



Energy, Mines and Resources  
Box 2703, Whitehorse, Yukon Y1A 2C6

May 20, 2015

Mr. Jing You Lu  
Chief Operating Officer  
Yukon Zinc Corporation  
#410-700 West Pender Street  
Vancouver, BC V6C 1G8

Dear Mr. Lu:

**Re: Required Updated to Reclamation and Closure Plan  
Wolverine Mine QML-0006**

As discussed at our meeting on February 18, 2015, I am providing you with additional guidance on the updates that are required for the Reclamation and Closure Plan associated with the Wolverine Mine (the "site"), including temporary closure requirements.

Section 8.8 of QML-0006 (the "Licence") requires that Yukon Zinc Corporation ("YZC") submit a document updating the most recently approved Reclamation and Closure Plan for the site for approval every two years from the anniversary of the start-up date (the "updated Plan"). According to our records, this requires YZC to submit for approval an updated Reclamation and Closure Plan no later than July 17, 2015.

The updated Plan must address decommissioning and reclamation of the site at final closure and care and maintenance of the site during temporary closure. Specifically it must address the matters set out in section 8.6 of the Licence.

In addition to the above, given the current temporary closure of the mine, it will be important in the updated Plan to adequately characterize current conditions at the minesite. This characterization must include the following::

- a) identification of the surveyed volumes of all waste rock and ore on surface, including the temporary waste rock and ore stockpile in the industrial complex, the test mine waste rock pad and the operations waste rock pad;
- b) inventory of all stored wastes on site, including special wastes
- c) a bathymetric survey of tailings solids, and elevation of water contained in the tailings management facility;
- d) identification of current water elevation in underground mine, and recommended installation of continuous pressure transducer data logger;

- f) conduct and reporting of inspection of tailings facility by a qualified engineer; and
- g) an update to the operations, maintenance and surveillance plan for the tailings management facility;

Further, I will be looking in the updated Plan for discussion on the following.

## **1. Temporary Closure**

During any temporary closure, facilities on site must remain intact and maintained in good working order. Site maintenance, monitoring and reporting must continue uninterrupted as per Licence requirements (e.g. quarterly groundwater well monitoring, surface water quality monitoring as per approved Reclamation and Closure Plan V2013-05 (Table 3-1)). The temporary closure plan must focus on ensuring public health and safety, protecting the environment and managing risks associated with potential abandonment of the site. To demonstrate how these objectives will be achieved, the updated Plan, at a minimum, must include the following:

- a) annual surveyed elevation of water level in the tailings management facility;
- b) water elevation monitoring in underground mine (e.g., using continuous pressure transducer datalogger)
- c) quarterly water analyses for underground mine water
- d) a mine site emergency response plan;
- e) a plan to remove all explosives and hazardous materials from site;
- f) personnel requirements and contact information;
- g) underground geotechnical stability maintenance and monitoring;
- h) a water management plan for normal conditions and for freshet; and
- i) a cost estimate to complete these works on an annual basis, by quarter.

## **2. Transition from Temporary Closure to Operations**

If YZC plans to resume operations after temporary closure, the updated Plan must also identify the actions necessary to transition between these periods. At a minimum, this must include the following information:

- a) a dewatering, re-entry and rehabilitation plan for the underground workings;
- b) a waste rock management plan to move waste rock into the underground workings, the tailings management facility, or consolidate all waste rock into one facility;
- c) detailed designs for a water treatment plant sufficiently sized to treat water from the tailings management facility during the ice free periods; and
- d) a construction schedule for the water treatment plant that demonstrates the facility will be mechanically complete within five months of resuming operations, and able to sufficiently treat water before water levels in the tailings management
- e) facility require discharge.

### 3. Permanent Closure

The updated Plan must also include closure measures for permanent closure that demonstrate that the site can be reclaimed and closed to an environmentally stable condition suitable for future land use. Updates to the permanent closure plan must include:

- a) a description of existing conditions;
- b) closure designs for all waste storage facilities (waste rock pads and tailings facility);
- c) a water treatment and management plan for the underground workings and tailings management facility;
- d) detailed designs for hydraulic plugs for the underground workings including the ventilation raise; and
- e) a detailed cost estimate for the implementation of the plan, ongoing care and maintenance and long term monitoring requirements.

To assist you in preparing the updated Plan, I refer you to *"Reclamation and Closure Planning for Quartz Mining Projects"* dated August 2013. This document has been prepared by the Department of Energy, Mines and Resources and the Yukon Water Board and is accessible through the following website

[http://www.emr.gov.yk.ca/mining/pdf/mml\\_reclamation\\_closure\\_planning\\_quartz\\_mining\\_projects\\_aug2013.pdf](http://www.emr.gov.yk.ca/mining/pdf/mml_reclamation_closure_planning_quartz_mining_projects_aug2013.pdf).

Please do not hesitate to contact me at (867) 667-3126 if you have any questions or wish to discuss.

Sincerely,



Robert Holmes  
Director, Mineral Resources

cc: Justin Hooper, Natural Resources Officer  
Heather Jirousek, Director, Water Resources