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## Request for Approval

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**Daniel Takami** <danieltakami@gmail.com>

Thu, Aug 4, 2022 at 8:34 AM

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

Cc: Sergio Rivera <sergio.rivera@novametallix.com>, Richard Mittasch <rmittasch@nedmining.com>, Sean Muller <smuller@nedmining.com>

Patrick,

This request is to enable GIR to drill underground core holes for the Geology Department at two pre-existing drill stations in the Idaho Tunnel. This drilling activity will likely have a duration of 6-8 weeks at each drill station depending on what Geology finds. These Geology core holes are needed to convert inferred resources to indicated or measured resources. It is our firm belief that this activity can be accomplished with zero impact to current effluent water in the tunnel. Enclosed is the full request with all information. If you have any other questions, please let me know.

Respectfully,

***Daniel J. Takami***

President, Sustainable Metal Solutions, LLC

President, Nederland Mining Consultants Inc.

President, Grand Island Resources, LLC

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501.256.4444

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 **Signed Request for Approval - CORE DRILLING 4 August 22.pdf**  
893K



Division of Reclamation, Mining & Safety  
c/o Mr. Patrick Lennberg  
1001 E 62nd Ave,  
Room 215  
Denver, CO 80216

August 4, 2022

**RE: Cross Gold Mine, Permit No. M-1977-410, REQUEST TO CORE DRILL IN TWO EXISTING DRILL STATION BAYS UNDERGROUND IN THE IDAHO TUNNEL.**

Mr. Lennberg,

Per your phone conversation with GIR staff this past Monday, below is a description of the activities associated with the request for approval by DRMS to perform Core Drilling.

This request is to enable GIR to drill underground core holes for the Geology Department at two pre-existing drill stations in the Idaho Tunnel (Figure 1). This bedrock drilling activity will likely have a duration of 6-8 weeks at each drill station depending on what Geology finds. These Geology core holes are needed to convert inferred resources to indicated or measured resources. It is our firm belief that this activity can be accomplished with zero impact to current effluent water in the tunnel as no water will escape the drill bay. We also believe that there will be zero impact to groundwater as well. To ensure that zero discharge occurs, the following precautions will be undertaken:

1. Drill water and any sediment associated with drilling will be collected in 2 portable sumps. As sediment accumulates in one of the sumps it will be pumped to a portable centrifuge in the drill bay and placed in polyethylene containers for off-site disposal at a proper disposal facility. No chemical additions to the drilling fluid will be used. The standard additive to prevent water loss during drilling is natural bentonite mud.
2. Make up water to the drill rig will be conveyed by pipe with a turn-off valve from an existing sump or coffer dam further back in the tunnel.
3. Any indication of water circulation issues in a drill hole will be cause for hole abandonment and immediate placement of a bentonite plug for the entire drill hole length. All underground drillholes will be plugged and abandoned in this manner.
4. Other than the moving and removal of the U-8 underground drill rig, the only movement of materials in and out of the bay will be core boxes and sacks of bentonite. Drilling at



each bay is estimated to take between 6 and 8 weeks. A wheel cart will be used for core and bentonite. There is no water flow on the floor at the entrance to either of these drill stations. The installation of an aggregate road base to the portal and enclosing water flow in steel piping at the entrance to each drill bay ensures no chances for stirring natural mine effluent.

5. To further mitigate any water, grease, or oil spillage to the floor of the bay, a capture system that includes impermeable tarps will be laid on the floor. An impermeable tarp-lined berm will also be constructed at the entrance to the bay. Disposal of all grease and rags will be done in a plastic barrel for proper disposal.

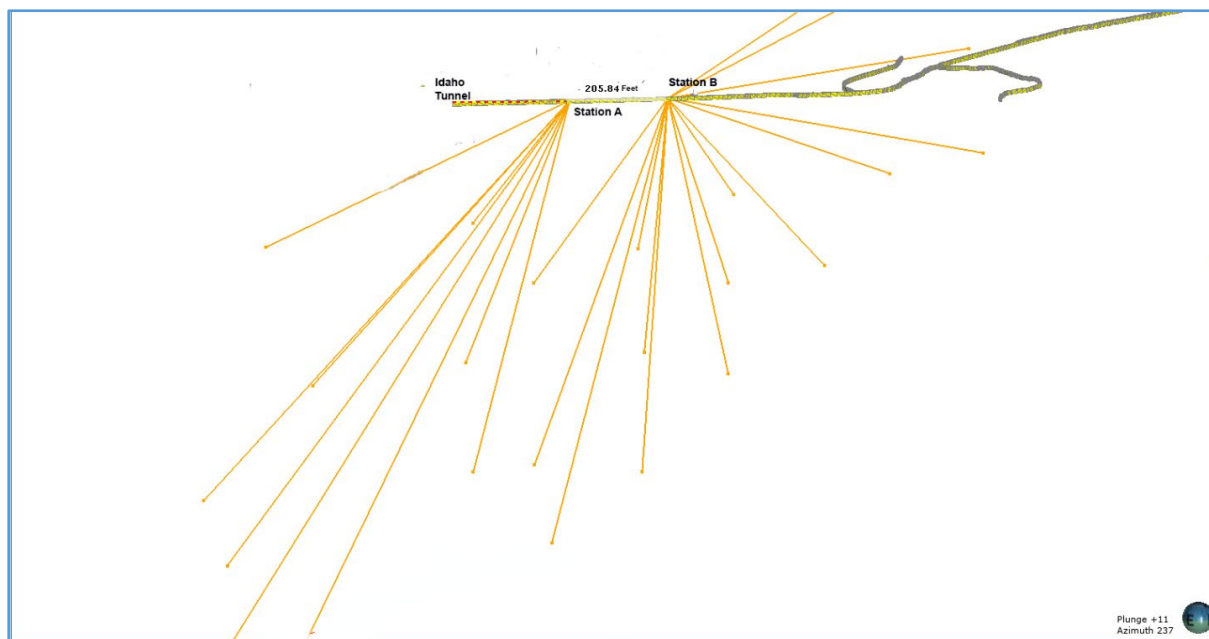
While it is anticipated that these precautions will contain any and all water used during the drilling process plus all sediment, GIR will implement additional safeguards for water protection Utilizing the existing three settling ponds known as 3A, 3B and 3C that in turn go via pipeline to the Juliet raise in the Cross MINE and then pumped to Pond 1 for water treatment prior to discharge. To ensure that the drilling activity is not impacting surface waters in the 3 series of settling ponds, Pond 3A will be sampled for grease and oil.

The two drill stations A and B are 205 feet and 383 from the portal respectively. The back of the bay where the drilling will be conducted is 25 feet from the main tunnel. The bay is 20 feet wide and 14 feet high proving ample room of all equipment away from the main tunnel (Figure 2).

The U- 8 core drill (Figure 3) runs off of electric power and has a design that includes a sophisticated positioner and turntable. Once positioned at the back of the bay, the rig does need not be moved for each hole minimizing any disturbance of the rock floor once set in-place.



**Figure 1. Location of Pre-existing Core Drill Stations A & B in the Idaho Tunnel (Southwest View)**



**Figure 2. Picture looking South into A Drill Station from the Idaho Tunnel**





*Figure 3. Diamec U-8 Core Rig showing Electrical Controls*



GIR would appreciate approval by DRMS to proceed with the work described herein.

Respectfully Submitted,

*D. J. Takami*

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