TR. The TR should address schedule, freezing potential, specifications and alignment. *{Note the Division received the submittal prior to completion of this report}.*
- II. Ms. Burt requested some background information on how CC&V phased the bonding for AM-10/MLE2. The Division provided information via email on July 21, 2016.

High Grade Mill: Mr. Don Rodabough was on site to discuss the mill discharge water management, leach circuit secondary containment, and the mill platform seep investigation:

- a) Mill Discharge – The area observed collecting mill water discharge during the June 16, 2016 inspection (see **Photo 1**) was a result of valve in the discharge “can” (see **Photo 2**) not being properly seated. Mr. Rodabough indicated this problem had been corrected and the manual valve that allows the pipes to the AGVLF infiltration wells to back drain should flow to the infiltration wells need to be stopped is now in the closed position. He indicated the only time the mine would need to allow backflow to drain to the pond area would be if the infiltration wells were not working and/or there was danger of the pipe lines to the infiltration wells freezing.

- b) Leach Circuit Secondary Containment – The Division observed slurry from the leach tanks in the secondary containment area (see **Photo 3**). Mr. Rodabough stated that it was from a tank clean out and the mine was in the process of cleaning it up. The Division later verified that the use of the secondary containment for tank maintenance is approved per AM-10/MLE2. CC&V provided the Division with photographic evidence (via email) of the secondary containment area having been cleaned up on July 26, 2016 (see **Photo 4**). Mr. Rodabough stated the mine had had to revert to the smaller capacity positive displacement pumps to move the leach circuit slurry in the secondary containment area back into the leach circuit because the viscosity of the slurry was too high for the new centrifugal pumps. He further indicated the mine is looking for better pump options.
- c) Mill platform seep – The seep area was observed. It remained dry and did not appear to have had any additional seepage since the May 12, 2016 inspection. Mr. Rodabough provided additional explanation on the mill platform water containment system, pointing out the mill sump (see **Photo 5**) in the SW corner of the mill platform. He explained this sump captures meteoric water and fire suppression system leakage water reaching the liner system under the mill. The water in the sump was observed to be on the order of 30 feet from the top of the sump (see **Photo 6**). He stated this water has a pH of about 2 due to contact with the waste rock used to construct the mill platform. He also stated the water in the sump is pumped back to the mill circuit via temporary lines that will become permanent.

SGVLF Inspection: Water levels were observed on the four High Volume Solution Collection System (HVSCS) transducer displays and the nearby piezometer that is expected by mine personnel to be outside the drawdown cone of the four HVSCS pumps. Discussions with Mr. Denny Deemer and Mr. Laurin Colby (both with CC&V) indicated the PSSA 80 percent capacity level for the HVSCS transducers is 94 feet. This 94-foot depth apparently applies to the nearby piezometer as well. The Division requested the various transducers be labeled for future consistent reference. Ms. Trippel provided photographic evidence of identification placards (see **Photo 7**) for each transducer being labeled via email on July 20, 2016. The following provides a summary of the observed water levels:

SGVLF HVSCS Transducers: 88301 @ 50.12; 88303 @ 50.09; 88305 @ 50.44; 88307 @ 50.26; Piezometer @ 33.53.

A post-inspection review of this data suggests a discrepancy. If the piezometer is outside the influence of the drawdown cone for the four HVSCS pumps, then it should have a greater depth, yet the piezometer depth is approximately 17 feet below that of the pump transducers. A review of the PSSA as-constructed drawings suggests the discrepancy may be because the piezometer is constructed outside the PSSA sump such that the bottom of the sump is considerably higher than the bottom of the PSSA pump risers. If this is the case, the 94-foot depth should not be applicable to the piezometer. The piezometer outside the drawdown cone area is the most important check in the SGVLF PSSA to ensure the pool is below the 80 percent volume as is the limit in the approved AM-10/MLE2 permit. **This apparent discrepancy in water level readings is cited as a potential problem on page 2 of this report.**

Stormwater Channel Inspection: Mr. Ron DiDonato accompanied the Division and Ms. Trippel on inspections for the Phase I and II stormwater diversion channels in the SGVLF area. The Phase I channel is now mostly haul road, but the last several hundred feet emptying into Phase I sediment pond at the southern toe of Topsoil Stockpile #34 are riprap-lined channel. Equipment was observed removing sediment from this section of the Phase I diversion channel (see **Photo 8**). Most segments of the Phase II diversion channel have been

constructed, but segments where access is needed (near the existing SGVLF haul road crossing and the upper end of the channel needed for construction access) and near the area recently back filled with structural fill (see **Photo 9**) are yet to be completed. The Phase II sediment pond was dry (see **Photo 10**) and appeared to be deeper than 10 feet from the bottom to the spillway invert on the north end of the pond. Ms. Trippel said she would ask the engineer of record to confirm whether or not the Phase II sediment pond fell under the jurisdiction of the State Engineers Office for jurisdictional dams.

Additional stormwater channels between EMP-19 and EMP-17 were inspected in the Grassy Valley area, south of the WHEx with Ms. Trippel. These channels appeared to be in good condition with one exception near EMP-17 where growing vegetation in the middle of the channel was bulky enough to significantly reduce the channel conveyance capacity. Ms. Trippel provided photographic evidence of this vegetation being removed via email on July 20, 2016. No other problems were observed.

Ironclad Maintenance Shops Inspection: Mr. Clint Shaefer accompanied the Division and Ms. Trippel on the inspection of the Ironclad Maintenance Shops. Mr. Shaefer pointed out the newly enclosed lubricant transfer station (see **Photo 11**) at the large truck maintenance shop, designed to contain occasional spills during the transfer process. He indicated he would like to implement a similar enclosure on the west end of the warehouse/small truck maintenance shop (see **Photo 12**). No problems were observed.

Acreage Release Inspection: The additional area associated with acreage reduction AR-03 was inspected. On June 23, 2016, CC&V submitted a request to release approximately 35 acres near Goldfield (previously included in release request AR-02) and added approximately 8 acres divided between an area split by Hwy 67 (see **Photo 13**, and another area along Shelf Road/County Road 88 – see **Photo 14**) south of Cripple Creek. The 35 acres near Goldfield were inspected during the Division's June 16, 2016 inspection. CC&V stated that the lands associated with the acreage reduction have not been a part of the active mining area nor have they ever been within the affected lands boundary. The Division observed the approximate location of the Shelf Road lands and has determined that there is no recent disturbance and concluded that nothing observed would prevent the approval to release the requested ~ 8 acres. On August 1, 2016 the Division approved AR-03 which includes the 35 acres near Goldfield and the 8 acres off Shelf Road.

Summary:

1. CC&V must resolve to the Division's satisfaction the apparent discrepancy in the SGVLF PSSA piezometer limit with respect to the 80 percent storage capacity by the corrective action due date on page 2 of this report.
2. CC&V committed to working with the engineer of record to confirm whether or not the SGVLF Phase II sediment pond is subject to jurisdictional dam oversight by the State Engineers Office.
3. The Division received TR-79 on July 21, 2016 to address the AGVLF infiltration trench slope stability evaluation.
4. The Division plans to continue observing Mill platform seep.
5. AR-03 was approved on August 1, 2016. Issuance of AR-03 is waiting on the 30-day appeal period as an objection was received by the Division.

PHOTOGRAPHS



Photo 1. Secondary infiltration trench on north side of Phase IV AGVLF (looking west).

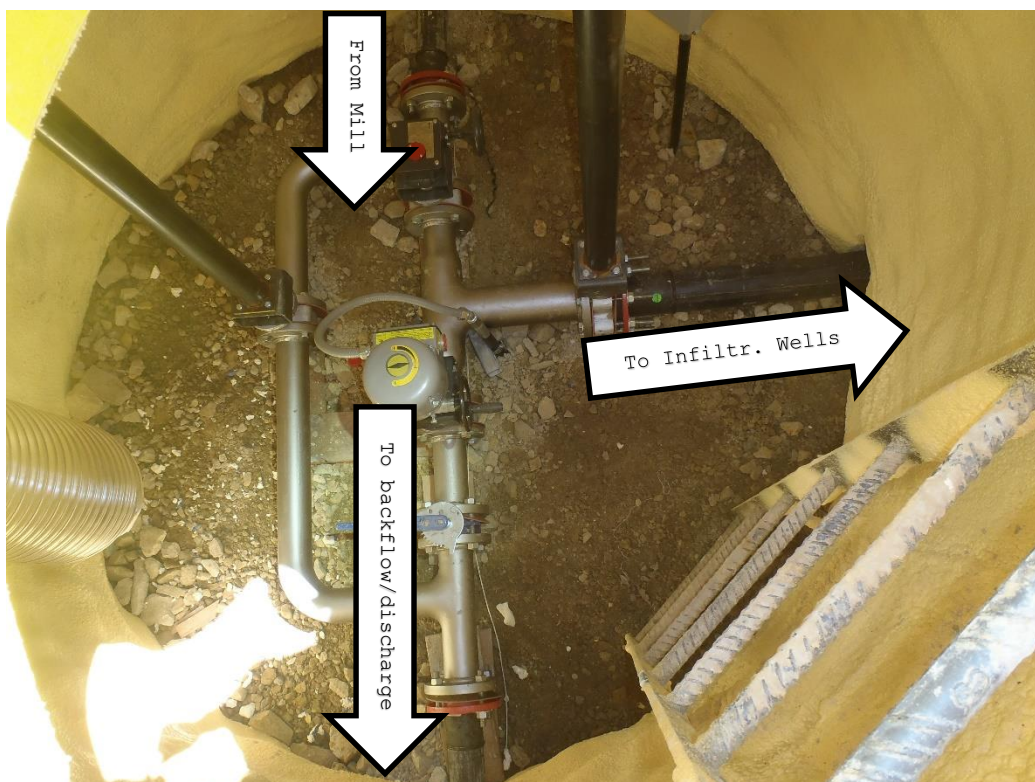


Photo 2. Interior of Mill platform valve box ("can").

PHOTOGRAPHS (cont.)



Photo 3. Observed slurry from leach tank maintenance in the secondary containment area.



Photo 4. Secondary containment area having been cleaned up (July 26, 2016).

PHOTOGRAPHS (cont.)



Photo 5. Mill water containment system sump in SW corner of mill platform.



Photo 6. Water in Mill sump observed to be approx.. 30 feet from the top of the sump.

PHOTOGRAPHS (cont.)



Photo 7. SGVLF PSSA transducer identification placards (from CC&V, post inspection).



Photo 8. SGVLF Phase I diversion channel maintenance.

PHOTOGRAPHS (cont.)



Photo 9. SGVLF Phase II diversion channel construction.



Photo 10. SGVLF Phase II diversion sediment pond (looking NW).
{note spillway on far end}

PHOTOGRAPHS (cont.)



Photo 11. Newly enclosed large truck maintenance shop lubricant transfer station.



Photo 12. Location for future enclosed maintenance shop lubricant transfer station.

PHOTOGRAPHS (cont.)



Photo 13. AR-03 release area near HWY 67 (looking west).



Photo 14. AR-03 release area near Shelf Road (looking south).

Inspection Contact Address

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