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Staff Report

Applicant: Teck Metals Ltd.	
Location: Pine Point Tailings Impoundment Area	File Number: MV2017L2-0007
Date Prepared: April 8, 2020	Date of Board Meeting: April 30, 2020
Subject: Water Licence Annual Report	

1. Purpose

The purpose of this Report is to present to the Mackenzie Valley Land and Water Board (MVLWB/the Board) an Annual Water Licence Report (Annual Report) submitted by Teck Metals Ltd. (Teck Metals) to fulfill Part B, condition 12 of Water Licence (Licence) MV2017L2-0007.

2. Background

- October 24, 2017– Issuance of Licence MV2017L2-0007;
- March 30, 2020 – Annual Report received; and
- **April 30, 2020 – Annual Report presented to the Board for information update.**

3. Discussion

Project History

The Pine Point mine was operated by Cominco from 1964 to 1988 and produced 70 million tons of ore, with grades of 2.9% lead and 6.8% zinc. The project has operated under a water licence since 1975. When the mine closed in 1988, a Closure and Reclamation Plan, which had been approved June 1987, was implemented. The Plan was updated in 1990 and 1991 during reclamation activities. A Type B Licence N1L3-0035 was issued on June 1, 1993 for five years, which was followed by Type B Licence N1L2-0035, issued on July 1, 1997, for a ten-year term to June 30, 2007. In July 2001, Cominco and Teck Metals merged. Since the merger, Teck has been managing the site. On October 26, 2007, the Board issued Teck the MV2006L2-0013 Licence. In June 2009, Teck Cominco Metals Ltd. changed its name to Teck Metals Ltd.

On December 18, 2017, the Board issued a Type B renewal Water Licence MV2017L2-0007 to continue water monitoring and management at the Pine Point Tailings Impoundment Area (TIA). The MV2017L2-0007 Licence authorizes Teck to monitor and treat impacted water on site. The water treatment plant injects a lime/water mixture into the impacted water as it flows through a settling channel. The water becomes more alkaline (higher pH) due to the lime injection, which leads to a chemical precipitation

reaction, where the zinc separates out from the water and becomes a solid that settles to the bottom of the channel. The treated water is then discharged to the receiving environment.

On October 25, 2017, Teck’s 1991 Closure and Reclamation Plan with 2006 updates were approved by the Board as an interim submission. At the time of the MV2017L2-0007 Licence renewal, Teck was required to submit a Reclamation Research Plan on May 1, 2018 and Closure and Reclamation Plan by December 31, 2020. On May 1, 2018, Teck submitted a Reclamation Research Plan (attached) in accordance with Licence MV2017L2-0007, Part H, condition 3. The Reclamation Research Plan describes the research that will be conducted in order to help select a closure option and support the Closure and Reclamation Plan. The Reclamation Research Plan was reviewed and approved by the Board on July 19, 2018.

On March 28, 2019, Teck Metals submitted a Type A Land Use Permit to conduct land use activities associated with its water treatment and reclamation research. On May 16, 2019, the Board issued Permit MV2019X0006.

Description of Annual Report

On March 30, 2020, Teck Metals submitted an Annual Report to describe the activities conducted in 2019 (attached).

Authorization Requirements

The Annual Report is required to fulfill Part B, condition 12 and Schedule 1, condition 1 of Licence MV2017L2-0007.

4. Comments

Board staff reviewed the Annual Report and note that the Annual Report conforms with the requirements listed in Schedule 1, condition 1 of Licence MV2017L2-0007 (Table 1).

Table 1 Board staff review of Licence MV2017L2-0006 Annual Report

Licence MV2017L2-0007 Requirement Schedule 1, condition 1	Board staff Review
a) A summary of the calibration and status of the meters and devices referred to in Part B of this Licence;	Provided in section 7.3
b) A summary of engagement activities conducted in accordance with the approved Engagement Plan , in Part B of this Licence, undertaken during the previous calendar year and shall include a brief description of activities planned for the forthcoming year;	Provided in section 2.0
c) A summary of Construction activities and major maintenance work conducted in accordance with Part E of this Licence, undertaken during the previous calendar year;	Provided in section 3.0, no construction occurred.
d) A summary of activities conducted in accordance with the approved Water Management Plan , required in Part F of this Licence, undertaken during the previous calendar year, including: <ul style="list-style-type: none"> i. A summary of updates or changes to the process or facilities required for the management of Water and Wastewater; ii. Daily, monthly and annual quantities in cubic metres of all 	Discharge volume provided in Table 2.

<p>Water and Wastewater collected, treated and pumped from the Post-Treatment Effluent Discharge point, identified by Discharge location;</p>	
<p>e) A summary of activities conducted in accordance with the approved Operations and Maintenance Plan, required in Part F of this Licence, undertaken during the previous calendar year, including:</p> <ul style="list-style-type: none"> i. A summary of updates or changes to the process or facilities required for the management of the Tailings Impoundment Area; ii. A description of response actions that were carried out if any Action Levels were exceeded. 	<p>Provided in section 5.0.</p>
<p>f) A summary of activities conducted in accordance with the approved Spill Contingency Plan, required in Part G of this Licence, undertaken during the previous calendar year, including:</p> <ul style="list-style-type: none"> i. A list and description for all Unauthorized Discharges that occurred during the previous calendar year, including the date, NWT spill number, volume, location, summary of the circumstances and follow-up actions taken, and status (i.e. open or closed), in accordance with the reporting requirements in Part G of this Licence; and ii. An outline of any spill training and communications exercises carried out during the previous calendar year. 	<p>Provided in section 6.</p>
<p>g) A summary of activities conducted in accordance with the Closure and Reclamation Plan, required in Part H of this Licence, completed during the year, a summary of updates or changes made, and an outline of any work anticipated for the next year;</p>	<p>Provided in section 1.0.</p>
<p>h) Any other details on Water Use or Waste disposal requested by the Board by November 1 of the year being reported;</p>	<p>Not applicable.</p>
<p>i) Electronic and tabular summaries of all data and information generated under the Surveillance Network Program for the previous year, in excel, or an electronic and printed format acceptable to the Board. This shall also include, but not be limited to the following:</p> <ul style="list-style-type: none"> i. Rationale for SNP stations where samples were not collected and results and interpretation of quality assurance/quality control procedures; ii. Graphical summaries and interpretation of the analytical results from the SNP samples collected at the points of compliance (SNP station 35-1) compared to the Effluent Quality Criteria under Part F of this Licence, for the previous two consecutive years; iii. An explanation of any actions taken in response to any exceedances of the Effluent Quality Criteria; iv. Results from the Hach system monitoring, including all 	<p>Tabular summary provided in Table 5 to 10. Graphical summary provided in Figures 3-7.</p> <p>No action levels exceeded.</p> <p>Electronic spreadsheet in excel provided (attached).</p>

calibration and maintenance records for the Hach system;	
j) A summary of actions taken to address concerns, non-conformances, or deficiencies in any reports filed by an Inspector.	Not applicable.

5. Conclusion

Board staff conclude that the Annual Report, as submitted, is in conformity with requirements of Licence MV2017L2-0007.

Board staff conclude there are no outstanding issues or concerns with this Annual Report.

6. Recommendation

Board staff recommend the Board **acknowledge the Annual Water Licence Report to Water Licence MV2017L2-0007.**

A draft decision letter is attached.

7. Attachments

- [2019 Annual Water Licence Report](#)
 - [Raw data file](#)
- Draft Letter from the Board

Respectfully submitted,



Jacqueline Ho
Regulatory Specialist