




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: Cross Gold Mine	MINE/PROSPECTING ID#: M-1977-410	MINERAL: Gold, copper, silver,	COUNTY: Boulder
INSPECTION TYPE: Monitoring	WEATHER: Cloudy	INSP. DATE: December 12, 2022	INSP. TIME: 09:30
OPERATOR: Grand Island Resources LLC	OPERATOR REPRESENTATIVE: Sergio Rivera Je'an-Paul Brewer	TYPE OF OPERATION: 110(2) - Hard Rock Limited Impact	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$546,751.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
INSPECTOR(S): Patrick Lennberg	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: December 16, 2022	

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>Y</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>N</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>Y</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION-- <u>Y</u>	(ST) STIPULATIONS----- <u>Y</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>N</u>	

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

OBSERVATIONS

The Cross Gold Mine was inspected by Patrick Lennberg with the Division of Reclamation, Mining and Safety (Division/DRMS). The inspection was completed as part of the Division's increased inspection frequency, the permit is to be inspected on a quarterly basis. The site was previously inspected by the Division on September 26, 2022 during the third quarter inspection of 2022. Sergio Rivera and Je'an-Paul Brewer representing Grand Island Resources, LLC (GIR), the permittee/operator, accompanied me during the inspection. The weather was partly cloudy and calm.

The Cross Gold Mine is a 110(2) underground mine operation permitted for 9.9 acres for the mining of gold, silver, and other minerals. The permit area includes two discharging mine openings: the Cross Mine portal (at the Cross Mine) and the Idaho Tunnel portal (at the Caribou Mine). Discharge from these mines is directed to a series of plastic-lined ponds prior to being treated and discharged into Coon Track Creek at the permitted discharge point (CO0032751). The mine is located on land owned by the permittee. The site is located approximately 4 miles northwest of Nederland, CO in Boulder County, at an elevation of approximately 9,760 feet. Access to the site is off of Caribou Road. A separate entrance exists for each of the two mines at the site, the Cross Mine (to the south) and the Caribou Mine (to the north). The approved post-mining land use is a combination of forestry and residential. A mine sign was observed at the Caribou Mine entrance as required by Rule 3.1.12.

Amendment 2 (AM-2) was issued on April 13, 2022, which increased the permit area by 1.04 acres for a total permit area of 9.99 acres, including the addition of the Potosi Shaft and the Caribou 300 Level Portal. It also revised the mining and reclamation plans and maps to address the addition of a new internal haul road between the Cross and the Caribou Mines, and updated ground support and reclamation plan for the Idaho Tunnel Portal at the Caribou Mine. Technical Revision 10 (TR-10) was approved on April 28, 2022. TR-10 modified the water management and treatment program and provide a surface water and groundwater monitoring program (in accordance with corrective action #1 of the Board Order issued for Violation No. MV-2021-017). Currently, the site is under a Cease and Desist Order that prohibits any further activities underground, except those activities approved by the Division, in writing, as necessary to comply with the conditions of the Order.

The mine was not active at the time of inspection and mine personnel were attending the annual refresher class on-site.

During the inspection the Division discussed the third quarter 2022 groundwater and surface water report. The operator is in the process of responding to the Division's second adequacy review letter. The operator and the Division spoke about reducing the analyte list for which groundwater and effluent samples are analyzed. The Division would review the reduction request through a Technical Revision. The Division recommended the operator also include in that Technical Revision, the request and brief summary of rebuilding the snow-shed at the Cross Tunnel and the relocation of the water treatment plant.

Also discussed during the inspection were activities related to the Idaho Tunnel. While in the field the operator stated they were reviewing TR's 5, 7, and 9 along with AM-2 as they relate to rebuilding the Idaho Tunnel entrance. The operator stated it appears, from their initial permit file review, that no additional revisions with the Division were needed to reconstruct the entrance. The inspector stated they were

unfamiliar with that particular aspect of the permit and additional research on the topic would be completed once they returned to the office. The Division reviewed recent revisions including the ones stated above and could not find where the new construction details of the Idaho Tunnel entrance were addressed in the recent revisions. The revisions mentioned; TR-5 addressed rehabilitation of the old entrance to allow safer entrance into the tunnel, TR-7 addressed the geotechnical stability of the slopes around the entrance after rehabilitation work and in response to problem citation in the March 2020 inspection, TR-9 was submitted because of a stipulation in the approval of TR-7 which updated the geotechnical stability analysis of the tunnel rehabilitation work demonstrating the portal slopes meet the stability requirements of the Mined Land Reclamation Board. In AM-2 no details of the tunnel entrance reconstruction were provided although a line-item was used for reclamation of the tunnel entrance. However, that line-item was more of a placeholder until additional details could be provided. Therefore, the Division believes a Technical Revision would be needed that provides the design details of the entrance reconstruction along with any needed geotechnical stability analysis and any local permitting as needed. If the operator can demonstrate a Technical Revision is not needed they may do so. Finally, if there is any significant alteration of the reclamation plan or an increase in the affected land acreage the operator may need to convert to an appropriate 112d permit.

The last item discussed in the field was the ground control and hydraulic control structure that the operator would like to complete in the Idaho Tunnel. The Division stated a stand-alone Technical Revision was needed for this item. The Division encouraged the operator to provide details on what they proposed to do, why it was needed, the duration of activities and how the proposed efforts may impact the baseline groundwater monitoring program.

During the inspection Pond 2 was noted to be dry. The operator stated the pond was cleaned out over the summer and the integrity of liner checked. The liner was found to be in good condition and sediment removed from the pond was currently undergoing TCLP testing for disposal purposes. The Division reiterated, from previous inspections, that when the operator determines a proper disposable facility for the sediment that they provide the Division with the letter of acceptance from the facility along with the analytical results. It was also stated these similar documents were also needed for disposal of the water treatment sludge.

Photographs taken during the inspection are attached.

Please contact Patrick Lennberg (303)866-3567 ext. 8114 or email at patrick.lennberg@state.co.us if you have any questions regarding this report.

Inspection Contact Address

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PHOTOGRAPHS



Photo 1: Mine sign at the primary mine entrance location



Photo 2: Current conditions at the Idaho Tunnel entrance



Photo 3: Pond 3A



Photo 4: Ponds 3B and 3C



Photo 5: Pond 1



Photo 6: Pond 2



Photo 7: Cross Mine entrance and the approximate location, between aspen and conifer trees, of where the water treatment plant will be relocated to



Photo 8: Cross Mine snow-shed is going to be replaced in the area from the middle right of the picture to the middle left