

**Compliance Monitoring and Inspections
Energy Mines and Resources
PO Box 2703, Whitehorse, Yukon Y1A 2C6**

April 18, 2023

INSPECTOR'S DIRECTION

Issued pursuant to section 35 of the *Waters Act*, SY 2003, c. 19

Issued To:

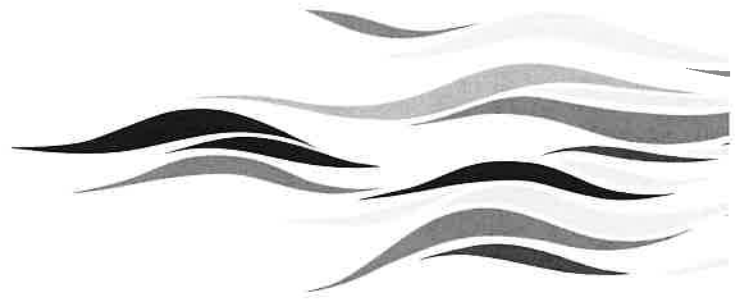
Minto Metals Corp
61 Wasson Place,
Whitehorse, YT
Y1A 0H7

This document constitutes an Inspector's Direction to Minto Metals Corp. ("Minto") and is issued pursuant to paragraph 35(1)(a) of the *Waters Act*, SY 2003, c. 19 (the "Act").

I, Matthew Jenner, an Inspector designated by the Minister of Energy Mines and Resources, Government of Yukon under subsection 33(1) of the Act, have reasonable grounds to believe that water has been and is being used in contravention of the conditions of water licence QZ14-031-3 and that a danger to the environment may reasonably be expected to result from the adverse effects of that use for the reasons outlined below.

REASONABLE GROUNDS FOR BELIEF

1. The available storage facilities at the mine are described in the approved Water Management Plan for the Minto mine as the Area 2 Pit Tailings Management Facility (A2PTMF), the Main Pit Tailings Management Facility (MPTMF), and the Water Storage Pond (WSP) (collectively, the "Water Storage Facilities"). Clause 59 of QZ14-031-3 states:



- “59) As of October 31 of each year, the Licensee shall provide a minimum excess water storage capacity of 1,000,000 cubic metres in the water storage facilities for storage of freshet or flood flows”.
2. On April 11, 2022, the cumulative water storage capacity in the MPTMF and the A2TMF (collectively known as the Tailings Management Facilities (TMF)) was 575,331 cubic meters. The cumulative water storage capacity in the TMFs as of April 12, 2023 was 363,263 cubic meters of water equivalent. Continued operations at the mine, including tailings and water from underground deposited in the TMFs has resulted in a storage capacity loss of 212,068 cubic meters over a 12 month period.
 3. The TMFs are engineered facilities that must be operated within the design parameters for each facility, this includes maintaining appropriate water storage capacities. Storage of water and/or tailings that results in an exceedance of freeboard may impact the integrity of these facilities and result in facilities that are no longer physically or geochemically stable and may cause a release to the environment.
 4. In early 2022 Minto Metals Corp. commissioned water treatment facilities at the mine site and commenced water treatment. However, water treatment at the Minto mine to date has been insufficient to restore available storage prior to freshet as per license conditions.
 5. During the 2021 freshet, the mine reported 182% of normal snow water equivalency. During the months of April and May 2021, the decrease in available storage at the mine from freshet inputs and mine inputs (tailings and underground dewatering) was approximately 704,000 cubic meters. Freshet in 2023 is expected to result in a larger snow melt than 2021 and may reasonably be expected to deplete the remaining available storage at site. The water stored in the TMFs is documented to be above effluent quality standards for copper and selenium, contaminants of concern. Without adequate treatment volumes and the risk of available storage being depleted during freshet, it may reasonably be expected that untreated water containing contaminants of concern would be unintentionally released from the TMFs through overtopping of pit



walls or seepage that cannot be captured, to the receiving environment (Minto Creek) in concentrations that exceed the effluent quality limits of QZ14-031-3.

6. In the current circumstances, without removal of water from the TMFs, it is believed that during the upcoming freshet the mine will exceed water storage capacity and will release contaminated water from the TMFs to the adjacent site area, and possibly to Minto Creek. A release of untreated water from the TMFs may reasonably be expected to result in water quality degradation of Minto Creek. Minto Creek flows from the mine site to the Yukon River approximately 9 kilometers to the northeast. Release of untreated water to Minto Creek is reasonably expected to cause a danger to the environment by depositing contaminants of concern which can bio-accumulate in aquatic organisms and have toxic effects.

7. Minto North Pit is a geologically competent pit with no known surface or ground water seepage concerns. Presently the Minto North Pit contains approximately 196,000 cubic meters of water that has come into contact with pit walls and mined material in the pit shell and is known to be above the effluent quality standards for selenium. It may be reasonably believed that the immediate and temporary storage of tailings-contaminated water in the Minto North Pit will be safe for the environment and is the best option to avoid an uncontrolled release of contaminated water to the environment. The stored water in Minto North Pit must be treated in accordance with applicable laws and authorizations prior to discharge to the environment.

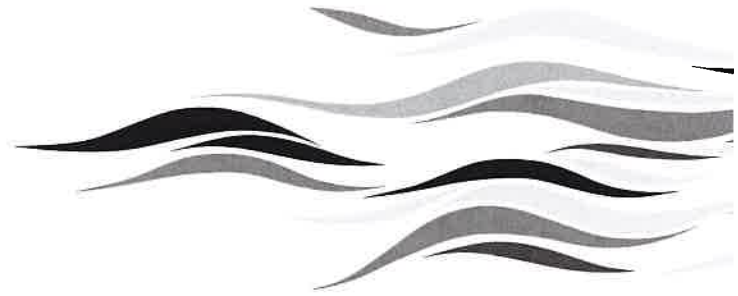
MEASURES TO BE TAKEN:

Based on the above and pursuant to subsection 35(1) of the Waters Act, I direct Minto Metals Corp to do the following:

1. When the total available storage capacity in the TMF's falls below 300,000 cubic meters, immediately:



- a. Transfer water from the TMF's to Minto North Pit. Continue this transfer of water until there is 400,000 cubic meters of storage capacity in the TMF's or as directed by the inspector; and
 - b. Cease all deposition of tailings in the TMF's to preserve available storage for freshet flows. No further deposition of tailings is allowed without written approval from the inspector.
2. Inform the undersigned inspector immediately when water transfer to the Minto North Pit commences and each time a transfer occurs.
3. Commence environmental monitoring and reporting, as outlined below, prior to transfer of water. This requirement is in addition to the environmental monitoring requirements outlined in water licence QZ14-031-3. Provide written reports to the undersigned inspector on a weekly basis including all of the following monitoring results.
 - a. In advance of any water transfer, collect water quality data for the parameters listed in Table 1 of QZ14-031-3 from the TMF's and Minto North Pit, and measure the existing water volume in the Minto North Pit;
 - b. During transfer, report on the daily volume of water transferred to Minto North Pit;
 - c. Following the transfer of water from the TMF's, measure the water quality in the Minto North Pit for the parameters listed in Table 1 of QZ14-031-3;
 - d. Following the freshet season, measure the water quality in the Minto North Pit for the parameters listed in Table 1 of QZ14-031-3; and
 - e. Increase the frequency of the environmental monitoring required under QZ14-031-3 in the area of the Minto North Pit as follows:
 - i. Surface water quality monitoring at MN-.02, MN-.05, MN-1.5, MN-2.5 and MN-4.5 must increase to weekly; and
 - ii. Groundwater quality and level monitoring at MW09-03 and MW17-11 must increase to monthly.



4. Beginning immediately following the freshet period, and to be completed within a six month period, remove all pre-existing and transferred water from the Minto North Pit and manage all water in a manner consistent with QZ14-031-3.

You are legally obliged to comply with this Direction and with all of the conditions in water licence QZ14-031-3. Failure to comply is an offence under the Act.

Pursuant to paragraph 35(2)(a) of the Act, Minto may request to have this Direction reviewed by the Minister.

If you require further information, have any questions or concerns, please call, write or email me at the contact information provided.

Regards,

A handwritten signature in blue ink, appearing to be "Matthew Jenner", written over the typed name.

Matthew Jenner
Inspector, Head of Major Mines
867-334-6144
Matthew.jenner@yukon.ca

cc

Kevin McGinty – Mining Manager – Selkirk First Nation
Todd Powell – Director – Mineral Resources and Geosciences Services
Caleb Light – acting Director – Yukon Water board Secretariat