



STATE OF
COLORADO

Lennberg - DNR, Patrick <patrick.lennberg@state.co.us>

Grand Island Resources Second Quarter Report

Daniel Takami <danieltakami@gmail.com>

Tue, Jul 12, 2022 at 3:25 PM

To: "Mojar - DNR, Camille" <camille.mojar@state.co.us>

Cc: Patrick Lennberg - DNR <patrick.lennberg@state.co.us>, Richard Mittasch <rmittasch@nedmining.com>, Sergio Rivera <sergio.rivera@novametallix.com>

Ms Mojar,

Enclosed is Grand Island Resources Second Quarter Report. Please let me know if you have any questions.

Respectfully,

Daniel J. Takami

President, Sustainable Metal Solutions, LLC

President, Nederland Mining Consultants Inc.

President, Grand Island Resources, LLC

danieltakami@gmail.com

501.256.4444



Signed MLRB - SECOND QUARTER 2022 REPORT - BOARD ORDER.pdf

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

**PREPARED BY:
GRAND ISLAND RESOURCES LLC
CROSS AND CARIBOU MINES
4415 CARIBOU ROAD
NEDERLAND, CO 80466**

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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) it's Findings of Fact, Conclusions of Law and Order (Appendix A) 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.

The Operator hereby complies with Point 3 of the Order's Corrective Actions which mandates the following:

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

Prior to the issuance of the Board Findings of Fact, Conclusions of Law and Order, an Enforcement Hearing was held by the Board with DRMS and the Operator on December 15th, 2021, where the Cease and Desist Order was upheld by the Board. A follow up Hearing with the Board was held on January 19, 2022, where DRMS requested that the Board imposed on the Operator the Financial Fine that had been tabled by the Board during the December Hearing. 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 present 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.

As a result of the above timeline of events, some of the activities described in this report pre-date the February 18, 2022, Board Order.

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 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 (Appendix B-1) to conduct 17 specific activities 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 the Operator. Not all requested activities were initially approved by the DRMS; the Operator provided additional information and clarifications at the requested of DRMS; the approval dates for the activities are reflected on the Table; communication between DRMS and the Operator are provided in Appendix B-2.

TABLE 3.1.2.1 DRMS Approved Activities and Progress Report

Priority	Location		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%
		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%
	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%
		1.2.2. "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	60.0%
		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 working. A detailed reclamation plan and design is currently being prepared for submittal under separate cover to DRMS	Activity not Approved by DRMS	0.0%
		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%
	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	80.0%
		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	15.0%
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 Scope of Work for the Study. Approval of the Study is hereby requested.	Activity not Approved by DRMS	0.0%

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.

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 Second Quarterly Report and the First Quarterly Report submitted to the Board on March 30, 2022

3.2.4. Appear Before the MLRB – December 2022

Hearing date to be scheduled by the Board.

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”) provided on June 30, 2022, Progress Report for the Second Quarter, 2022, select portions of the report 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 CPDHE, Monthly Discharge Monitoring Reports - Cross Gold Mine CO0032751.

The Filings indicate that all compliance samples tested for the Second Quarter of 2022 meet permit discharge standards.

4.2. ACTIVITIES COMPLETED IN THE SECOND QUARTER OF 2022 (April 1 – June 30, 2022)

- 4.2.1. On May 10, 2022, GIR submitted the Facility Evaluation identified and outlined in Paragraph 21 of the Order.
- 4.2.2. GIR submitted the March, April, and May 2022 DMRs. During those months, there were no exceedances at Outfall 001.
- 4.2.3. In accordance with Corrective Action No. 1 of the Board Order, the Technical Revision was approved by DRMS on April 28, 2022.
- 4.2.4. The following work was completed to manage high Spring runoff and to ensure that the site remains in compliance with its permit effluent limits:
 - 4.2.4.1. The location for a water door in the Caribou/Idaho Tunnel has been identified to allow for planned release of the detained water and provide access to the underground workings as needed. Attenuation of high infiltration water flux will have important benefits to water treatment.
 - 4.2.4.2. GIR has made progress on the construction of catchment areas at the tunnel ribs in several locations, which will be collection points for water thereby allowing for improved drainage control into conveyance ditches. Sediment control features (buckets) and ditch repairs advancement is significant and continued as part of standard operations. Identification of additional locations is on-going as part of normal operating procedures. Additionally, shotcrete has been placed at highly fractured and weathered areas to secure loose material in position and to limit sloughing and sediment generation. The “G station” control is currently at 75% completion. Finally, GIR is researching underground pre-treatment options.
 - 4.2.4.3. GIR identified specific locations where core drill holes may contribute significant water flows to peak discharge. GIR applied industry and engineering standards to plug 30 drill holes at tunnel level in the Cross Mine.

- 4.2.5. A new flowmeter was installed at Outfall-001A. The flowmeter is working as designed.
- 4.2.6. GIR has enhanced the mechanical equipment at the existing WTP to maximize throughput capabilities. Specifically, additional MetSorb pressure vessels have arrived at the mine site. They have been tested and are ready for utilization in the water treatment system. Additionally, the influent pump at the Pond 1 location has been replaced. This change involved the replacement of a 3-HP pump for a 7.5-HP pump to allow for maximum throughput. This allows the system to treat water onsite to maximum capacity under the permitted monthly allowable limits.
- 4.2.7. A pressure transmitter has been installed in the Winze decline. This is the current location of the Cross pump to limit manual checks and ensure proper operations of the Cross pump given it has been dewatered completely since March 26, 2022. This allows an automated reading of the feet of head within the workings.
- 4.2.8. GIR continues to onboard the new Water Treatment Technician. The technician has provided an added stability to the project. The technician is local to the area and allows quick response to any tasks required at site to ensure the water treatment system is running optimally.
- 4.2.9. Pond 2 has had a lime hydroxide treatment and is in the settling process. Once that settling process is complete, the decanting procedure will begin. A slow bleed of the separated water will be pumped to Pond 1 for treatment through the water treatment system. The remaining sediment will be analyzed for proper disposal.
- 4.2.10. Upon completion the coffer dam removal, and once infiltration high flows have subsided, a permanent sump will be established in the Caribou Tunnel. The permanent sump location has been identified, engineering has been completed, and ground control will be re-assessed prior to construction.
- 4.2.11. Mitigation tools have been installed in both the Cross and Caribou portals to reduce sediment outflow. The Caribou coffer dam and 8.75 sump have been completed. Water effluent is now piped to Pond 3A to reduce surface flow along the mine travel surface. The discharge from the Pond 3 system (a, b and c) is conveyance to Pond 1 and/or the Juliet raise via pipeline. The Cross mine ditch has been reestablished, repaired and improved. The travel surface has been covered with gravel to reduce sediment generation; all water is reporting to the u/g workings are now managed via pumping and pipeline including a re-established a sump at winze intersection fitted with a pump which transfer the water to the escape way (second level).
- 4.2.12. Mitigation tools in the Caribou outflow ponds have been installed to retain sediment prior to treatment. GIR selected an alternative mitigation strategy consisting of conveyance of Caribou water to the Joliet raise as opposed to the installation of baffles within the Pond 3 system due to the geometry of the ponds.
- 4.2.13. GIR installed an operational bypass of the Caribou Mine source stream before Pond 1 to the Cross workings for holding capacity in an emergency.
- 4.2.14. GIR installed increased heat trace and insulation in the Cross Tunnel to ensure no freezing will occur do to batch treatment.

4.3. THIRD QUARTER OF 2022 PLANNED ACTIVITIES

Activities planned for third quarter of 2022 (July 1-September 1, 2022), subject to change based on time, staffing, and financial constraints:

- 4.3.1. Complete the final structural design for the water door in the Caribou/Idaho Tunnel.

- 4.3.2. Complete the G Station control and continue to research underground pre-treatment options.
- 4.3.3. Continue to evaluate moving the existing flowmeter at Outfall-001A to the Caribou Mine source stream for complete monitoring of all flow onsite, both source water and treated.
- 4.3.4. Continue to onboard the new Water Treatment Technician.

5. CLOSING

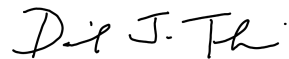
Grand Island Resources LLC, Directors, Management and Technical Personnel appreciate the opportunity to submit this Quarterly Report to the Mined Land Reclamation Board in compliance with the Board's February 18, 2022, Findings of Fact, Conclusions of Law and Order issued to Grand Island Resources LLC (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 has been working 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

Grand Island Resources LLC,



Daniel Takami
President