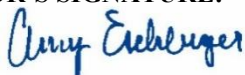




MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

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): Amy Eschberger, Patrick Lennberg	INSP. DATE: April 23, 2019	INSP. TIME: 09:45
OPERATOR: Cripple Creek & Victor Gold Mining Company	OPERATOR REPRESENTATIVE: Justin Bills, Katie Blake, Charles Bissue	TYPE OF OPERATION: 112d-3 - Designated Mining Operation	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$208,491,188.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Foggy	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: May 13, 2019

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>Y</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>N</u>	(SF) PROCESSING FACILITIES----- <u>Y</u>	(TS) TOPSOIL----- <u>N</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</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>	(RS) RECL PLAN/COMP-- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>Y</u>	(SC) EROSION/SEDIMENTATION--- <u>N</u>	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>Y</u>	(OD) OFF-SITE DAMAGE----- <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

This was a normal monitoring inspection of the Cresson Project (Permit No. M-1980-244) conducted by Amy Eschberger and Patrick Lennberg of the Division of Reclamation, Mining and Safety (Division). The Division was accompanied by Justin Bills, Katie Blake, and Charles Bissue during the inspection. This is a 112d-3 Designated Mining Operation (DMO) permitted for 6,007 acres to mine and process gold ore. The site is located between the towns of Cripple Creek and Victor in Teller County. The approved post-mining land use is a combination of rangeland and wildlife habitat. **Photos 1-30** taken during the inspection are included with this report.

This inspection included the following facilities and areas:

- Squaw Gulch Valley Leach Facility
- Arequa Gulch Valley Leach Facility
- Valley Leach Facility Leak Detection Sumps
- Valley Leach Facility Water Level Readings
- High Grade Mill Facility
- East Cresson Overburden Storage Area Seep

Squaw Gulch Valley leach Facility (SGVLF or VLF2):

The operation is currently advancing the 9,900 foot lift, which is very close to the top elevation of the mill platform. The Division inspected active leaching surfaces on the SGVLF. The operation is required to minimize ponding of leaching solution to less than 3 feet by 3 feet in area. This is to prevent the ponds from being a wildlife attractant. Active leaching areas appeared to be well-ripped to minimize ponding. No significant ponding was observed. However, the northwestern portion of SGVLF could not be observed due to dense fog. The elongated sump present at the southwestern toe of the SGVLF (near the ADR-2 Facility) was filled with bird balls, and did not appear to be holding any water.

All three of the SGVLF Leak Detection System (LDS) sumps were inspected, including SG-LDS-1, SG-LDS-2, and SG-LDS-3. All of the sumps inspected were dry. The operator must inspect these sumps weekly, and sample and characterize any water present. The water should be removed after sampling so it can be determined if water continues to enter the sump.

Arequa Gulch Valley Leach Facility (AGVLF or VLF1):

The current and maximum elevation of ore placement in the AGVLF is 10,400 feet (for Phase V). The Division inspected active leaching surfaces on the AGVLF. These surfaces appeared to be well-ripped to minimize ponding. There was some minor ponding observed which appeared to be from melting ice. However, no significant ponding (greater than 3 feet by 3 feet in area) was observed. The Division did observe some ponding inside the northwestern toe berm of the AGVLF, adjacent to the road and freshwater tank (just south of the HGM facility). The operator indicated this ponding was from meteoric water. While there is no permit requirement regarding the size of ponded meteoric water, any water that comes into contact with the leach facilities could be considered impacted. Therefore, if ponding of meteoric water occurs frequently in such areas, the Division recommends the operator place bird balls in the ditch to be safe.

While inspecting the leaching surfaces of AGVLF, the operator pointed out the portion of Phase III proposed for conducting a leach cell study in Technical Revision No. 113 (TR-113). Approximately 18,000 tons of previously processed (leached) crushed ore has already been placed and distributed over the cell liner in this

area, at a depth of approximately 3 feet. The cell liner was installed in an overlapping fashion, with a 10% grade to direct solution to the north (toward the facility). TR-113 described the study area as being approximately 67,049 sq. ft. in size. The Division issued an adequacy review letter for TR-113 on April 26, 2019.

A total of 15 LDS sumps exist in the AGVLF. The Division inspected two of these sumps, including AG-LDS-12 and AG-LDS-13 (located in Phase IV, at the northern edge of the crusher area). The sumps inspected were dry. As mentioned above, the permit requires all LDS sumps to be inspected weekly and any water present in the sumps to be sampled and characterized. The action level for water found in the sumps is pH > 9 and/or (WAD) Cyanide > 0.5 mg/L. The operator stated none of the water samples collected from the sumps thus far has met action level concentrations. All LDS sumps were last inspected by the operation the day before this inspection (on April 22, 2019). Some of the sumps had water and were therefore sampled and the remaining water pumped out. This included the AG-LDS-6 sump which frequently has a few inches of water (observed by the Division during previous inspections). The operator has recently (within the last few weeks) started hanging buckets at the inlets inside the sumps for those which have frequently held water. This has helped the operation to differentiate water entering the sump from the LDS from other water sources (i.e. meteoric). So far, this experiment has shown water present in the sumps to not have come from the inlets, meaning the water is not coming from the LDS. Regardless, the operator continues collecting samples from any water found in the sumps during the weekly inspections, as required by the permit.

Valley Leach Facility Water Level Readings:

The Division recorded water level readings from transducers for the high volume solution collection system (HVSCS), pond piezometers, and low volume solution collection system (LVSCS) of the SGVLF and Phase IV of the AGVLF. The values recorded during this inspection are presented on the enclosed **Attachment A**. All recorded values were below their respective reporting limits.

It should be noted, the AGVLF Phase IV HVSCS pumps #307, #308, and #309 are still reading a little higher (27.8 - 28.5 feet) than the transducer pipe, #310 (25.1 feet). As mentioned in the October 30, 2018 inspection report, the Division would expect the transducer pipe to read higher than the pumps given that it should be located outside of the cone of depression created by the pumps. In August of 2018, the operator installed a new pipe and transducer for #310 on the other side of the pumps to reduce influence from the Phase V solution inflow. This did not resolve the issue of getting artificially high readings at the Phase IV HVSCS pumps. However, the Division has observed less difference between the pump and pipe readings since the #310 pipe was relocated. This is curious as the Division would expect moving the pipe away from Phase V inflow would increase the difference between the pump and pipe readings.

As mentioned in the Division's October 30, 2018 inspection report, due to the complicated nature of the AGVLF phasing and solution routing/inflows through the phases, it appears the transducer pipe readings may not necessarily be representative of the highest water levels present in the Pregnant Solution Storage Areas (PSSAs) of the AGVLF. The Division believes there would be substantial value in submitting a 3D model of the AGVLF (or other method appropriate for understanding the system), showing the sill elevations of all PSSAs and potential flowpaths through the phases with respect to the water level monitoring locations. The Division understands the operator intends to submit an additional amendment application in the near future, which may be a good opportunity to provide this information.

High Grade Mill (HGM) Facility:

The Division walked around the exterior of the HGM facility to inspect for leaks, spills, and secondary containment issues. Both the west and east sides of the mill exterior were inspected, as well as the area around

the concentrate storage facility (Con Barn). The Division observed a loader loading a haul truck with concentrate from the Con Barn. During the inspection, the high pH thickener tank located on the eastern side of the building was being drained for cleaning (which occurs annually according to the operator). The fluid from the tank was draining into the high pH thickener secondary containment and into the sump. Water was then being pumped from the sump and discharged into the secondary containment for the processed ore thickener tank, where it flowed to the sump located at the northwest corner of the containment structure. This portion of the structure had approximately 1-2 inches of sludge deposited from the discharge. The tank cleaning process does temporarily utilize a portion of the overall capacity of the secondary containment. However, this occurs over a relatively short period of time (typically during a single day), utilizes a small portion of the containment capacity, and is cleaned out immediately after the process is completed.

During the HGM inspection, the operator pointed out the 330 ton silo which Technical Revision No. 114 (TR-114) proposes to relocate from the southeast corner of the HGM to the Squaw Gulch Overburden Storage Area (SGOSA). The relocation of this silo will improve operational efficiency by providing a means to add either lime or cement ore prior to placement on the valley leach facilities. TR-114 proposes placing the silo adjacent to the haul road on an elevated concrete foundation. A retaining wall will be constructed, offset from the silo by approximately 45 feet. The silo will be equipped with a conveyor stretching from the bottom of the silo over the retaining wall to a dump hopper, where the lime or cement material will be discharged into the bed of a haul truck, on top of the ore. The Division is currently reviewing the operator's adequacy response for TR-114 received on May 9, 2019.

The vat leach circuit on the northwest side of the HGM continued to be offline (since February 2018).

East Cresson Overburden Storage Area (ECOSA) Seep:

The Division inspected the seep area located at the eastern toe of the ECOSA. The seep accumulation trench was holding water during the inspection. The water was red in color and approximately 2-1/2 feet deep. A trickle of water was observed flowing into the trench (within the toe berm of the ECOSA) from the south/southeast. The operator indicated the length of time between a precipitation event and when the seep expresses from the ECOSA is slowing, and was recently recorded to take approximately 12 hours (more than double the rate observed by the operator last summer). The operator has a plan for monitoring the accumulation of water from the seep, and as needed, transporting the water from the ECOSA to a lined facility on site (one of the valley leach facilities). The operator representatives present during the inspection were not sure of the current seep flow rate or when the accumulation trench was last pumped. The operator did mention plans to install a staff gauge in the trench so the water level can be more easily estimated and tracked.

The operator provided water quality data for the ECOSA seep to the Division on July 20, 2017. This data shows the seep water to have a very low pH (3.45), very high TDS (17,700 mg/L), and elevated concentrations of Aluminum (961 mg/L), Arsenic (0.027 mg/L), Cadmium (2.55 mg/L), Copper (0.407 mg/L), Iron (2.48 mg/L), Manganese (565 mg/L), Nickel (3.46 mg/L), Selenium (0.068 mg/L), Zinc (80.1 mg/L), and Sulfate (11,900 mg/L). Because the majority of the ECOSA (including the portion with the identified seep) is located on top of the diatreme, the operator believes the seep water infiltrates the ground to the diatreme. If the impacted ECOSA seep water were to migrate downgradient, the Division would expect to see evidence of impacted shallow groundwater at the new monitoring well that was installed in Grassy Valley in May of 2018 (GVMW-25). The operator started reporting monitoring data for this well in the 4th Quarter 2018 report. The data presented thus far does not indicate impacts from the ECOSA seep. The operator has indicated they are working on a long-term (final closure) mitigation plan for the ECOSA seep which will be presented in a permit revision.

Close-Out Meeting:

The Division had a close-out meeting with the operator at their Victor office, which included discussion of the following:

- SGVLF Phase 2 construction is underway (at the northwestern edge of the facility). The operation is currently installing the subgrade in this area. Installation of the liner in this area is anticipated to begin the first part of May. The operator expects to submit the Phase 2 certification report to the Division in mid-July. The Phase 2 construction area was not visible from the overlook during this inspection due to dense fog. Given the short construction timeline for Phase 2, the Division intends to inspect the site more frequently during this time to observe the different stages of construction.
- The operator intends to submit a Technical Revision regarding underground mining in the Main Cresson (as previously discussed with the Division).
- The operator intends to submit a Technical Revision regarding bond changes for non-EPF facilities (as previously discussed with the Division).
- The operator has not been consistently reporting results of LDS sump inspections and sampling to the Division, as was done annually until 2013/2014. It is the Division's understanding the permit requires this information be submitted. In a follow-up conversation after the inspection, the operator committed to submitting LDS sump inspection, sampling, and reporting plans in the form of either a Technical Memorandum or Technical Revision, depending on whether or not the plans have changed since initially approved in the permit. The operator intends to submit this information (by June 10, 2019) as part of their corrective action response for the problem cited in the Division's inspection report sent on May 10, 2019, related to LDS sump sampling/reporting.

PHOTOGRAPHS



Photo 1. View looking west from top of HGM platform, showing SGVLF leaching surface. No solution ponding greater than 3 feet x 3 feet in size was observed.



Photo 2. View looking northwest from top of HGM platform, showing SGVLF leaching surface. No solution ponding greater than 3 feet x 3 feet in size was observed.



Photo 3. View looking northwest from overlook located south of HGM, showing SGVLF leaching surfaces. No solution ponding greater than 3 feet x 3 feet in size was observed. Note dense fog reducing visibility of northwestern portion of SGVLF.



Photo 4. View looking northwest across sump at SGVLF toe filled with bird balls. This sump appeared to be dry during the inspection.



Photo 5. View looking northeast, showing location of LDS sump SG-LDS-1 (circled) at southern edge of SGVLF.



Photo 6. View looking inside LDS sump SG-LDS-1, showing sump dry during inspection.



Photo 7. View looking north, showing location of LDS sump SG-LDS-2 (circled) at southwestern edge of SGVLF.



Photo 8. View looking inside LDS sump SG-LDS-2, showing sump dry during inspection.



Photo 9. View looking southwest, showing location of LDS sump SG-LDS-3 at eastern edge of SGVLF.



Photo 10. View looking inside LDS sump SG-LDS-3, showing sump dry during inspection.



Photo 11. View looking across leaching surface of AGVLF. No solution ponding greater than 3 feet x 3 feet in size was observed.



Photo 12. View looking across leaching surface of AGVLF at the 10,400 foot elevation. No solution ponding greater than 3 feet x 3 feet in size was observed. Note ice present on leaching surface.



Photo 13. View looking southwest from top of HGM platform, showing ponding inside toe berm of AGVLF (circled) which the operator indicated is meteoric water.



Photo 14. View looking west across top of AGVLF, showing Phase III area (indicated) proposed for use in a leach cell study (in TR-113). Approximately 3 feet of previously processed crushed ore has already been placed on a geomembrane liner in this area.



Photo 15. View looking north, showing location of LDS sumps AG-LDS-12 (foreground) and AG-LDS-13 (background) at northern edge of crusher area in Phase IV of AGVLF.



Photo 16. View looking inside LDS sump AG-LDS-12, showing sump dry during inspection.



Photo 17. View looking inside LDS sump AG-LDS-13, showing sump dry during inspection.



Photo 18. View looking northwest at Con Barn located at southern edge of HGM.



Photo 19. View looking south, showing loader loading concentrate from Con Barn into haul truck during inspection.



Photo 20. View looking across secondary containment for high pH thickener, located on east side of HGM. High pH thickener tank was being drained during the inspection for cleaning (drainage area circled).



Photo 21. View looking across secondary containment for high pH thickener (left) and processed ore thickener (right), located on east side of HGM. Water was being pumped from high pH thickener sump to secondary containment of processed ore thickener during inspection (note hose at center).



Photo 22. View looking across western half of secondary containment for processed ore thickener, located on east side of HGM. Water from high pH thickener sump was being discharged (circled) into this structure during inspection.



Photo 23. View looking across secondary containment for processed ore thickener, located on east side of HGM. High pH thickener discharge was draining into sump (shown) located at northwest corner of this structure.



Photo 24. View looking across eastern half of secondary containment for processed ore thickener, located on east side of HGM. Note this portion of the structure had no reduction in capacity during the inspection.



Photo 25. View looking west showing 330 ton silo located at southeastern edge of HGM proposed for relocation to SGOSA in TR-114.



Photo 26. View looking inside 330 ton silo located at southeastern edge of HGM proposed for relocation to SGOSA in TR-114.



Photo 27. View looking across vat leach circuit present on west side of HGM, still offline since February 2018.



Photo 28. View looking northwest, showing location of seep accumulation trench at eastern toe of ECOSA (circled).



Photo 29. View of seep accumulation trench at eastern toe of ECOSA, showing approximately 2-1/2 feet of water present in trench during inspection.



Photo 30. View looking southeast from seep accumulation trench at eastern toe of ECOSA. A trickle of water was flowing into the trench during the inspection (flow direction indicated).

Inspection Contact Address

Mike Schaffner
Cripple Creek & Victor Gold Mining Company
P. O. Box 191
Victor, CO 80860

Encl: Attachment A – CC&V Water Level Inspection Readings

CC: Michael Cunningham, DRMS
Tim Cazier, DRMS
Patrick Lennberg, DRMS
Elliott Russell, DRMS
Justin Raglin, CC&V
Justin Bills, CC&V
Katie Blake, CC&V

CC&V VLF Water Level Inspection Readings

Previous Results

Date:		9/27/18	10/30/18	2/14/19	3/21/19	4/23/19	Notes
AREQUA VLF:	EPS:	TC1	AME	ERR	TC1		
Phase I HVSC & Pond Piezometers	TIME:	10:28	11:17	11:48			
Note: 80% cap. @ 63.75 ft	Max. of Pump #299, #300, #301, 302, or #303 (Circle Pump #)	(ft)	53.5	56.2	59.4		
	Pond Lvl / XDCR #1	(ft)	52.9	11.2	59.7		
	System Press / XDCR #2	(ft)	38.3	15.1	42.5		system head
Phase I Low Volume Solution Collection	TIME:		11:14	11:01			
Note: Req'd < 2 ft	Piezo #1 (HAND)	(ft)	--	0.66	0.45		
	Piezo #2 (AUTO)	(ft)	--	0.79	0.83		
Phase II & III HVSC & Pond Piezometer	TIME:		11:00	11:11	10:45		
Note: 80% @ 49.4 ft	Max. of XDCR #4, #5, or #6 (Circle XDCR #)	(ft)	--	34.7	44	44.6	
	Piezo (Pipe)	(ft)	--	32.7	43.4	44.7	
Phase II & III Low Volume Solution Collection	TIME:		11:02	11:15	10:50		
Note: Req'd < 2 ft	Pump / XDCR #1 (AUTO)	(ft)	--	0.57	0.49	0.58	
	Pump / XDCR #2 (AUTO)	(ft)	--	0.48	0.41	0.44	
Phase IV High Volume Solution Collection	TIME:	11:40	12:07	12:10	12:46	12:05	
Note: 80% cap. @ 56.5 ft	Max. of Pump #307, #308, or #309 (Circle Pump #)	(ft)	30.4	46.1	44.8	43.7	28.5
	XDCR pipe (#310 Resv'd)	(ft)	38.0	45.9	44.8	44.2	25.1
Phase IV Low Volume Solution Collection	TIME:	11:47	12:11	12:12	12:50	12:07	
Note: Req'd < 24"	Pump / XDCR #1	(in)	11.2	15.2	17.2	13.3 to 17.0	16.5
	Pump / XDCR #2	(in)	12.3	12.6	12.5	12.4	12.5
Phase V High Volume Solution Collection	TIME:		13:25	10:35			
Note: 80% cap. @ 36.5 ft	Max. of XDCR #311, #312, #313, or #314 (Circle XDCR #)	(ft)	--	31.1	31.1		
Phase V Low Volume Solution Collection	TIME:		13:26	10:36			
Note: Req'd < 24"	XDCR #001	(in)	--	13.72	12.07		
	XDCR #002	(in)	--	15.7	17		
External Pond Low Volume Solution Collection	TIME:			11:00			
Note: Req'd < 24"	Pump / XDCR #1-EXT (AUTO)	(in)	--	--	13.7		
	Pump / XDCR #2-EXT (AUTO)	(in)	--	--	13.8		
Underdrain Discharge Area	TIME:						
Note: 1 l/sec = 15.85 gpm	South Underdrain (S U/D)	(gpm)	--	--	--		
	4" Pipe Discharge AG 01 Spring Pipe	(gpm)	--	--	--		
	NPDES Discharge AG 1.5 -001A	(gpm)	--	--	--		
	North Underdrain (N U/D)	(gpm)	--	--	--		
	24-inch Solid Pipe	(gpm)	--	--	--		
Arequa Gulch Monitor Well Pumpback System	TIME:						
Data first collected by DRMS 3/8/12	35A	(in)	--	--	--		
	63B	(ft)	--	--	--		
	B63	(gpm)	--	--	--		
	A35	(gpm)	--	--	--		
SQUAW GULCH VLF High Vol. SC:	TIME:		10:24	10:15	10:25	10:20	
Note: 80% cap. @ 94 ft	LIT #88301 (north end)	(ft)	--	55.59	83.92	70.61	54.82
	LIT #88303	(ft)	--	54.8	84.77	69.68	53.79
	LIT #88305	(ft)	--	54.97	83.54	70.21	54.4
	LIT #88307 (south end)	(ft)	--	54.6	84.99	70.18	56.9
	Piezometer-LIT #88314	(ft)	--	62.72	84	80.6	63.14
SQUAW GULCH VLF Low Vol. SC:	TIME:		10:27	10:20	10:19	10:25	
Note: Req'd < 24"	Leachate Pump 1	(in)	--	6.4	7.0	6.6	7.2
	Leachate Pump 2	(in)	--	6.7	7.6	6.9	7.8