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From: **Keith, Katy L.** <katy.keith@stinson.com>

Date: Wed, Jul 13, 2022 at 11:29 AM

Subject: Grand Island Resources, LLC's Appeal of the Division's Final Determination of Designated Mining Operation Status for the Cross Gold Mine, Permit No. M-1977-410

To: camille.mojar@state.co.us <camille.mojar@state.co.us>

Cc: Botts, Jr., Robert E. <robert.botts@stinson.com>, Gilmer, Zane A. <zane.gilmer@stinson.com>

Good morning Ms. Mojar,

Please find attached a copy of Grand Island Resources, LLC's Petition for Hearing Before the Mined Land Reclamation Board and Brief in Support of Appeal of the Division's Final Determination of Designated Mining Operation Status for the Cross Gold Mine and supporting exhibits.

Thank you.

Katy L. Keith

LAA Team Lead

STINSON LLP

1144 Fifteenth Street, Suite 2400

Denver, CO 80202

Direct: 303.376.8408

STINSON.COM

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**BEFORE THE MINED LAND RECLAMATION BOARD
STATE OF COLORADO**

IN THE MATTER OF GRAND ISLAND RESOURCES, LLC'S APPEAL OF THE
DIVISION'S FINAL DETERMINATION OF DESIGNATED MINING OPERATION STATUS
FOR THE CROSS GOLD MINE, PERMIT NO. M-1977-410

**GRAND ISLAND RESOURCES, LLC'S PETITION FOR HEARING BEFORE THE
MINED LAND RECLAMATION BOARD AND BRIEF IN SUPPORT OF APPEAL OF
THE DIVISION'S FINAL DETERMINATION OF DESIGNATED MINING
OPERATION STATUS FOR THE CROSS GOLD MINE**

Pursuant to Rules 1.4.11, 7.2.4(1)(b), and 7.2.7 of the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for Hard Rock, Metal and Designated Mining Operations ("Rules"), through undersigned counsel, Grand Island Resources, LLC ("GIR"), as the owner of the Cross Gold Mine (referred to herein as the "Cross Mine"), hereby submits this request for a hearing before the Mined Land Reclamation Board (the "Board"), and this Brief in support thereof, related to the final determination by the Division of Reclamation, Mining and Safety ("Division") that the Cross Mine is a "Designated Mining Operation" ("DMO").

I. INTRODUCTION AND SUMMARY OF APPEAL

This appeal arises from the Division's final determination that the Cross Mine is a DMO. The Division's final determination is based on the fact that the Cross Mine installed a new water treatment system at the mine to treat water discharge to ensure that no detrimental amounts of toxic materials are exposed in quantities sufficient to adversely affect human health, property or the environment. The Division made its DMO determination despite the fact that the DMO statute and Rules were not enacted to apply in situations like this, nor has the Division

historically interpreted or applied them in this manner. Indeed, the Cross Mine has historically treated water at the mine to ensure compliance with water safety standards and the Cross Mine has never been designated a DMO. There are no conditions or activities currently conducted at the mine that would warrant a DMO designation. Further, other similarly situated mines have and do treat water for the same purpose and the Division has not designated these mines as DMOs, like it is now doing with respect to the Cross Mine. Beyond being inconsistent with the purpose of the Rules and the Division's own historical practices, a DMO designation is unduly burdensome to the Cross Mine given the expensive and time consuming steps necessary to comply with the additional regulatory requirements attached to such a designation. In short, the Division's decision is contrary to the facts, inconsistent with the Division's historical treatment and classification of the Cross Mine and other similarly situated mines, and ignores the unnecessary harm that such a designation would cause to the Cross Mine.

II. BACKGROUND ON CROSS MINE

The Cross Mine is located approximately four miles northwest of Nederland, Colorado adjacent to Roosevelt National Forest, at an elevation of approximately 9,700 feet above mean sea level. The property is an existing hard rock mining operation owned by GIR and at present, no active mining is being conducted. The mine permit number M-1977-410 was last revised through Amendment No. 2, dated January 6, 2022 ("AM 2") and approved by the Division on February 8, 2022. The AM 2 increased the permit area to the current 9.99 acres and provided an additional financial warranty for reclamation.

The site is bisected by Coon Track Creek, a tributary of Beaver Creek that joins with Middle Boulder Creek near its discharge at the Barker Meadows Reservoir. The mine currently manages discharges directly into Coon Track Creek under the Colorado Department of Public

Health and Environment, Water Quality Control Division ("WQCD") National Pollutant Discharge Elimination System ("NPDES") permit number CO-0032751.

III. PROCEDURAL BACKGROUND

A. The Division's Initial Preliminary DMO Determination and GIR's Response

On February 17, 2022, the Division issued a Notice of Designated Mining Operation Determination to GIR, as owner of the Cross Mine, which stated that the Division made a preliminary determination that the Cross Mine met the definition of a DMO as specified in Rule 1.1(20) of the Mineral Rules ("Division Letter"). Exhibit A. The Division Letter provided, in relevant part, that:

The Division's determination is based on the following:

The Cross Gold Mine discharges groundwater through the Cross Mine and the Idaho Tunnel portals. The Cross Gold Mine has historically treated groundwater before it is discharged to Coon Track Creek. The historic treatment has consisted of routing groundwater through a series of lined ponds and the addition of lime to the Cross Mine discharge. The discharge of treated wastewater is regulated by the Colorado Department of Public Health and Environment, Water Quality Control Division under CDPS Permit No. CO0032751.

On January 11, 2022, the Division conducted an inspection of the Cross Gold Mine and observed the new water treatment system. The system was brought online in December 2021 and consists of filtration and absorption water treatment technology. The Cross Gold Mine is required to treat water to prevent the discharge of heavy metals into the Coon Track Creek. Designated Mining Operations are those operations at which toxic or acid producing materials may be exposed or disturbed as a result of mining operations. Rule 1.1(1) defines acid and toxic producing materials as natural or reworked earth materials having acid or toxic chemical and physical characteristics that, under mining or post-mining conditions of drainage, exposure, or other processes, produce materials which contain detrimental amounts of chemical constituents such as acids, bases, or metallic compounds.

Exhibit A, p. 1.

Although the Division Letter stated that the Division had made a preliminary determination that the Cross Mine was a DMO, it did not cite to Rule 1.1(20) (the "DMO Rule")

or otherwise specifically identify which section of the Rules the Division relied on in making its preliminary DMO determination. The Division Letter also did not contain the information required by Rule 7.2.2(2). For instance, the Division Letter did not provide the factual basis to support its DMO determination by identifying, for example, what mining or post-mining conditions exist in connection with the Cross Mine that purportedly support the Division's DMO determination. *See* Rule 7.2.2(2) (requiring that the Division's notice be accompanied by, among other things, "factual statements including a review of the permit application, approved permit application, proposed or existing metallurgical process, known site geology or geochemistry, and the most recent site inspection").

Given the deficiencies with the Division Letter, GIR was left to infer from the Division's statement that because the "Cross Mine is required to treat water to prevent the discharge of heavy metals into the Coon Track Creek" (emphasis added), and that the Division cited to Rule 1.1(1), that the Division had concluded that the Cross Mine is an operation at which toxic or acid producing materials may be exposed or disturbed as a result of mining operations. On March 18, 2022, pursuant to Rule 7.2.4, GIR submitted to the Division GIR's appeal of the Division's DMO designation related to the Cross Mine ("Division Appeal"). Exhibit B.

B. The Division and GIR's Meeting Pursuant to Rule 7.2.4(1)(a)

On May 25, 2022, pursuant to Rule 7.2.4(1)(a), representatives from the Division and GIR met to discuss the Division's preliminary DMO determination and GIR's Division Appeal. Due to the deficiencies in the Division Letter, primarily related to the lack of factual basis to support the Division's DMO determination, the primary objective for GIR at this meeting was to learn the actual basis for the Division's preliminary determination.

During this meeting, the Division initially stated that its basis for the preliminary DMO determination was that the Cross Mine recently installed a new water treatment system to treat water discharge. GIR responded that while the Cross Mine was using a new water treatment system, the Cross Mine has historically treated water discharge through a different process and, as such, nothing had actually changed with respect to the fact that the water discharge was being treated. The Division acknowledged that GIR has historically treated water discharge at the mine. In fact, on March 1, 2022, as part of GIR's Technical Revision No. 10 ("TR-10"), the Division approved the new water treatment system that the Division is now apparently using as a basis to make its preliminary DMO designation. Notably, the Division's DMO designation blindsided GIR as the Division made no mention of this prior to February 16, 2022, during an informal phone call in which the Division notified the Cross Mine that it would be issuing a DMO determination for the mine, which was done the following day as part of the Division Letter. Exhibit C, ¶ 4 (July 12, 2022 Aff. of S. Muller). In fact, as the Board will likely recall, on January 19, 2022, the Division provided an update to the Board about the Cross Mine's progress in implementing its new water treatment system and never mentioned a possible DMO designation as a result of the implementation of that system. Such an omission just weeks before issuing the preliminary DMO designation suggests that the Division made its DMO designation for some reason other than it now claims.

Nevertheless, at GIR's meeting with the Division, the Division then stated that the basis for the preliminary DMO designation was actually the "degree" to which GIR was now treating the water discharge as part of its water treatment system. GIR responded by noting that the Rules related to DMO designation do not distinguish between water treatment and non-water treatment or the "degree" to which water discharge is treated, so GIR asked the Division for the legal basis

that the Division was relying on for making its preliminary DMO determination based on the alleged "degree" to which the water discharge was treated. The Division acknowledged that no such standard is found in the Rules, nor could the Division articulate what "degree" of water treatment would be acceptable to the Division such that a DMO designation would not be appropriate vs. the "degree" of water treatment that would put a mine over the Division's internal and undocumented threshold for such a designation.

GIR also pointed out to the Division that GIR is not aware of the Division applying the DMO Rule to mines simply because they treat water discharge. GIR noted, as the Division had admitted, that the Cross Mine historically treated water discharge for years and was not designated as a DMO. Further, GIR inquired of the Division whether it was the Division's position that the mere fact that a mine uses a water treatment process is sufficient to classify the mine as a DMO under the Rules, to which the Division denied that was its position, despite the fact that the basis the Division provided for its preliminary DMO determination of the Cross Mine was apparently for that very reason. GIR also asked the Division if it had examples of other mines that the Division had designated as a DMO simply because it treated water discharge (to any "degree"), but the Division would not provide a response to that inquiry.

GIR also told the Division that not only did it believe the DMO designation was improper, but that such a designation would be detrimental to GIR and the Cross Mine. GIR explained that GIR was continuing to work on its mine planning, which would be supplemented in part by the results of the ground water testing that is being conducted and will continue for the next 15 months. GIR further explained that it would be unduly harmed by the time and costs associated with the DMO application requirements, including the hiring of experts, GIR's personnel's time and attention, and the substantial costs associated with preparing the

Environmental Protection Plan. In the meantime, GIR's mining operations would be negatively impacted if the Division forces GIR to use its human and financial resources to comply with the DMO designation requirements instead of focusing on its mine exploration program and other mine development activities. The bottom line is that the DMO designation is premature and unwarranted based on the mine's current operations and such a DMO designation would create an unnecessary hardship.

C. The Division's Final DMO Determination

On June 13, 2022, the Division issued its Notice of Designation of Mining Operation – Final Determination, which provided notice to GIR of the Division's final determination that the Cross Mine "is a Designated Mining Operation as defined by Rule 1.1(20)." Exhibit D. This appeal follows.

IV. ARGUMENT

A. Legal Standard¹

Rule 1.1(20) states that a DMO "means a mining operation at which:²

- (a) designated chemicals used in metallurgical processing are present on-site; or
- (b) toxic or acid-forming materials may be exposed or disturbed as a result of mining operations; or
- (c) acid mine drainage occurs or has the potential to occur due to mining or reclamation activities; or
- (d) uranium is developed or extracted, either by in situ leach mining methods or by conventional underground or open mining techniques.

¹ The Division's decision is also governed by Colorado's Administrative Procedures Act which, among other things, mandates that agency decisions should not be arbitrary and capricious, an abuse or unwarranted exercise of discretion, unsupported by substantial evidence, or otherwise contrary to the law. *See* C.R.S. § 24-4-106(7)(b).

² C.R.S. § 34-32-103(3.5)(a) defines DMO under the Mined Land Reclamation Act and further examples of DMOs can be found at C.R.S. § 34-32-112.5.

- (e) The various types of Designated Mining Operations are identified in Section 34-32-112.5, C.R.S. 1984, as amended. Except as to uranium mining operations designated mining operations exclude operations that do not use toxic or acid chemicals in processing for purposes of extractive metallurgy and will not cause acid mine drainage. Any designated mining operation, including uranium designated mining operations, may seek exemptions from this status pursuant to Rule 7.
- (f)
 - (1) Metal mining operations, permitted under Section 34-32-110, C.R.S. 1984, as amended, which do not use or store designated chemicals, shall be excepted from the requirements applicable to Designated Mining Operations, unless they have a potential to produce acid or toxic mine drainage in quantities sufficient to adversely affect any person, property or environment. It shall be the burden of the Operator or Applicant to demonstrate to the satisfaction of the Office that such potential does not exist.
 - (2) The exception set forth in Rule 1.1(20)(f)(1) does not apply to Section 110 uranium mining operations. However, such operations may apply for an exemption from Designated Mining Operation status pursuant to the requirements and procedures set forth in Rule 7."

Rule 1.1(1) provides as follows:

"Acid and Toxic Producing Materials" means natural or reworked earth materials having acid or toxic chemicals and physical characteristics that, under mining or post-mining conditions of drainage, exposure, or other processes, produce materials which contain detrimental amounts of chemical constituents such as acids, bases, or metallic compounds.

B. Relevant Legislative History of the Mined Land Reclamation Act

The definition of acid or toxic forming materials was added to the Mined Land Reclamation Act ("MLRA") by S.B. 93-247. The bill was prompted by the disaster at the Summitville Mine where cyanide used to extract minerals was released into the Alamosa River. *Colorado Min. Ass'n v. Bd. of Cty. Comm'rs of Summit Cty.*, 199 P.3d 718, 727 (Colo. 2009). "[T]he purpose" of the 1993 amendments "was to ensure that mining operations utilizing toxic or acidic chemicals would receive increased regulatory oversight under the MLRA." *Id.* To achieve

that purpose, the amendments "vest[ed] the Board with the authority to authorize the use of toxic or acidic chemicals, including cyanide, for mineral extraction in mining operations, under heavily regulated conditions" and created a more heavily regulated category of mines ("designated mining operations"), which included "operations utilizing toxic or acidic chemicals, such as cyanide, for extractive metallurgical processing." *Id.* These amendments and the definitions of acid and toxic materials were specifically designed to address mining operations that use harmful chemicals to extract the target mineral from the surrounding rock or which produce, or have significant potential to produce, acid mine drainage, a primary mobilizer of metallics from host rocks.

The statute and the regulations underwent a second round of substantial amendments to address the increase in uranium mines that similarly used toxic chemicals to extract the uranium. H.B. 08-1161, 66th Gen. Assemb., Reg. Sess. (Colo. 2008); 2 CCR 407-1, Permanent Rule Docket No. 2010-00032 (Aug. 12, 2010). The sponsor of the bill, Senator Steven Johnson, explained that the "bill deals with in situ uranium mining technology," which is "not a technology that [the government] ha[s] a lot of experience with in the state of Colorado and that's why [the legislature] update[d] the regulations." Audio Colorado State Senate Proceeding at 2:30-2:33 & 3:05-3:11 (Apr. 20, 2008). The amendments in both the statute and the regulations specifically increased regulatory oversight over uranium in situ leach mining. *See* H.B. 08-1161 §§ 1, 3, 5, 66th Gen. Assemb., Reg. Sess. (Colo. 2008) (adding uranium mines to DMO categories and adding additional permit requirements for in situ leach mines); Statement of Basis, Specific Statutory Authority, and Purpose, 2 CCR 407-1, Permanent Rule Docket No. 2010-00032 (Aug. 12, 2010), at pp. 4-5 (explaining that the changes to the regulations were intended to "mirror" H.B. 08-1161's goal of "provid[ing] new requirements for uranium mining

operations"). As with the initial amendments in 1993, this more recent amendment to the MLRA was meant to address mines that use harmful chemicals to extract the target mineral from the surrounding rock.

C. Argument

1. The presence of a water treatment system is not evidence of Cross Mine's Activities "produc[ing] materials which contain detrimental amounts of chemical constituents such as acids, bases, or metallic compounds."

The modifications to GIR's water treatment system at the focus of the Division Letter were prompted in part by temporary exceedances and not changes in Cross Mine's operations. As set forth in the Findings of Fact, Conclusions of Law, and Order, Grand Island Resources LLC, File No. M-1977-4410, MV-2021-017, dated February 18, 2022 ("NOV Order"), it is undisputed that in February 2020, certain water outflow measurements exceeded GIR's WQCD water discharge permit standards, including elevated levels of zinc, cadmium, lead, copper and silver ("Exceedance Reports"). *See* Exhibit E, ¶¶ 14, 15 (NOV Order). It is also undisputed that the water quality issues that precipitated the exceedances under the discharge permit were the result of a collapse in the Idaho Tunnel (also known as the Caribou Mine). The collapse choked off water flow which was subsequently released during the rehabilitation process. *See id.* at ¶ 22. The tunnel collapse was a random occurrence, one that has not changed, nor will it change the mineral composition or physical characteristics of the Cross Mine. Significantly, as noted in the Division's Response to Citizen's Complaints, dated February 22, 2022, according to the Division's own analysis, there was "no evidence" that the exceedances "led to the degradation of surface and ground water resources," and all of the data, including the exceedances, "were below drinking water standards." Exhibit F. The mere existence of certain metals that were detected at a temporary exceedance level does not support a finding that they constitute "detrimental

amounts of chemical constituents such as acids, bases, or metallic compounds," and therefore, do not meet the standards in Rule 1.1(1).

Further, the Division approved the very water treatment process that it is now using as a basis to designate the Cross Mine as a DMO. As set forth in Permit Number M1977-410, TR-10, GIR provided a detailed plan of action, including current activities addressing the surface water quality, descriptions of the underground sumps installations and new water treatment pilot system, as well as the results of the current system compliance testing, and the Groundwater Monitoring Plan as required by the NOV Order. The Division approved the TR-10 and GIR has paid the increased reclamation bond required by the Division in connection with the water treatment system.

The fact that GIR continues to treat water discharged from the Cross Mine does not mean that its operations "produce materials which contain detrimental amounts of chemical constituents such as acids, bases, or metallic compounds." GIR's current water treatment system is specifically designed to maintain compliance with all applicable water quality standards, just as its prior process using on-site ponds and neutralizing additives was designed to do. The water samples collected since January 2022 have shown no exceedances above permitted water quality standards. Exhibit B, Aff. of S. Muller, ¶¶ 5-6.³

Moreover, considering the existence of a water treatment system as evidence supporting a DMO designation is an impermissible and impractical expansion of the regulations. If the Division considers any operator that utilizes a water discharge treatment system to comply with water standards, including the abatement or neutralization of certain metals or other materials

³ Mr. Muller provided an affidavit that was submitted to the Division in support of GIR's appeal of the Division's preliminary DMO determination, which is affixed to the end of Exhibit B (GIR's appeal of the Division's preliminary DMO determination).

that could be potentially detrimental to human or aquatic life, then virtually every mine in Colorado that has a water discharge treatment system would have to be designated as a DMO. As a result, there would be very few 110 permit holders and even fewer operators with exemptions to 112 permits. Clearly, that is not the intent of Rule 1.1(1), nor how the rule should be or has been applied.

As noted above, during GIR's meeting with the Division to discuss the Division's preliminary DMO determination, the Division refused to disclose whether there were mines that treat water that are not designated as DMOs. However, our own analysis of the Division's records revealed a number of 110 permitted mines in Colorado that have discharge settling ponds and other water treatment systems covered under their permits.⁴ *See Ohlson v. Weil*, 953 P.2d 939, 942 (Colo. App. 1997) (rejecting agency's current interpretation that was contrary to its prior actions). There have even been certain instances where the Division has even granted an exemption under 112 permits to uranium operators. There is nothing unique about the Cross Mine's water treatment system or the mine's operations that would justify treating it differently than other mines or even differently than its previous treatment.

GIR is compliant with its mining permit number M-1977-410 and with its water discharge permit number CO-0032751. There are no activities or conditions at the Cross Mine that warrant the need for any increased regulatory obligations. The Division's DMO determination amounts to an unwarranted penalty assessed against the Cross Mine as the mine does not meet the criteria for designation as a DMO under Section 34-32-112.5, Rule 1.1(1), or Rule 1.1(20).

⁴ For example, Walker Ruby Mining Company, Inc., owner/operator of Ruby Trust Mine, Permit No. M1979181 holds a 110 permit, had a water treatment process, was found to have exceeded the permit effluent discharge limitations, which included the limitations of copper discharge levels into the Sneffels Creek, and was not designated as a DMO.

- 2. There is no indication that "acid and toxic producing materials as natural or reworked earth materials having acid or toxic chemical and physical characteristics that, under mining or post-mining conditions of drainage, exposure, or other processes, produce materials which contain detrimental amounts of chemical constituents such as acids, bases, or metallic compounds" exist at the Cross Mine.**

GIR's current activities at the Cross Mine are focused on compliance with the NOV Order. There are no designated chemicals used in metallurgical processing stored on site, because no metallurgical processing occurs at the Cross Mine. The chemicals used or stored at the Cross Mine are those referenced in the Safety Data Sheets. Exhibit B, Aff. of S. Muller, ¶ 4.

The Cross Mine host rock is predominantly monzonite, a rock with high amounts of calcium that buffers any sulfides in the rock, and is a non-acid producing rock. The gold and silver occurs at the Cross Mine mostly with iron pyrite, and includes lead, zinc and copper sulfides with trace cadmium occurring with the zinc sulfides. Although the site contains some lead, zinc and copper sulfides and cadmium similar to the naturally occurring levels present in outcrops in the area, the definition of acid- or toxic- producing materials in Rule 1.1(1) relates solely to materials which contain detrimental amounts of chemical constituents such as acids, bases, or metallic compounds. There is no evidence that any such material exists at the Cross Mine that meets this definition.

Based on the well-documented surveys and analytical reports pertaining to the geology and ore deposits specific to the Grand Island District, of which the Cross Mine is a part, which have all been previously filed with the Division in connection with the Cross Mine's mining permit, there is no evidence of the development of acid mine drainage from workings, host rock, or waste rock at the Cross Mine. *See* Exhibit B, Aff. of S. Muller, ¶ 3. In support of GIR's AM 2, GIR provided the Division with various environmental reports and studies performed related

to the Cross Mine property, including an acid-base accounting that was performed in 1994 and 1995.

3. If the Board Agrees with the Division's Novel DMO Regulation Interpretation and Designation, then it Should Grant Cross Mine an Exemption.

In spite of all of the arguments set forth above, to the extent the Board is inclined to adopt the Division's interpretation and application of the DMO Rule and determination that the Cross Mine meets the criteria of a DMO, then the Board should exercise its authority pursuant to Rule 7.2.6(1) and C.R.S. § 34-32-112.5(2) and exempt the Cross Mine from the DMO requirements set forth in Rule 7. In relevant part, Rule 7.2.6(1) provides as follows:⁵

If an Operator or Applicant demonstrates to the satisfaction of the Office or the Board, at the time of applying for a permit, or at a subsequent hearing, or after notification given pursuant to Rule 7.2.2 of this Rule, that designated chemicals will not be stored or used on-site for extractive metallurgical processing, toxic or acid-forming materials will not be exposed or disturbed in quantities sufficient to adversely affect human health, property or the environment; and that acid mine drainage, as defined in Rule 1, will not occur as a result of mining operations, the Board shall exempt such existing operations from the requirements of this Rule 7, which Rule implements Section 34-32-116.5, C.R.S. 1984, as amended.

An exemption to the DMO Rule is warranted, because the Cross Mine's new water treatment system sufficiently prevents the exposure of any toxic materials in quantities that would adversely affect human health, property or the environment.⁶ As set forth above, the new water treatment system has been operational for approximately eight months. Regular water testing has been performed since that time to ensure that the water treatment process is working to prevent any possible toxic materials from being discharged from the mine. Water tests over

⁵ C.R.S. §34-32-112.5 contains similar language ~~as~~ to Rule 7.2.6(1) with regard to exemptions from DMO requirements.

⁶ There is also no acid mine drainage as a result of the operations. Exhibit B, Aff. of S. Muller, ¶ 3.

the last three months have all been within the permitted water discharge standards, demonstrating the water treatment system's effectiveness. Exhibit C, ¶ 3 (July 12, 2022 Aff. of S. Muller).

As discussed above, the Cross Mine, like many other gold and silver mines in Colorado, historically treated water through a filtration process using on-site retention ponds. To GIR's knowledge, the Division has not treated any of those mines as a DMO, including the Cross Mine, likely because that is not the intent behind the DMO Rule and the mines were able to manage the water treatment process to ensure that although toxic materials that were present at the mine (such as the very metals that were being mined) would not be discharged in quantities sufficient to adversely affect human health, property or the environment. Now that the Cross Mine's new water treatment system is calibrated and working effectively, the Cross Mine is for all intents and purposes in the same position it was in prior to the installation of the new water treatment system when it was effectively treating water through the use of its on-site retention ponds. The Cross Mine, like other mines that use on-site ponds to treat water, was not a DMO then and there is no reason for it to be a DMO now, simply because the Cross Mine installed a better and more sophisticated water treatment system to ensure the safety of humans and the environment. As such, the Board should exempt the Cross Mine from the DMO requirements of Rule 7.

V. CONCLUSION

GIR has sufficiently demonstrated that the Cross Mine is not a DMO and the Division's interpretation and application of the DMO Rule to the Cross Mine individually and as compared to other mines that treat water discharge is arbitrary and capricious or otherwise contrary to the Rules and law. As such, GIR respectfully requests that the Board find that the Cross Mine is not a DMO and reverse the Division's June 13, 2022 final determination that the Cross Mine is a DMO. In the alternative, to the extent the Board is inclined to adopt the Division's interpretation

and application of the DMO Rule, then the Board should grant the Cross Mine an exemption pursuant to Rule 7.2.6.

Dated: July 13, 2022

/s/ Robert E. Botts, Jr.

Robert E. Botts, Jr., Atty. Reg. No.21317

Zane Gilmer, Atty. Reg. No.41602

STINSON LLP

1144 Fifteenth Street, Suite 2400

Denver, CO 80202

Telephone: 303.500.7190

robert.botts@stinson.com

zane.gilmer@stinson.com

CERTIFICATE OF SERVICE

I hereby certify that on July 13, 2022, a true and correct copy of the foregoing was submitted via electronic mail and Federal Express to the Mined Land Reclamation Board and other such recipients as designated below:

Camille Mojar
Board Secretary
Mined Land Reclamation Board
Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, CO 80203
Telephone: 303.866.3567, ex. 8136
camille.mojar@state.co.us

Scott Schultz
Senior Assistant Attorney General
Colorado Dept. of Law
Natural Resources & Environment Section
Ralph L. Carr Colorado Judicial Center
1300 Broadway, 7th Floor
Denver, CO 80203
Telephone: 720.508.6256
scott.schultz@coag.gov

/s/ Robert E. Botts, Jr.
Robert E. Botts, Jr., Atty. Reg. No.21317

Exhibit A

February 17, 2022

Daniel Takami
Grand Island Resources LLC
12567 West Cedar Dr.
Lakewood, CO 80228

**RE: Cross Gold Mine, Permit No. M-1977-410
Notice of Designated Mining Operation Determination**

Mr. Takami:

Based on a review of the operational conditions at the Cross Gold Mine, the Division of Reclamation, Mining and Safety (Division) has determined, under criteria specified in Rule 1.1(20) of the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for Hard Rock, Metal, and Designated Mining Operations (Rules), that the Cross Gold Mine meets the definition of a “Designated Mining Operation” (DMO). Under the authority of Rule 7.2.2, the Division hereby notifies Grand Island Resources, LLC that the determination has been made, effective on the date of this notice, that the Cross Gold Mine is a Designated Mining Operation.

The Division’s determination is based on the following:

The Cross Gold Mine discharges groundwater through the Cross Mine and the Idaho Tunnel portals. The Cross Gold Mine has historically treated groundwater before it is discharged to Coon Track Creek. The historic treatment has consisted of routing groundwater through a series of lined ponds and the addition of lime to the Cross Mine discharge. The discharge of treated wastewater is regulated by the Colorado Department of Public Health and Environment, Water Quality Control Division under CDPS Permit No. CO0032751.

On January 11, 2022, the Division conducted an inspection of the Cross Gold Mine and observed a new water treatment system. The system was brought online in December of 2021 and consists of filtration and adsorption water treatment technology. The Cross Gold Mine is required to treat water to prevent the discharge of heavy metals into Coon Track Creek. Designated Mining Operations are those operations at which toxic or acid producing materials may be exposed or disturbed as a result of mining operations. Rule 1.1(1) defines acid and toxic producing materials as natural or reworked earth materials having acid or toxic chemical and physical characteristics that, under mining or post-mining conditions of drainage, exposure, or other processes, produce materials which contain detrimental amounts of chemical constituents such as acids, bases, or metallic compounds.



The obligations and requirements of a site assigned with DMO status are described in Rules 6.4, 7, and 8, a copy of which may be downloaded from the Division's website at: <https://drms.colorado.gov/>.

If the Operator agrees with this determination, then you are required to notify the Division by mail of your concurrence within 30 days of the date of this notice, by **March 19, 2022**, and proceed to comply with the requirements of Subsections (2) and (3) of Rule 7.2.3. If the Operator disagrees with the Division's determination, then you may appeal this notice in writing to the Division within 30 days of the date of this notice. Rule 7.2.4 describes the procedures that the Operator shall follow for disputing the determination.

Pursuant to Rule 7.2.2(1), the Division will post notice of this determination to the next regular monthly agenda of the Mined Land Reclamation Board.

If you have any questions, you may contact me by telephone at 303-866-3567, ext. 8129, or by email at amy.eschberger@state.co.us.

Sincerely,

A handwritten signature in blue ink that reads "Amy Eschberger".

Amy Eschberger
Environmental Protection Specialist

Cc: Daniel Pollock, Grand Island Resources LLC
Richard Mittasch, Grand Island Resources LLC
Michael Cunningham, DRMS
Russ Means, DRMS
Scott Schultz, DRMS counsel, AGO

Exhibit B

March 18, 2022

Via Electronic Mail to: amy.eschberger@state.co.us

Ms. Amy Eschberger
Environmental Protection Specialist
Colorado Division of Reclamation, Mining and Safety
1001 E 62nd Avenue, Room 215
Denver, CO 80216

Re: Cross Gold Mine, Permit No. M-1977-410, Preliminary Designated Mining Operation Determination

Grand Island Resources, LLC's Appeal of the Division's DMO Determination

In response to your letter dated February 17, 2022 ("Division Letter"), and pursuant to Rule 7.2.4 of the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board, as amended in April 1994 ("Mineral Rules"), Grand Island Resources, LLC ("GIR"), the owner of the Cross Gold Mine (referred to herein as the "Cross Mine"), through its representative Stinson LLP, hereby submits its appeal of the Division of Reclamation, Mining and Safety's (the "Division") determination that the Cross Mine meets the definition of a "Designated Mining Operation" ("DMO").

Description of the Cross Mine

The Cross Mine site is located approximately four miles northwest of Nederland, Colorado adjacent to Roosevelt National Forest, at an elevation of approximately 9,700 feet above mean sea level (MSL). The property is an existing hard rock mining operation owned by GIR and at present, no active mining is being conducted. The mine permit number M-1977-410 was last revised through Amendment No. 2, dated January 6, 2022 ("AM 2") and approved by the Division on February 8, 2022. The AM 2 increased the permit area to the current 9.99 acres and provided an additional financial warranty for reclamation.

The site is bisected by Coon Track Creek, a tributary of Beaver Creek that joins with Middle Boulder Creek near its discharge at the Barker Meadows Reservoir. The mine currently manages discharges directly into Coon Track Creek under the Colorado Department of Public Health and Environment, Water Quality Control Division ("WQCD") National Pollutant Discharge Elimination System ("NPDES") permit number CO-0032751.

Summary of Arguments

1. The Division Letter does not specify the basis for designating the Cross Mine as a DMO, but instead simply cites Rule 1.1(1).

2. The Cross Mine operation does not meet the criteria for designation as a DMO under Section 34-32-112.5, CRS 1984, as amended, or Rule 1.1(1), or Rule 1.1(20).
3. The current activities carried out at the Cross Mine ensure that no toxic or acid forming materials are exposed or disturbed in quantities sufficient to adversely affect human health, property or the environment.
4. The geologic makeup of the Cross Mine precludes the mine from being or becoming an acid mine.

The Division's DMO Determination

The Division Letter provides, in relevant part that:

On January 11, 2022, the Division conducted an inspection of the Cross Gold Mine and observed the new water treatment system. The system was brought online in December 2021 and consists of filtration and absorption water treatment technology. The Cross Gold Mine is required to treat water to prevent the discharge of heavy metals into the Coon Track Creek. Designated Mining Operations are those operations at which toxic or acid producing materials may be exposed or disturbed as a result of mining operations. Rule 1.1(1) defines acid and toxic producing materials as natural or reworked earth materials having acid or toxic chemical and physical characteristics that, under mining or post-mining conditions of drainage, exposure, or other processes, produce materials which contain detrimental amounts of chemical constituents such as acids, bases, or metallic compounds.

Standard for Designation of a DMO

Rule 1.1(20) states that a DMO "means a mining operation at which:

- (a) designated chemicals used in metallurgical processing are present on-site; or
- (b) toxic or acid-forming materials may be exposed or disturbed as a result of mining operations; or
- (c) acid mine drainage occurs or has the potential to occur due to mining or reclamation activities; or
- (d) uranium is developed or extracted, either by in situ leach mining methods or by conventional underground or open mining techniques.
- (e) The various types of Designated Mining Operations are identified in Section 34-32-112.5, C.R.S. 1984, as amended. Except as to uranium mining operations designated mining operations exclude operations that do not use toxic or acid chemicals in processing for purposes of extractive metallurgy

and will not cause acid mine drainage. Any designated mining operation, including uranium designated mining operations, may seek exemptions from this status pursuant to Rule 7.

- (f) (1) Metal mining operations, permitted under Section 34-32-110, C.R.S. 1984, as amended, which do not use or store designated chemicals, shall be excepted from the requirements applicable to Designated Mining Operations, unless they have a potential to produce acid or toxic mine drainage in quantities sufficient to adversely affect any person, property or environment. It shall be the burden of the Operator or Applicant to demonstrate to the satisfaction of the Office that such potential does not exist.
- (2) The exception set forth in Rule 1.1(20)(f)(1) does not apply to Section 110 uranium mining operations. However, such operations may apply for an exemption from Designated Mining Operation status pursuant to the requirements and procedures set forth in Rule 7."

The Division Letter does not reference this Rule or specifically identify which section of the Rule the Division relied on in making its DMO determination. The Division Letter also does not contain the information required by Rule 7.2.2(2). For instance, the Division Letter does not provide the factual basis to support its DMO determination by identifying, for example, what mining or post-mining conditions exist in connection with the Cross Mine that purportedly support the Division's DMO determination. *See* Rule 7.2.2(2) (requiring that the Division's notice be accompanied by, among other things, "factual statements including a review of the permit application, approved permit application, proposed or existing metallurgical process, known site geology or geochemistry, and the most recent site inspection").

GIR can only infer from the Division's statement that because the "Cross Mine is required to treat water to prevent the discharge of heavy metals into the Coon Track Creek" (emphasis added), and that the Division cited to Rule 1.1(1), the Division has concluded that the Cross Mine is an operation at which toxic or acid producing materials may be exposed or disturbed as a result of mining operations.

Rule 1.1(1) provides as follows:

"Acid and Toxic Producing Materials" means natural or reworked earth materials having acid or toxic chemicals and physical characteristics that, under mining or post-mining conditions of drainage, exposure, or other processes, produce materials which contain detrimental amounts of chemical constituents such as acids, bases, or metallic compounds.

For the reasons set forth below, the Division's conclusion that Cross Mine is a DMO is inconsistent with the facts and is a misapplication of Rules 1.1(1) and 1.1(20).

Legal Background Regarding Rule 1.1

The definition of acid or toxic forming materials was added to the Mined Land Reclamation Act ("MLRA") by S.B. 93-247. The bill was prompted by the disaster at the Summitville Mine where cyanide used to extract minerals was released into the Alamosa River. *Colorado Min. Ass'n v. Bd. of Cty. Comm'rs of Summit Cty.*, 199 P.3d 718, 727 (Colo. 2009). "[T]he purpose" of the 1993 amendments "was to ensure that mining operations utilizing toxic or acidic chemicals would receive increased regulatory oversight under the MLRA." *Id.* To achieve that purpose, the amendments "vest[ed] the Board with the authority to authorize the use of toxic or acidic chemicals, including cyanide, for mineral extraction in mining operations, under heavily regulated conditions" and created a more heavily regulated category of mines ("designated mining operations"), which included "operations utilizing toxic or acidic chemicals, such as cyanide, for extractive metallurgical processing." *Id.* These amendments and the definitions of acid and toxic materials were specifically designed to address mining operations that use harmful chemicals to extract the target mineral from the surrounding rock or which produce, or have significant potential to produce, acid mine drainage, a primary mobilizer of metallics from host rocks.

The statute and the regulations underwent a second round of substantial amendments to address the increase in uranium mines that similarly used toxic chemicals to extract the uranium. H.B. 08-1161, 66th Gen. Assemb., Reg. Sess. (Colo. 2008); 2 CCR 407-1, Permanent Rule Docket No. 2010-00032 (Aug. 12, 2010). The sponsor of the bill, Senator Steven Johnson, explained that the "bill deals with in situ uranium mining technology," which is "not a technology that [the government] ha[s] a lot of experience with in the state of Colorado and that's why [the legislature] update[d] the regulations." Audio Colorado State Senate Proceeding at 2:30-2:33 & 3:05-3:11 (Apr. 20, 2008). The amendments in both the statute and the regulations specifically increased regulatory oversight over uranium in situ leach mining. *See* H.B. 08-1161 §§ 1, 3, 5, 66th Gen. Assemb., Reg. Sess. (Colo. 2008) (adding uranium mines to DMO categories and adding additional permit requirements for in situ leach mines); Statement of Basis, Specific Statutory Authority, and Purpose, 2 CCR 407-1, Permanent Rule Docket No. 2010-00032 (Aug. 12, 2010), at pp. 4-5 (explaining that the changes to the regulations were intended to "mirror" H.B. 08-1161's goal of "provid[ing] new requirements for uranium mining operations"). As with the initial amendments in 1993, this more recent amendment to the MLRA was meant to address mines that use harmful chemicals to extract the target mineral from the surrounding rock.

Analysis

The presence of a water treatment system is not evidence of Cross Mine's Activities "produc[ing] materials which contain detrimental amounts of chemical constituents such as acids, bases, or metallic compounds."

The modifications to GIR's water treatment system at the focus of the Division's Letter were prompted in part by temporary exceedances and not changes in Cross Mine's operations. As set forth in the Findings of Fact, Conclusions of Law, and Order, Grand Island Resources LLC, File No. M-1977-4410, MV-2021-017, dated February 18, 2022 ("NOV Order"), it is undisputed that in February 2020, certain water outflow measurements exceeded GIR's WQCD water discharge permit standards, including elevated levels of zinc, cadmium, lead, copper and silver ("Exceedance Reports"). *See* NOV Order, ¶¶ 14, 15. It is also undisputed that the water quality issues that precipitated the exceedances under the discharge permit were the result of a collapse in the Idaho Tunnel (also known as the Caribou Mine). The collapse choked off water flow which was subsequently released during the rehabilitation process. *See id.* at ¶ 22. The tunnel collapse was a random occurrence, one that has not changed, nor will it change the mineral composition or physical characteristics of the Cross Mine. Significantly, as noted in the Division's Response to Citizen's Complaints, dated February 22, 2022, according to the Division's own analysis, there was "no evidence" that the exceedances "led to the degradation of surface and ground water resources," and all of the data, including the exceedances, "were below drinking water standards."

The mere existence of certain metals that were detected at a temporary exceedance level does not support a finding that they constitute "detrimental amounts of chemical constituents such as acids, bases, or metallic compounds," and therefore, do not meet the standards in Rule 1.1(1).

GIR clearly recognizes the significance of any exceedances under its discharge permit, even a random event-caused temporary exceedance, which is the case here. GIR also understands that each and every stakeholder has a legitimate interest in ensuring that operators are compliant with the State's water quality standards. GIR considers itself to be a stakeholder and endeavors to ensure that compliance with water quality standards is its highest priority.

As set forth in GIR's Cross Mine, Permit number M1977-410, Technical Revision 10, submitted on March 1, 2022 ("TR 10"), GIR provided a detailed plan of action, including current activities addressing the surface water quality, descriptions of the underground sumps installations and new water treatment pilot system, as well as the results of the current system compliance testing, and the Groundwater Monitoring Plan as required by the NOV Order.

The fact that GIR continues to treat water discharged from the Cross Mine does not mean that its operations "produce materials which contain detrimental amounts of chemical constituents such as acids, bases, or metallic compounds." GIR's current water treatment system is specifically

designed to maintain compliance with all applicable water quality standards. The water samples collected since January 2022 have shown no exceedances above permitted water quality standards. *See* Affidavit of Sean Muller, ¶¶ 5-6.

Moreover, considering the existence of a water treatment system as evidence supporting a DMO designation is an impermissible and impractical expansion of the regulations. If the Division considers any operator that utilizes a water discharge treatment system to comply with water standards, including the abatement or neutralization of certain metals or other materials that could be potentially detrimental to human or aquatic life, then virtually every mine in Colorado that has a water discharge treatment system would have to be designated as a DMO. As a result, there would be very few 110 permit holders and even fewer operators with exemptions to 112 permits. Clearly, that is not the intent of Rule 1.1(1), nor how the rule should or has been applied. Our analysis of the Division's records showed a substantial number of 110 permitted mines in Colorado, including other gold and silver mines, that have discharge settling ponds and other water treatment systems covered under their permits. There have been certain instances where the Division has even granted an exemption under 112 permits to uranium operators. There is nothing unique about the Cross Mine's water treatment system or the mine's operations that would justify treating it differently than other mines.

GIR is compliant with its mining permit number M-1977-410 and with its water discharge permit number CO-0032751. There are no activities or conditions at the Cross Mine that warrant the need for any increased regulatory oversight. The Division's DMO determination amounts to an unwarranted penalty assessed against the Cross Mine as the mine does not meet the criteria for designation as a DMO under Section 34-32-112.5, Rule 1.1(1), or Rule 1.1(20).

There is no indication that "acid and toxic producing materials as natural or reworked earth materials having acid or toxic chemical and physical characteristics that, under mining or post-mining conditions of drainage, exposure, or other processes, produce materials which contain detrimental amounts of chemical constituents such as acids, bases, or metallic compounds" exist at the Cross Mine.

GIR's current activities at the Cross Mine are focused on compliance with the NOV Order. There are no designated chemicals used in metallurgical processing stored on site, because no metallurgical processing occurs at the Cross Mine. The chemicals used or stored at the Cross Mine are those referenced in Safety Data Sheets. *See* Affidavit of Sean Muller, ¶ 4.

The Cross Mine host rock is predominantly monzonite, a rock with high amounts of calcium that buffers any sulfides in the rock, and is a non-acid producing rock. The gold and silver occurs in the Cross Mine mostly with iron pyrite, and includes lead, zinc and copper sulfides with trace cadmium occurring with the zinc sulfides. Although the site contains some lead, zinc and copper sulfides and cadmium similar to the naturally occurring levels present in outcrops in the area, the

definition of acid– or toxic– producing materials in Rule 1.1(1) relates solely to materials which contain detrimental amounts of chemical constituents such as acids, bases, or metallic compounds. There is no evidence that any such material exists at the Cross Mine that meets this definition.

Based on the well-documented surveys and analytical reports pertaining the geology and ore deposits specific to the Grand Island District, of which the Cross Mine is a part, there is no evidence of the development of acid mine drainage from workings, host rock, or waste rock at the Cross Mine. *See* Affidavit of Sean Muller, ¶ 3; *see also*, Core Laboratories and USGS reports referenced below.

In support of GIR's AM 2, GIR provided the Division with various environmental reports and studies performed related to the Cross Mine property, including an acid-base accounting that was performed in 1994 and 1995. For ease of reference, GIR is submitting herewith a copy of the reports referenced below in Appendix A, which contain information in support of GIR's appeal.

The discussion above comparing the Cross Mine operation against the criteria for DMO designation indicates that the Cross Mine should not be designated as a DMO, but should instead maintain its 110(2) permit status.

Pursuant to Rule 7.2.4, GIR disputes the Division's pending designation of Cross Mine as a DMO. We request that the Division reverse its pending designation as we have demonstrated there is an insufficient factual basis for designating the Cross Mine as a DMO.

Dated: March 18, 2022

/s/ Robert E. Botts, Jr.

Robert E. Botts, Jr., #21317

Zane Gilmer, #41602

STINSON LLP

1144 Fifteenth Street, Suite 2400

Denver, CO 80202

Telephone: 303.500.7190

robert.botts@stinson.com

zane.gilmer@stinson.com

Appendix A

List of Environmental Reports and Studies:

1. Core Laboratories Analytical Report, dated October 20, 1994
2. Core Laboratories Analytical Report, dated November 10, 1994
3. Core Laboratories Analytical Report, dated November 30, 1994
4. Core Laboratories Analytical Report, dated January 12, 1995
5. Core Laboratories Analytical Report, dated January 27, 1995
6. Core Laboratories Analytical Report, dated March 9, 1995
7. Core Laboratories Analytical Report, dated March 24, 1995
8. Preliminary Environmental Due Diligence of Calais Resource Consolidated Caribou Mining District, by Knight Piésold Consulting, dated December 14, 2004
9. State of the Watershed: Water Quality of Boulder Creek, Colorado, by Sheila F Murphy, 2006
10. Science of the Total Environment, 743 (2020) 140635, Wildfire-driven change in hydrology mobilize arsenic and metals from legacy mine waste, by Sheila F. Murphy, et al.
11. Special Use Review Application and Addendum, Cross Mine Expansion, Boulder County, Colorado, prepared by Walsh Environmental Scientists and Engineers, LLC, reproduced July 2008
12. "Geology and Ore Deposits of the Front Range Colorado" USGS Professional Paper 223, Lovering and Goddard (1950), pp. 197-202.

RE: CROSS GOLD MINE, PERMIT NO. M-1977-410, PRELIMINARY DESIGNATED MINING OPERATION DETERMINATION

STATE OF COLORADO)
) SS.
COUNTY OF BOULDER)

1. My name is Sean Muller. I am the Geology Manager for Grand Island Resources, LLC. My experience at the Cross Mine goes back to 2010 when I worked with the previous mine owner, Tom Hendricks.
2. I have a Bachelors in Earth Science/Biology and a Masters in Economic Geology. I started my PhD in Mining Engineering in 2010 at the Colorado School of Mines with a thesis topic at the mine. I have 49 years of mining and environmental experience starting my career in metallurgy then moving into exploration, operations and environmental characterization plus remedial design. During the 1990s when the metals market crashed, I worked in aqueous phase geochemistry for characterizing the Superfund cleanup of about 20 Anaconda mines, mills, and smelters. This diverse technical expertise gives me a full understanding of the processes and potential impacts of mining and future reclamation.
3. Effluent discharge from the Cross and Caribou mines has occurred since the 1870s and there are perhaps 30 legacy mines in the Coon Track Creek drainage where there is no evidence of acid mine drainage (AMD). Significant is the fact that through this 150 years, waste rock piles around these legacy mines have had no AMD seepage. The reason for this is explained in the Acid Base Accounting tests conducted on ore and evaluated in a TCLP generated leachate in 1994 and 1995. These tests were conducted after the Designated Mining Operation (DMO) rule came into effect. At that time, DNR asked all of the mining companies to prove they are not a DMO. In 1995, DNR after reviewing the analytical testing provided by Core Laboratories, concluded that the ore and leachate had no indication of being acid generating. Monzonite is the host rock for the sulfide veins and it has a very high neutralization potential. Even sulfide-laden waste rock at these legacy mines are non-acid generating.
4. A comprehensive file of all chemicals stored or used at the permitted mine site is maintained in the Cross-Caribou Mine's records labeled "Safety Data Sheets. No

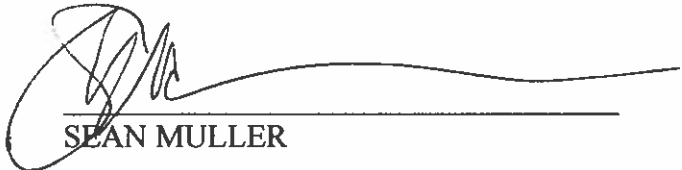


designated chemicals sufficient for processing ore exist on the site as no milling occurs. There is one pallet of hydrated lime used prior to 2021 for dropping out metals and dissolved solids in the effluent coming from the portals. The only acids on site are one gallon of sulfuric acid used for recharging batteries and approximately one liter of dilute hydrochloric acid used by the geologists for identifying carbonate rocks.

5. Effluent discharge exceedances that occurred during the rehabilitation of the collapsed portal at the Idaho Tunnel have been mitigated by the treatment system installed at the end December 2021. This treatment system was designed by Environmental Solutions in conjunction with Graver Engineers. Black Fox Mining Consultants are monitoring sampling in an audit capacity for independent reporting to CDPHE. This treatment system is designed to eliminate total suspended solids (TSS) through filtration to 5 micron and total dissolved solids (TDS) removal by a cation adsorption media known as Metsorb. These respective analytical certificates have been provided to CDPHE to ascertain the success of the treatment system. Additionally, samples collected for a more comprehensive analytical suite per compliance reporting have had no exceedances to the metals limitations established in the NPDES permit from January 2022 through February 2022. Compliance samples for the first half of March have been collected and we are awaiting lab results. Additionally, wet samples for testing of the flathead minnow and daphnia are undergoing quarterly testing at this time. With no exceedances during the last eight weeks (re: weekly treatment system validation) for metals we are confident that the March 2022 sampling results will follow suit.
6. Effectually, discharge waters into Coon Track Creek meet the aquatic criteria in the NPDES permit. Post-mining reclamation will include sealing the portals from future discharge. With the lack of dissolution of the sulfides due to the high buffering capacity of the monzonitic host rock, future treatment post-reclamation will not be necessary.

I state under penalty of perjury that the facts set forth above are true and correct.

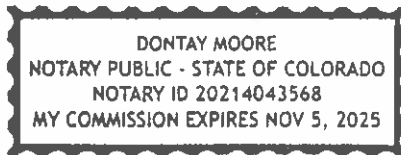
Further Affiant sayeth naught.




SEAN MULLER

STATE OF COLORADO)
) SS.
COUNTY OF Boulder)

On this 18 day of March, 2022, before me, the undersigned Notary Public, personally appeared Sean Muller, proved to me through satisfactory evidence of identification, which was Colorado Wyoming DL, to be the person whose name is signed on the preceding document who swore or affirmed to me that the contents of the document are truthful and accurate to the best of their knowledge and belief.





Notary Public

My Commission expires: Nov 5, 2025

A handwritten signature or mark, possibly initials, located at the bottom right of the page.

BEFORE THE DIVISION OF RECLAMATION, MINING AND SAFETY
STATE OF COLORADO

RE: CROSS GOLD MINE, PERMIT NO. M-1977-410, PRELIMINARY DESIGNATED MINE
OPERATION DETERMINATION

AFFIDAVIT IN SUPPORT OF GRAND ISLAND RESOURCE'S APPEAL

STATE OF COLORADO)
) SS.
COUNTY OF Boulder)

I, Don McCoy, being over the age of eighteen, being first duly sworn on oath, states as follows:

1. My name is Donald Jack McCoy, Jr, and I have worked as the Health and Safety Manager for Cross-Caribou Mine for more than six months, and I have worked in the mining industry for over forty-five years.
2. The Cross-Caribou Mine's records labeled "Safety Data Sheets" represent the chemicals utilized or stored on-site.
3. Regarding alkaline material, we have one pallet of lime previously used for water treatment, a process that was halted in 2021; one gallon of sulfuric acid for recharging batteries; and less than a liter of dilute hydrochloric acid utilized by the geologist for identifying carbonate rocks. All are properly stored and none are used in processing ore or water treatment.

I state under penalty of perjury that the facts set forth above are true and correct.

Further Affiant sayeth naught.


DONALD JACK MCCOY, JR.

STATE OF COLORADO)
) SS.
COUNTY OF Boulder)

On this 19 day of MARCH, 2022, before me, the undersigned Notary Public, personally appeared Donald Jack McCoy Jr, proved to me through satisfactory evidence of identification, which was Colorado Driver License to be the person whose name is signed on the preceding document who swore or affirmed to me that the contents of the document are truthful and accurate to the best of their knowledge and belief.

JOSHUA MARTIN HARROD
NOTARY PUBLIC - STATE OF COLORADO
Notary ID 20224002827
My Commission Expires 1/20/2026


Notary Public

My Commission expires: 01/20/2026

Exhibit C

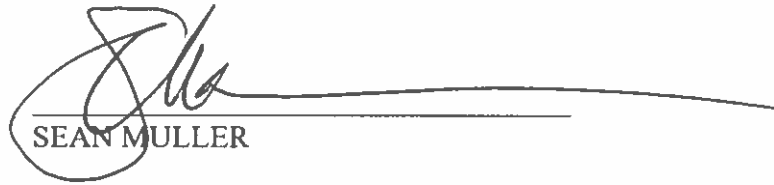
IN THE MATTER OF GRAND ISLAND RESOURCES, LLC'S APPEAL OF DIVISION'S
FINAL DETERMINATION OF DESIGNATED MINING OPERATION STATUS FOR THE
CROSS GOLD MINE, PERMIT NO. M-1977-410

STATE OF COLORADO)
) SS.
COUNTY OF BOULDER)

1. My name is Sean Müller. I am the Geology Manager for Grand Island Resources, LLC ("GIR"). My job responsibilities for GIR include exploration; resource estimation; ore grade control during operations; and hydrogeological characterization.
2. The Cross Gold Mine ("Cross Mine") installed a new water treatment system in December 2021. GIR personnel worked diligently to install and calibrate the water treatment system, which began in the winter 2021 and continued into spring 2022.
3. Since the installation of the new water treatment system, GIR has conducted formal water testing twice per month to ensure compliance with water quality standards in the CDPHE discharge permit. Of those sampling events over the course of the last six months, only one test revealed a potential exceedance for unknown reasons. Water testing results over the last three months have all been within the permitted water discharge standards.
4. The Division of Reclamation, Mining and Safety ("Division") was made aware of GIR's plan for, and installation of, the new water treatment system prior to its installation. At no point during this time did the Division indicate that the implementation of a new water treatment system would result in the Division designating the Cross Mine a Designated Mining Operation ("DMO"), nor did the Division express any concern about the degree to which the Cross Mine was treating water prior to discharge as part of the new water treatment system. In fact, it was not until February 16, 2022, that Richard Mittasch received a phone call from Amy Eschberger that the Division was going to apply a DMO designation to the Cross Mine. The following day, on February 17, 2022, the Division issued a Notice of Designated Mining Operation Determination, establishing the Division's preliminary DMO determination for the Cross Mine.
5. In March 2022, the Cross Mine submitted its Technical Revision No. 10 ("TR-10") related to the new water treatment system, which the Division approved.

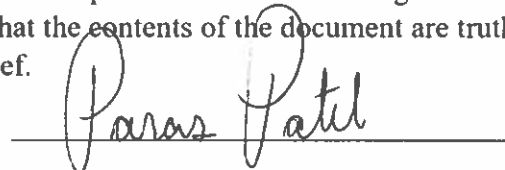
I state under penalty of perjury that the facts set forth above are true and correct.

Further Affiant sayeth naught.


SEAN MULLER

STATE OF COLORADO)
) SS.
COUNTY OF Boulder)

On this 12 day of July, 2022, before me, the undersigned Notary Public, personally appeared Sean Muller, proved to me through satisfactory evidence of identification, which was Driver License, to be the person whose name is signed on the preceding document who swore or affirmed to me that the contents of the document are truthful and accurate to the best of their knowledge and belief.


Notary Public

My Commission expires: June 4, 2025

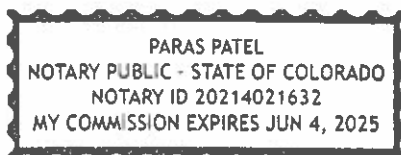


Exhibit D



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

June 13, 2022

Daniel Takami
Grand Island Resources LLC
12567 West Cedar Dr.
Lakewood, CO 80228

RE: Cross Gold Mine, Permit No. M-1977-410
Notice of Designated Mining Operation - Final Determination

Mr. Takami:

On February 17, 2022, the Division of Reclamation, Mining and Safety (Division) sent you a Notice of Designated Mining Operation Determination letter in accordance with Rule 7.2.2 of the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for Hard Rock, Metal and Designated Mining Operations (Rules). On March 18, 2022, the Division received a response letter from Grand Island Resources (GIR or Operator) stating that the Operator disagreed with the Division's determination that the Cross Gold Mine is a Designated Mining Operation.

As required by Rule 7.2.4(1)(a), the Division and the Operator held a meeting on May 25, 2022 to discuss the pending designation. In making its final determination, the Division took into consideration both the information the Operator provided in the March 18th letter, as well as the information the Operator and their counsel provided during the May 25th meeting. The Division has determined the Operator has not satisfactorily demonstrated that the Cross Gold Mine is not a Designated Mining Operation. Therefore, this letter serves as the Division's final determination that the Cross Gold Mine is a Designated Mining Operation as defined by Rule 1.1(20).

Pursuant to Rule 7.2.4(1)(b), the Operator may appeal the Division's determination to the Board within 30 days of the date of this letter.

If you have any questions, you may contact me at (303) 866-3567 ext. 8116.

Sincerely,

Senior Environmental Protection Specialist

EC: Richard Mittasch, Grand Island Resources LLC
Robert E. Botts, Jr., STINSON LLP
Russ Means, DRMS
Amy Eschberger, DRMS
Scott Schultz, AGO



Exhibit E



COLORADO

**Division of Reclamation,
Mining and Safety**

Department of Natural Resources

February 18, 2022

Attn: Richard Mittasch
Grand Island Resources LLC
P.O. Box 3395
4415 Caribou Rd
Nederland, CO 80466

Re: Findings of Fact, Conclusions of Law, and Order, Grand Island Resources LLC
File No. M-1977-410, MV-2021-017

On February 18, 2022 the Mined Land Reclamation Board signed the enclosed Board Order for the above captioned operation. Because this document is the final order of the Board, it is legally binding on and affects the above-captioned operation, and we strongly advise that you read this document carefully.

Sincerely,


Camille Mojar
Board Administrator

Enclosure(s)

Certified Mail

7018 2290 0001 8923 1007

cc:

Amy Eschberger
Michael Cunningham
Jeff Fugate
Scott Schultz
Charles Kooyman
John Henderson, Esq.
Daniel Takami
Ed Byrne, Esq.
Gabe Racz, Esq.
Patrick Delaney
Greg Miller



BEFORE THE MINED LAND RECLAMATION BOARD
STATE OF COLORADO

Notice of Violation No. MV-2021-017

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER

IN THE MATTER OF POSSIBLE VIOLATION BY GRAND ISLAND RESOURCES, LLC, CIVIL PENALTIES, CEASE AND DESIST ORDER, AND CORRECTIVE ACTIONS FOR FAILURE TO MINIMIZE DISTURBANCES TO THE PREVAILING HYDROLOGIC BALANCE, File No. M-1977-410

THIS MATTER came before the Mined Land Reclamation Board ("Board") on December 15, 2021, and on January 19, 2022 via videoconference to consider a possible violation by Grand Island Resources, LLC ("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. Amy Eschberger, Michael Cunningham, Russ Means, and Assistant Attorney General Scott Schultz appeared on behalf of the Division of Reclamation, Mining and Safety ("Division"). John Henderson, Esq.; Daniel Takami; Ed Byrne, Esq.; Gabe Racz, Esq.; and Greg Miller appeared on behalf of the Operator.

The Board, having considered the parties' presentations, testimony, and the administrative record, and being otherwise fully informed of the facts in the matter, enters the following:

FINDINGS OF FACT

1. The Operator holds a 110(2) reclamation permit for an 8.95 acre gold, silver, zinc, copper, and lead mine located in Section 9, Township 1 South, Range 73 West, 6th Principal Meridian in Boulder County, Colorado, permit number M-1977-410. The permitted site, known as the Cross Gold Mine, is located outside Nederland, Colorado.
2. The permitted site consists of two mines, the Cross Mine and Caribou Mine, separated by Coon Track Creek. Coon Track Creek drains into tributaries before entering a Boulder City reservoir approximately 5 miles downstream and east of the Town of Nederland.. Water is discharged into Coon Track Creek from both mines under a discharge permit issued by the Colorado Department of Public Health and Environment's Water Quality Control Division ("WQCD"). Previously, prior to discharge, water from the Cross Mine was treated with lime, allowed to settle in a pond, and then moved to a second pond where it is mixed with outflow from the Caribou Mine. The treated water was then discharged into Coon Track Creek.

3. On June 27, 2019, the Division received an email from Tom Hendricks, the previous operator, regarding a planned water quality improvement project for the Cross Gold Mine. The Division requested the submittal of a formal proposal with more details so that the Division could determine an appropriate revision. No proposal was submitted by the Operator in 2019. Mr. Hendricks, who had been battling a serious illness, passed away in early January 2020 and the transition to new management began. Hendricks had managed both mines for more than 40 years.

4. On February 4, 2020, the Division received a notice of noncompliance from WQCD for zinc and cadmium levels in excess of levels set in Operator's WQCD discharge permit (CDPS Permit No. CO0032751).

5. On February 5, 2020, the Division received Operator's Compliance Advisory Response to WQCD. Operator attributed the water quality issues to disturbances in flow caused by a collapse in the Idaho Tunnel and associated rehabilitation activities in November 2019.

6. On February 12, 2020, the Division sent Operator a notice of compliance problems with required corrective actions. The notice required Operator to copy the Division on all future compliance notices issued by WQCD for the site and to submit a technical revision to the Division by April 12, 2020, with a detailed plan for addressing the impaired surface water quality.

7. On March 19, 2020, the Division received a response from Operator describing progress it had made in reestablishing flows from the Idaho Tunnel and resulting improvements to water quality at the permitted discharge location.

8. The Division conducted an inspection of the site on March 26, 2020, and provided the report to Operator on April 7, 2020. The Division's inspection report cited several problems at the site, including impaired surface water that was discussed in the Division's February 12, 2020, notice of compliance problems sent to Operator.

9. On April 29, 2020, the Division received Technical Revision No. 5 from Operator, which provided for the rehabilitation of the Idaho Tunnel portal to allow safe entry into the mine and to reestablish the flow of mine water from the Caribou Mine to meet Operator's WQCD permit discharge requirements.

10. The Division approved Technical Revision No. 5 on June 22, 2020.

11. On August 25, 2020, the Division received Operator's Technical Revision No. 8, which provided a detailed plan for the rehabilitation and replacement of pond liners at the Caribou Mine and additional improvements to the water treatment system, including the addition of a lime feed and control building.

12. The Division approved Technical Revision No. 8 on November 10, 2020.

13. On June 24, 2021, the Division inspected the site and met with the Operator. The Operator failed to inform the Division of any water quality issues at the site although work being done on the treatment ponds was discussed.

14. On September 21, 2021, the Division received a notice of non-compliance from WQCD for the site's exceedances at the permitted discharge location regarding zinc, cadmium, lead, copper, and silver. Some of the discharge exceedances went back to May 2020.

15. On October 1, 2021, the Division issued a Reason to Believe a Violation Exists and Notice of Board Hearing letter to Operator. The Notice described the alleged violation as the failure to minimize disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quantity or quality of water in surface and groundwater systems both during and after the mining operation and during reclamation. 34-32-116(7)(g), C.R.S. and Rule 3.1.6(1).

16. The Division received a response from Operator on October 7, 2021, stating that activities at the site have stressed the lime-addition and detention pond water treatment system. The Operator's letter also stated that Operator was working on alternative water treatment systems, including ones that Operator tried but which were not fully effective at ensuring compliance with discharge standards. Operator had installed a first-generation active treatment plant was on-site for testing, but, despite contractual assurances to the contrary, the system had failed to meet the aquatic life standards for the discharge.

17. On November 5, 2021, WQCD issued Operator a Notice of Violation and Cease and Desist Order for violations of its discharge permit, including exceedances of lead, cadmium, zinc, silver, and copper.

18. On November 21, 2021, the Division began receiving complaints from downstream landowners regarding the situation at the site. The Division has been investigating those complaints and has met with other agencies, including WQCD, Boulder County, and the City of Boulder, who are also investigating the complaints.

19. On November 24, 2021, the Division met with Operator and its water treatment consulting firms to discuss the new water treatment system being installed at the site, costs associated with the system, and the expected timeline to achieve full compliance with Operator's discharge permit.

20. On November 30, 2021, WQCD withdrew the Notice of Violation and Cease and Desist Order it had issued on November 5, 2021 and issued a revised notice.

21. At the hearing held during the Board's December 15, 2021 meeting, the Division presented testimony and evidence regarding the violations. Under the current

reclamation permit, water discharged from the Cross Mine is treated with lime, settled in a pond, and then mixed with water flowing from the Caribou Mine before discharge to Coon Track Creek. Before mining and reclamation activities re-started at the site, this water treatment system seemed to have been effective in helping water from the Cross Mine meet discharge standards set by the Operator's discharge permit with WQCD.

22. According to testimony from the Division, the water quality issues began when a collapse in the Idaho Tunnel choked off the comparatively cleaner water flow from the Caribou Mine. The water quality issues are the result of the Operator's mining operation, including rehabilitation and reclamation, at the site. The Division learned of the collapse of the Idaho Tunnel from WQCD on February 4, 2020, and received some additional details from the Operator's February 5, 2020 Compliance Response and in the request for TR-5 on April 29, 2020, although further communication as to the extent of the collapse was lacking. Operator had also not informed the Division of or sought approval for the alternative water treatment systems it had tried in 2021. The lack of communication from Operator to the Division was a pattern that started in 2020 after the death of Mr. Hendricks and the transition to new management.

23. Operator presented testimony regarding the circumstances at the site and its efforts to address the water quality discharge issue. Operator presented testimony that the levels set in its WQCD permit were set to aquatic life rather than drinking water standards, and that exceedances were still below levels set for drinking water. The aquatic life standards are generally more stringent than drinking water standards.

24. Operator also presented argument that WQCD, not the Division or Board, had sole authority to enforce violations of WQCD imposed discharge limits at the site.

25. Operator did not present evidence to dispute that outflow from the mines exceeded its WQCD discharge permit. Rather, Operator's expert witness, Greg Miller, admitted that there were ongoing water quality issues but stated that there was no threat to human health and that Operator was diligently working to address the issue. Operator's expert stated his opinion that the low levels of metallics in the discharges could not threaten wells or water supplies miles downstream or in other drainages as Coon Track Creek was a gaining stream, resulting in further dilution of trace metallics already being discharged within safe drinking water limits.

26. Operator presented testimony explaining that because the threshold amounts set by its discharge permit were so low, testing discharge water required sending samples to off-site labs for processing. The low amounts of minerals at issue has also made finding functional alternative water treatment processes difficult because meeting the limits requires a high level of filtering and treatment; many types of equipment will treat to drinking water standards and could not treat to the parts per billion standards set for aquatic life. Operator has been working on doing so and had already tried one system that failed to perform as warranted in treating discharge water.

27. Operator described the work it had already done in addressing the issue and stated that it had been communicating with WQCD regarding those efforts. Operator committed to copying the Division on all future communications with WQCD and asked the Division to open its communications with WQCD as well.

28. Operator presented testimony regarding the potential downsides from a cease and desist order, which could impair its ability to conduct activities necessary to remedy the discharge issues. In particular, Operator expressed the need to continue its efforts to reduce sedimentation from the Cross Mine from entering the water being discharged. Operator asked that any cease and desist order be tailored to allow Operator to continue that work.

29. Operator also asked the Board to wait to assess civil penalties should it find a violation until after WQCD had made its decision regarding the exceedances.

30. The Board stayed a decision on the amount of suspended civil penalties until its January 2022 meeting to allow Operator and the Division time to work together and present further evidence regarding efforts to address the issue.

31. At the Board's January 19, 2022, meeting, the Division presented testimony that Operator had been working well with the Division, had been in compliance with the cease and desist order and was making progress. Discharge data from November 2021 showed only exceedances in the pH and lead levels. Though the Division recognized that Operator was making progress and has shown commitment to compliance, its previous recommendation on civil penalties remained unchanged because that recommendation was based on facts that occurred prior to the hearing at the Board's December 15, 2021 meeting.

32. Operator also presented testimony regarding its efforts to address the discharge issue, public outreach regarding the issue, and the new treatment and filtration system. Regarding the exceedances in the November 2021 data, Operator explained that the new system was not online at that time and expressed satisfaction that preliminary results from the new system appeared to be achieving compliance with additional adjustments to the new system still in progress. The new system has been running continuously, and Operator has installed a remote control that allows full automation and remote monitoring. The latest sampling data from December showed compliance, and Operator hoped to have a record of full compliance through the next few months.

CONCLUSIONS OF LAW

33. The Board has jurisdiction over this matter pursuant to the Colorado Mined Land Reclamation Act, Article 32 of Title 34, C.R.S. (2021) ("Act").

34. Under section 34-32-116(7)(g), C.R.S., operators are required to minimize disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quantity or quality of water in surface and groundwater systems both during and after the mining operation and during reclamation. The Operator failed to minimize the disturbance to the quality of water in the surface system by allowing the discharge of water in excess of its allowable limits, in violation of section 34-32-116(7)(g), C.R.S.

35. Rule 3.1.6(1) of the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for Hard Rock, Metal, and Designated Mining Operations (the "Rules") requires operators to minimize disturbances to the quality and quantity of surface and groundwater during the mining operation and reclamation as measured by compliance with applicable Colorado water quality laws and regulations, including statewide water quality standards and site-specific classifications and standards adopted by the Water Quality Control Commission. Operator violated Rule 3.1.6(1) by failing to comply with its site-specific discharge standards adopted by the Water Quality Control Division.

36. Pursuant to section 34-32-124(2), C.R.S., the Board may issue a cease and desist order if it determines that an operator or person violated any provisions of the Act, permit, or regulation issued or promulgated under the Act. The Operator violated section 34-32-116(7)(g), C.R.S. and Rule 3.1.6(1).

37. Pursuant to section 34-32-124(7), C.R.S., the Board may impose a civil penalty of not less than \$50 per day nor more than \$200 per day for each day of violation. The Board may impose a civil penalty against the Operator based on 85 days of violation for a civil penalty of \$4,250 to \$17,000.

ORDER

Based on the foregoing findings of fact and conclusions of law, the Board finds the Operator 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 area 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 those activities approved by the Division, in writing, as necessary to comply with the conditions of this 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.

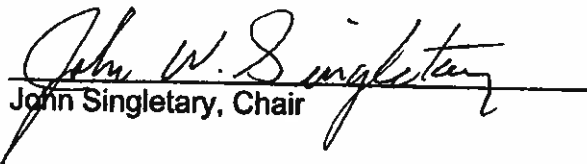
The Board imposes against Operator the following **CORRECTIVE ACTIONS**:
Operator shall:

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, 6.3.3, 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. 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.

The Board imposes a CIVIL PENALTY for 85 days of violation pursuant to section 34-32-124(7), C.R.S. at \$200 per day for a total civil penalty of \$17,000. All but \$5,000 of the civil penalty is suspended if Operator timely complies with all the corrective actions set forth in this Order. The portion of the civil penalty not suspended (\$5,000), shall be due and payable within 30 days of the effective date of this Order. If Operator does not timely comply with the corrective actions set forth above, then the suspended civil penalty, in the total amount of \$12,000, shall be due and payable within 30 days of the deadline for the corrective action.

DONE AND ORDERED this 18 day of February 2022.

FOR THE COLORADO MINED LAND
RECLAMATION BOARD


John Singletary, Chair

NOTICE OF JUDICIAL REVIEW RIGHTS

This order becomes effective and final upon mailing. Any party adversely affected or aggrieved by agency action may commence an action for judicial review by filing a complaint with the district court within 35 days after the effective date of this order, pursuant to section 24-4-106, C.R.S. (2021) and the Colorado Rules of Civil Procedure. In the event that a complaint for judicial review is filed, designations of record made in accordance with section 24-4-106(6), C.R.S. should be served on the Board at: 1313 Sherman Street, Room 215, Denver, CO 80203, Attention: Camie Mojar.

CERTIFICATE OF SERVICE

This is to certify that I have duly served the within FINDINGS OF FACT,
CONCLUSIONS OF LAW, AND ORDER upon all parties herein by depositing copies of same
in the United States mail, first-class postage prepaid, at Denver, Colorado, this 18th
day of February 2022 addressed as follows:

By certified mail:

7018 2290 0001 8923 1007

Attn: Richard Mittasch
Grand Island Resources LLC
P.O. Box 3395
4415 Caribou Rd
Nederland, CO 80466

By electronic mail:

John Henderson, Esq.
jrhcolaw@comcast.net

Daniel Takami
danieltakami@gmail.com

Ed Byrne, Esq.
edbyrne@smartlanduse.com

Gabe Racz, Esq.
gr@vrlaw.com

Patrick Delaney
pdelaney@blackfoxmining.com

Greg Miller
doctor.arsenic@gmail.com

By electronic mail to:

Amy Eschberger
Division of Reclamation, Mining & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Michael Cunningham
Division of Reclamation, Mining & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Charles J. Kooyman
Senior Assistant Attorney General
Department of Law
Business and Licensing Section
Ralph L. Carr Colorado Judicial Center
1300 Broadway, 10th floor
Denver, CO 80203

Jeff Fugate
First Assistant Attorney General
Department of Law
Natural Resources Section
Ralph L. Carr Colorado Judicial Center
1300 Broadway, 10th floor
Denver, CO 80203

Scott Schultz
Senior Assistant Attorney General
Department of Law
Natural Resources Section
Ralph L. Carr Colorado Judicial Center
1300 Broadway, 10th floor
Denver, CO 80203



Camille Mojar, Board Administrator

Exhibit F

February 22, 2022

RE: Response to Citizen Complaints; Cross Gold Mine; DRMS File No. M-1977-410

The Division of Reclamation, Mining and Safety (DRMS) received multiple citizen complaints from November 2021 through January 2022 regarding the Cross Gold Mine, File No. M-1977-410. While various concerns were expressed in the complaints, the primary concern (under DRMS jurisdiction) was regarding potential impacts the mine discharge may have had on surface water and groundwater resources in the vicinity of the mine, particularly to downstream wells.

Pursuant to Hard Rock Rule 3.1.6, disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quantity or quality of water in surface and groundwater systems both during and after the mining operation and during reclamation shall be minimized. Additionally, mine operators are required to be in compliance with applicable federal and Colorado water quality laws and regulations, including statewide standards adopted by the Water Quality Control Commission.

The Cross Gold Mine discharges groundwater through the Cross Mine and the Idaho Tunnel portals. The groundwater is treated to meet aquatic life standards before it is discharged into Coon Track Creek. The discharge of treated wastewater is regulated by the Colorado Department of Public Health and Environment, Water Quality Control Division (WQCD) under CDPS Permit No. CO0032751. In the course of investigating whether or not the discharge of groundwater from the Cross Gold Mine impaired the quality of groundwater in downstream wells, DRMS reviewed the available water quality data associated with the following:

- Domestic well – single sampling event provided with anonymous citizen complaint
- CDPS Permit No. CO0032751 – provided by WQCD
- Coon Track Creek, Middle Boulder Creek, and Barker Reservoir surface water sampling data – provided by the City of Boulder

Upon reviewing the available water quality data for the Cross Gold Mine and the surrounding area, DRMS has found no evidence indicating groundwater discharges from the mine led to degradation of surface and groundwater resources. DRMS reviewed all of the past data from the Cross Gold Mine, including exceedances of discharge standards and found that all discharges were below drinking water standards. DRMS also considered factors such as the distance from the mine to the nearest domestic wells and the quality of water in Coon Track Creek.

DRMS is committed to ensuring the Cross Gold Mine remains in compliance with all applicable water quality standards and will consider and review any additional water quality data as it becomes available.

If you have any questions, please contact me at (303) 866-3567 ext. 8116.

Sincerely,

A handwritten signature in blue ink, appearing to read "M.A. Cunningham".

Michael A. Cunningham
Senior Environmental Protection Specialist

CC: Daniel Takami, Grand Island Resources, LLC
Amy Eschberger, DRMS