

**MINED LAND RECLAMATION BOARD
BOARD ORDER FILE NO. M-1977-410, MV-2021-017
QUARTERLY REPORT
FOURTH QUARTER 2022
GRAND ISLAND RESOURCES LLC
CROSS AND CARIBOU MINES
NEDERLAND, COLORADO**

**PREPARED BY:
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1. CERTIFICATION

Name and Location of Project:

Grand Island Resources, LLC

Cross and Caribou Mines

4415 Caribou Road

Nederland, CO 80466

Operator:

Name: Daniel Takami – President Grand Island Resources

Address: 4415 Caribou Road, Nederland, CO 80466

2. INTRODUCTION

On February 18, 2022 the Colorado Mined Land Reclamation Board (Board) issued to Grand Island Resources LLC (Operator) its Findings of Fact, Conclusions of Law and Order on the matter of Notice of Violation No. MV-2021-017 brought before the Board by the Division of Reclamation, Mining & Safety (DRMS) on December 15, 2021 indicating possible violation by the Operator, Civil Penalties, Cease and Desist Order and Corrective Actions for Failure to Minimize Disturbances to the Prevailing Hydrologic Balance, File No. M-1977-410.

During the February 18, 2022, the Board concluded that the Operator was in violation of section 34-32-116(7)(g), C.R.S. and Rule 3.1.6(1) for its failures to minimize disturbances to the prevailing hydrologic balance of the affected land and of the surrounding areas and to the quality of water in surface systems during the mining operation and during reclamation. The Operator shall Cease and Desist any further activities underground, except for those activities approved by the Division, in writing, as necessary to comply with the conditions of the Order, protect water quality, prevent damage to off-site areas, complete reclamation, or to protect public health and safety, until all of the corrective actions have been resolved to the satisfaction of the Division.

The Board imposed against the Operator the following CORRECTIVE ACTIONS:

- 1. File a Technical Revision by February 28, 2022, to modify the water management and treatment program for the site to sufficiently address all water quality issues and provide a surface water and groundwater monitoring program that meets all applicable requirements of Rules 3.1.6, 3.1.7, 6.33, and 6.3.4. The Technical Revision shall be approved by the Division within 60 days of receipt, by April 28, 2022;***
- 2. Submit, within 30 days of the effective date of this Order, an interim financial warranty in the amount of \$ 162,841.00 to operate any necessary water treatment system at the site (based on an estimated cost of \$6,785 per month over a 2-year period);***
- 3. Submit, by the end of every calendar quarter, beginning with the first quarter of 2022, a written report outlining the activities undertaken at the site during the current quarter and any activities planned for the next quarter to ensure compliance with section 34-32-116(7)(g), C.R.S. and Rule 3.1.6(1). The quarterly reports shall also summarize any actions or findings of the Water Quality Control Division of the Colorado Department of Public Health and Environment regarding the site discharge permit, that were taken during the current quarter. The Operator shall submit the quarterly reports until the Division issues a written notice to Operator indicating that the reports are no longer necessary; and***
- 4. Appear at the Board's December 2022 meeting to provide a status update on the corrective actions required by this order.***

GIR submitted to the Board the First Quarter Report per the above Board Mandate on March 31, 2022. On June 30, 2022, GIR submitted to the Board a letter indicating that the Second Quarter Report was going to be submitted soon after the test results from the second June 2022 water quality compliance test work had been received and processed by GIR. Mr. Patrick Lennberg – DRMS Environmental Specialist indicated via email to GIR that the letter has been uploaded to the permit file. The Second Quarter 2022 was issued to the Board by GIR on July 12, 2022. The Third Quarter Report was issued to the Board on October 12, 2022.

The present document constitutes the FOURTH QUARTERLY 2022 Report to the Board.

3. MLRB ORDER

The Board found the Operator in violation of section 34-32-116(7)(g), C.R.S. and Rule 3.1.6(1).

3.1. CEASE AND DESIST – UNDERGROUND ACTIVITIES

BOARD ORDER: The Operator shall Cease and Desist any further activities underground, except for those activities approved by the Division, in writing, as necessary to comply with the conditions of the Order, protect water quality, prevent damage to off-site areas, complete reclamation, or to protect public health and safety, until all of the corrective actions have been resolved to the satisfaction of the Division.

OPERATORS ACTIONS: The Operator have taken the following actions

3.1.1. Underground Exploration and Ore Production Activities

The operator stopped all activities on November 30, 2021

3.1.2. DRMS Approved Activities

On December 21, 2021, the Operator requested, in written form, approval from DRMS to conduct specific underground activities considered by the Operator to be most pressing to comply with the intent of the Cease and Desist Order.

Table 3.1.2.1 below provides a status of Approval and Physical Progress on requested activities by GIR and approved by DRMS. Not all requested activities were initially approved by the DRMS; the Operator provided additional information and clarifications at the request of DRMS; the approval dates for the activities are reflected on the Table; communication between DRMS and the Operator.

TABLE 3.1.2.1 DRMS Approved Activities and Progress Report

Priority	Location	Activity	Final Approval by DRMS	Progress (% complete)
Priority 1	Cross Mine	1.1.1. Cross Discharge lines installations. The scheduled installation of replacement water discharge lines must continue in the Cross Mine to connect underground drainage system to prevent the mine from flooding. Should flooding occur, ground water would report to the surface through the Cross Mine Adit in an uncontrolled fashion directly to the environment.	22-Dec-21	100.0%
		1.1.2. Refuge Chamber Construction. Construction of an MSHA compliant safety refuge toward the back of the Cross tunnel. This is a critical activity and essential for operations associated with water management (pumps, pipelines, utilities).	22-Dec-21	35.0%
		1.1.3. Utilities Installation for Safety and Operations. (Discharge, Compressed Air, Ventilation, Power and Water supply). Replacement of dated infrastructure (compressed air, water, and electrical lines) which must be installed such that mine dewatering pumps and ventilation systems are operational.	29-Dec-21	100.0%
		1.1.4. Auxiliary Fan installations. The ventilation system is a critical safety requirement for personnel attending and maintaining the pumping systems; these systems must be operational prior to the construction of water management sumps and for any associated activities.	29-Dec-21	100.0%

Priority	Location	Activity	Final Approval by DRMS	Progress (% complete)
		1.1.5. Ground support installation. All areas leading to the mine pumping sites must be secured, bolted, and must comply with MSHA guidelines for safe personnel access.	29-Dec-21	100.0%
		1.1.6. Freeze Prevention Program. The groundwater conveyance systems must be insulated to prevent freezing of pipes and equipment and appurtenant facilities such that the water conveyance systems remain operational during the winter months.	22-Dec-21	100.0%
		1.1.7. Pond 1 Diversion Pipeline. A pipeline is to be installed and connect to the pipeline between pond 3c and pond 1. This pipeline can direct water flows from the caribou mine into the cross mine for increased attenuation during peak run-off and prevent overtopping of pond 1.	14-Apr-22	100.0%
		1.1.8. Cross Snowshed Rehabilitation. The 50-year old Cross Snowshed is in disrepair and must be rehabilitated for safety reasons.	Incidental to Cross Portal Rehabilitation	70.0%
	Caribou Mine/Idaho Tunnel	1.2.1. Construction of Sediment Control Structures. Solids removal from groundwater within the mine workings prior to discharge to the sediment control ponds is critical for optimizing the performance of the settling ponds. The construction of a Cofferdam and Check dams in the Idaho tunnel is critical for water quality compliance. These activities include the extension of piping systems into the pumping areas.	22-Dec-21	100.0%

Priority	Location	Activity	Final Approval by DRMS	Progress (% complete)
		1.2.2. "A.75" Sediment Control Sump Rehabilitation. Removal of sediment accumulated in the clarifying sump is a required O&M part of the system; GIR is planning to relocate the existing pump further into the sump to optimize sump storage capacity, an access walkway must be constructed to ensure the safety of maintenance personnel.	22-Dec-21	65.0%
		1.2.3. Freeze Prevention Program. The groundwater conveyance systems must be insulated to prevent freezing of pipes and equipment and appurtenant facilities such that the water conveyance systems remain operational during the winter months.	22-Dec-21	100.0%
Priority 2	Cross Mine	2.1.1. Cross Shaft and Old Access Road Surface Reclamation. Backfill, compact and recontour the terrain to reduce surface water inflow into the underground workings.	23-Jun-22	100.0%
		2.1.2. Apache/Potosi Sump Development at 'G' Station. Construction of a water sedimentation and clarification system at a midpoint within the tunnel. Construction of underground sumps is required such that water flows are collected and controlled. The sumps would serve as sediments settling structures such that heavily sediment laden water is not delivered to the treatment plant.	22-Dec-21	55.0%

Priority	Location	Activity	Final Approval by DRMS	Progress (% complete)
	Caribou Mine/Idaho Tunnel	2.2.1. Personnel Siding Development along Railway and Equipment Corridors. Safety step-aways from moving equipment.	22-Dec-21	100.0%
Priority 3	Cross Mine	3.1.1. Water and sediment controls at fractured zones through the implementation of catchment areas in the tunnel ribs and shotcrete applications.	29-Dec-21	0.0%
		3.1.2. Winze Hoist and Winze Sump Rehabilitation. Essential activity required for access of lower mine levels for rehabilitation and water management.	18-Feb-22	20%
		3.1.3. Sublevel Sediment Sumps Rehabilitation and Development. Rehabilitation of currently flooded workings after groundwater table drawdown and release of groundwater via the water treatment system.	18-Feb-22	5%
	Caribou Mine/Idaho Tunnel	3.2.1. Sediment Control Pond Upgrades. Minor modifications to reduce the impact of freezing pipes and ice build-up.	29-Dec-21	20.0%
Site Wide		4. HYDROGEOLOGIC STUDY GIR intends to conduct a comprehensive Hydrogeologic Study of the Mining Complex. The Study is considered critical and essential for near future and long-term operations and water quantity and quality management. GIR anticipates that the Study will require access to the mining areas and activities that are not anticipated to result in high level of disturbance. GIR will provide, upon request, the	Activity not Approved by DRMS	0.0%

Priority	Location	Activity	Final Approval by DRMS	Progress (% complete)
		Scope of Work for the Study. Approval of the Study is hereby requested.		

3.2. CORRECTIVE ACTIONS

3.2.1. Water Treatment Modifications Technical Revision

On February 28, 2022, the Operator filed with DRMS a Request for Technical Revision (namely TR-10) in response to a Service of Notice of Violation/Cease and Desist Order (Number IO-211130-1) from Colorado Department of Public Health and Environment (CDPHE) dated November 30, 2021, in conjunction with Permit No. M-1977-410. TR10 which includes a detailed plan of action and current activities addressing surface water quality noted in the letter. The Technical Revision request describes measures that have been undertaken and are further proposed at the site to address water quality issues, including underground installations, a description of the new water treatment pilot system, results of the current system and a Ground Water Monitoring Plan (GWMP) as required by the NOV/C&D Order.

TR-10 was approved by DRMS on April 28, 2022.

GIR has initiated water sampling campaigns for groundwater, surface water and mine effluent (pre-treatment) in compliance with TR-10 mandates. GIR has filed test results to DRMS in a timely manner via quarterly reports in accordance with TR-10 mandates. DRMS submitted to GIR comments pertaining to Water Sampling and Testing reported by GIR under the Third Quarter TR-10 Report to DRMS; GIR addressed those comments on a letter to DRMS submitted on January 5, 2023. GIR has made correction to the sampling and testing programs to address DRMS comments.

3.2.2. Financial Warranty to Operate the Water Treatment System

On March 16, 2022, the Operator filed with DRMS a FINANCIAL WARRANTY, CHECK FOR DEPOSIT IN THE STATE TREASURY Form, Check No. 125 for \$162,841.00 (One Hundred and Sixty-Two Thousand Eight Hundred and Forty-One Dollars); the check was deposited by the Operator on March 21, 2022.

On March 21, 2022, the Operator issued to DRMS a check for \$5,000.00 as payment to the Board Ordered Financial Fine for the violations.

On June 13, 2022, GIR submitted to the Division of Reclamation, Mining and Safety (Division) check #42 for the amount \$ 18,098.00 to cover the increase of the Financial Warranty for the permit to \$546,751.00, in accordance with Rule 4.2.1 and C.R.S. 34-32-117. GIR are considered fully bonded for this site at \$546,751.00.

3.2.3. Written Quarterly Report

The subject of this Fourth Quarterly Report. The Third Quarterly Report was submitted to the Board on October 12, 2022, the Second Quarterly Report was submitted to the Board on July 12, 2022 and, the First Quarterly Report submitted to the Board on March 30, 2022.

3.2.4. Appear Before the MLRB – December 2022

Hearing date has been scheduled for January 17, 2023.

4. CDPHE WATER QUALITY CONTROL DIVISION

Pursuant to Paragraph 24 of CDPHE-WQCD Notice of Violation/Cease and Desist Order Number IO-211130-1 dated November 30, 2021 (“Order”), as modified by correspondence with the Division. Grand Island Resources (“GIR”) has provided Progress Reports accordingly. Salient points are provided below.

4.1. NO WATER QUALITY DISCHARGE VIOLATION DURING THE QUARTER

Since late December of 2021, Mr. Patrick Delaney, Environmental Manager of the third-party company Black Fox Mining has been in charge for the operation, calibration, and optimization of the water treatment system at GIR facilities.

Mr. Delaney has also been responsible for collecting and/or supervising the collection of water quality compliance samples and has filed on behalf of GIR, with the Permits and Enforcement Section Water Quality Control Division CDPHE, Monthly Discharge Monitoring Reports - Cross Gold Mine CO0032751.

Filings with CDPHE indicate that all compliance samples tested during the Fourth Quarter of 2022 meet permit discharge standards. Copies of the Monthly Report Cover letters (DMRs) submitted by Mr. Delaney to CDPHE for the months of October and November 2022 are attached as Appendix A. Please note that the December 2022 report will be filed with CDPHE on or before January 28, 2023 and therefore the cover letter is not available at this time.

4.2. ACTIVITIES COMPLETED AS OF December 31, 2022

- 4.2.1. GIR has submitted DMRs for the months of March, April, May, June, July, August, September, October and November 2022; the DRM for the Month of December will be submitted the week of January 22, 2023. No water quality compliance parameters exceedances were detected from the Water Treatment Discharge (Compliance Outfall 001).
- 4.2.2. In accordance with Corrective Action No. 1 of the Board Order, the Technical Revision was approved by DRMS on April 28, 2022.
- 4.2.3. As indicated on Table 3.2.2.1. several of the DRMS approved activities have been completed. GIR continues with implementation of the approved measures in accordance with the Board Order and DRMS approvals.
- 4.2.4. Automated water levels data have been and continue to be recorded in groundwater wells and the Cross Winze. Discharge Water Flows at Outfall-001 are also being recorded on continued basis.
- 4.2.5. Pond 2 has been emptied; the pond is being used as emergency water storage facility. Sediments within the pond will be tested (TCLP) prior to disposal in a permitted facility.

4.3. FIRST QUARTER OF 2023 PLANNED ACTIVITIES

Activities planned for first quarter of 2023 (January 1 to March 31, 2023), subject to change based on time, staffing, and financial constraints:

- 4.3.1. Prepare and Submit to DRMS a Technical Revision associated with relocation of the pilot water treatment system to a permanent location.
- 4.3.2. Continue Refuge Chamber construction.

4.3.3. Continue Snowshed rehabilitation.

4.3.4. Continue sediment management at all locations underground including the A75 sump.

4.3.5. Continue with Apache/Potosi sump development at “G” Station.

4.3.6. Continue Winze rehabilitation.

4.3.7. Continue with sublevel sump rehabilitation.

5. CLOSING

Grand Island Resources LLC, Directors, Management and Technical Personnel appreciate the opportunity to submit this Quarterly Report to the Mined Land Reclamation Board in compliance with the Board's February 18, 2022, Findings of Fact, Conclusions of Law and Order issued to Grand Island Resources LLC (Operator) on the matter of Notice of Violation No. MV-2021-017 brought before the Board by the Division of Reclamation, Mining & Safety (DRMS) on December 15, 2021. Specifically, to the Order: ***Submit, by the end of every calendar quarter, beginning with the first quarter of 2022, a written report outlining the activities undertaken at the site during the current quarter and any activities planned for the next quarter to ensure compliance with section 34-32-116(7)(g), C.R.S. and Rule 3.1.6(I).***

Grand Island Resources LLC staff continue to work diligently and tirelessly to address the temporary shortcoming faced by the operation. The Corporation continues to invest the necessary financial and personnel resources required to implement measures to ensure that the violations cited by the Board are remedied and that do not occur in the future.

Grand Island Resources LLC looks forward to the opportunity to discuss with the Board and DRMS steps needed to obtain a release from the Cease and Desist Order such that we are allowed to continue exploring and identifying the metal resources contained within our mining district and advance the development of our mining operation.

Respectfully Submitted



Daniel J. Takami
President, Grand Island Resources LLC