

Department of Natural Resources

September 6, 2022

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

Re: Additional Information Required, 2nd Quarter 2022 Groundwater and Surface Water Monitoring Report; Cross Gold Mine, Permit No. M-1977-410

Dear Mr. Takami:

On August 15, 2022, the Division of Reclamation, Mining and Safety (Division/DRMS) received the 2<sup>nd</sup> Quarter 2022 groundwater and surface water monitoring report for the Cross Gold Mine. After review of the submission the Division has additional items that need to be addressed or clarified.

## **General**

- 1. Please explain why samples were collected only 14 days apart? The Operator committed, in TR-10, to collecting samples on a monthly basis which would mean that the June sampling event would at least occur sometime during the week of June 27<sup>th</sup>. The samples, as collected, are not considered monthly samples and could be interpreted to be the same sampling event.
- 2. The Operator in TR-10 committed to collecting duplicate samples at the rate of one duplicate sample for each media sampled. Therefore for each sampling event the Operator shall collect a one duplicate sample for surface water, one duplicate for groundwater and one duplicate for effluent. Explain why no duplicate samples were collected.
- 3. Additionally, other QA/QC samples such as rinsates, field blanks and matrix spike samples were not collected, why?

## **Surface Water**

- **4.** Please provide a location map that clearly depicts the surface water sampling locations.
- 5. Please update Tables 1-3 to include the concentrations of each analyte that the results are to be compared to. Please use the 30-day average maximum value for the month the samples were collected in.
- 6. What were the flow rates each time a surface water sample was collected? Please include a row in the summary tables that accounts for flow measured.



- **7.** The field sheets have not been signed. In future sampling events please insure the field sheets are completely filled out.
- **8.** On Tables 1 and 3 please clarify what is meant by the double asterixis located in the upper left-hand corner of each table.

## **Groundwater**

- **9.** Please explain why the Operator collected groundwater samples and had them analyzed for Regulation 41 (Reg. 41) Table A, Groundwater Organic Chemical Standards, compounds when TR-10 only required groundwater samples to be analyzed and compared to the most conservative concentrations of constituents listed on Reg. 41 Tables 1-4.
- **10.** Please comment on the following. All metals, except Silver, were analyzed as the total metals concentrations. In Reg. 41 Tables 1-4 the concentrations given are the dissolved metals concentrations. Additionally, the Division specifically directed the Operator to include dissolved metals concentrations as part of the analyte list.
- **11.** Please provide the potentiometric surface map the Operator committed to providing in the quarterly report in TR-10.
- **12.** Please address the following, the field sheets provided do not reflect the groundwater wells were purged following the approved SOP in TR-10. Specifically the wells were not purged a minimum of 3 casing volumes prior to sample collection.
- **13.** The groundwater field sheets have not been signed. In future sampling events please insure the field sheets are completely filled out.

Please respond to these issues within 30 days of the date on this letter. The due date is October 6, 2022. The Division reserves the right to further supplement this document with additional items and details as necessary.

If you need additional information or have any questions, please contact me by telephone at **303-866-3567 x8114**, or by email at patrick.lennberg@state.co.us.

Sincerely,

Patrick Lennberg

**Environmental Protection Specialist** 

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cc: Jared Ebert; DRMS

ec: Daniel Takami, Grand Island Resources LLC

Richard Mittasch, Grand Island Resources LLC