



Ministry of
Energy and Mines

Province of British Columbia
MINISTRY OF ENERGY AND MINES
Report of Inspector of Mines
Reclamation
(Issued pursuant to Section 15 of the *Mines Act*)

Inspection No.:
File: «FILE_NO»
Mine No.: 0100019
Permit No.: M-232
Emp/Cont: 0
Orders : 4
Stop Work:

Mine Name: Tulsequah Chief Mine
Location: Atlin MD
Owner, Manager: (no manager has been assigned)

Company: Chieftain Metals Inc
Address: Unit 118, 1515 Broadway Street
Port Coquitlam BC V3C 6M2

Workers Contacted:

Type of Mining: METAL MINE UNDERGROUND
Date of Inspection: 2016/09/26
Accompanying Inspectors: Doug Flynn (MEM), Rory Cummings (MEM)

Copies to Al Hoffman, Tania Demchuk, Trevor Williams (TRT),), Neil Bailey (MOE)

Written response is required from the Mine Manager within 15 days of receiving the report. In this document, Code means Health, Safety and Reclamation Code for Mines in British Columbia.

An inspection of Tulsequah Chief Mine, permitted to Chieftain Metals Inc. (CMI) was conducted on September 26, 2016 by Diane Howe (MEM Deputy Chief Inspector-Permitting) and Neil Bailey (MOE Compliance), accompanied by Doug Flynn (MEM H&S Inspector), Rory Cummings (MEM H&S Inspector) and Trevor Williams (Taku River Tlingit First Nation). Access to the site was via Discovery helicopter from Atlin (45 mins). The weather at the site was cloudy/overcast.

At the time of the inspection, there was neither a mine manager nor representatives of Chieftain Metals Inc. on site.

The mine received a major mine permit in 2008 for limited works, however the site has not been developed past initial construction activities and has been on a care and maintenance status since June 2012. On September 6, 2016 MEM received notice that the courts had appointed a Receiver and manager (Grant Thornton) to take possession and exercise control over all of the properties owned by Chieftain Metals Inc.

Diane Howe

Deputy Chief Inspector

6th Floor, 1810 Blanshard St., Victoria

Address

Signature – Inspector of Mines

Report Date: October 24, 2015

The purpose of this inspection of the surface works at the Tulsequah mine was to understand the current conditions at the mine and compared conditions to the previous 2015 November MEM inspection (attached).

The following areas were inspected:

- Airstrip camp (permitted by exploration permit)
- Lime Sludge Pit at Shaza airstrip
- Mine site exfiltration pond
- Mine Acid Water Treatment Plant and Chemical Storage pad (AWTP)

The following reports/communications also provided a general understanding of the current conditions of the site: the 2015 Annual Reclamation Report, the 2015 Closure Management Manual, 2015 MEM Inspection report, 2016 Care and Maintenance Manual, and the 2016 OMS manual for the Exfiltration pond, comments from MEM regarding the OMS manual, and observations and discussion that occurred on-site and following the inspection.

This report documents MEM's observations related to requirements of the M-232 permit, the *Health, Safety and Reclamation Code for Mines in BC*, the *Mines Act* and established best practices.

Note space has been provided after each Order/recommendation for the Company response.

Inspection Observations

Airstrip Camp

A general inspection of the airstrip camp was conducted looking at the overall condition of the facilities, security, signs of vandalism, or obvious signs of fuel spills. For the most part the camp is left unsecure except for the cook building and metal bunk trailer. Most other buildings were accessible with many of the buildings storing materials and equipment. Heavy equipment parked at the camp appeared to be secure and supplied with appropriate drip pans. Theft and vandalism is a potential concern given the site is relatively accessible and there is no caretaker on site.

Photo 1: Airstrip Camp



Photo 2: Rock truck with drip pan



Lime Sludge Pit at Shaza Strip

The lime sludge pit located adjacent to the airstrip remains inactive and in the same condition as was observed in 2015. CMI has maintained monitoring from 3 groundwater wells and until such time as the sludge is relocated, monitoring should continue.



Photo 3: Lime Sludge Pit at Shaza AirStrip. (2015 photo)



Photo 4: Shaza Airstrip, general location of Sludge Pit (2015 photo)

Exfiltration Pond

The exfiltration pond, is located adjacent to the 5200 portal and was built in 2011 as a settling pond for the mine portal drainage prior to being discharged to the Tulsequah River. There is no treatment of the portal waters other than the sludge being captured using filter cloth placed on the upstream side of the berm. In 2015 the company had to actively manage the pond by cleaning out the sludge to ensure maintenance of adequate capacity. At the time of this inspection, the exfiltration pond was no longer functioning as designed, likely the filter fabric is clogged from not being maintained, and the excess water is flowing over the rock berm and into the river.

As note in the 2015 inspection report, MEM had not approved the design, construction or operation of the exfiltration pond. As an order in the 2015 inspection, CMI was required to submit an as built and OMS manual for the operation of the pond. The manual was received by MEM, however given there is no continuous onsite presence, there is a significant concern that the pond is not being properly managed and may pose a risk if not immediately mitigated.



Photo 5 Exfiltration pond. Note overflow of mine portal water.



Photo 6: Exfiltration pond full of sludge mine portal water.

Acid Water Treatment Plant (AWTP)/ Chemical Storage Pad

The AWTP was constructed in its current location in 2011. The AWTP has been shut down due to operational issues and has not operated since 2012. It is MEM's understanding that a significant capital cost is required to get the AWTP operating efficiently.

At the time of this inspection the AWTP building and generator building were locked and secure. Several sea-cans located adjacent to the AWTP and pad area still contain chemicals that are used in the WT process. Some of the storage locations remain secure in locked sea-cans (Photo 7), however there are materials exposed (Photo 8) and may pose a risk to water quality and/or wildlife that wander onto the site.



Photo 7: Stored WT chemicals, some in secured containers, others under tarps



Photo 8 Exposed chemicals

Orders

The following orders are summarized based on observations and discussions that occurred on-site:

1. Pursuant to Mines Act Section 21, a mine manger is required to be appointed to oversee any work, including monitoring/remediation work that will be required in accordance with applicable BC regulations. Notification of a Mine Manger shall be submitted to the Chief Inspector by November 8, 2016.

Response:

2. Pursuant to HSRC 10.1.5 the Mine manager shall immediately retain a Professional Engineer to act in the capacity of an Engineer of Record (EOR). Notification of an EOR shall be submitted to the Chief Inspector by November 8, 2016.

Response:

Date of Inspection 2016 09 26

Initials _____ (Inspector)

Initials _____ (Manager)

3. Pursuant to *Mines Act* 15.4.1, take remedial action. The Mine manager (in consideration of the EOR recommendations) shall immediately take action to alleviate the concerns observed at the Exfiltration Pond. A proposed plan and schedule for activities shall be submitted to the Chief Inspector by November 8, 2016.

Response:

4. Pursuant to *Mines Act* 15.4.1, take remedial action. The Mine manager shall take immediate action remove/secure all hazardous products from the mine site. A proposed plan and schedule for activities shall be submitted to the Chief Inspector by November 8, 2016.

Response:

Closure

The Owner, Agent or Manager is reminded under that under the Mines Act, HSRC and M-232 permit conditions, even while the mine remains in “care and maintenance”, there remains obligations to ensure protection of the environment and public health from activities at the mine.

Please address response to the undersigned and feel free to contact the undersigned with any questions or comments.