



Sahtu Land and Water Board

Staff Report

Division: Water Program	Report No.: 6
Date Prepared: July 12, 2018	File No.: S17L8-002
Meeting Date: July 20 2018	
Subject: DIAND-Contaminants and Remediation Division (CARD) – Great Bear Lake Sites 2017 Annual Water Licence Report	

1. Purpose/Report Summary

The purpose of this Report is to present to the Sahtu Land and Water Board for information:

- a) 2017 Annual Water Licence Report; and
- b) Summary of stakeholder review comments and Proponent responses.

2. Background

- **July 13, 2017** - The Sahtu Land & Water Board (SLWB or Board) approved a seven-year Type B Water Licence (S17L8-002) for remediation and restoration of the abandoned historic industrial properties of the Great Bear Lake Mine Sites;
- **March 29, 2018** - The Board received the Great Bear Lake Sites 2017 Annual Water Licence Report with Appendices A, B and C
- **April 3, 2018** - Review packages were sent out electronically to members of the Deline Distribution List using the Online Review System with a request for comments by May 1, 2018;
- **May 1, 2018** – Reviewer comments received and deadline;
- **May 11, 2018** - Proponent response deadline and received;
- **May 14, 2018** – The Board received a final revised Appendix C (version 2.0) submitted to address reviewer comments and recommendations during the review process
- **July 20, 2018** - Presentation to the Board for information.

3. Discussion

3.1 Project Overview

The Water Licence S17L8-002, entitles the use of water and waste deposition in support of remediation and restoration activities at the Great Bear Lake Sites, including the Silver Bear Mines, Contact Lake Mine, El Bonanza/Bonanza Mine and the Sawmill Bay site.

In accordance with the requirements of the Water Licence, INAC-CARD has produced the 2017 Annual Water Licence Report. During the first half of 2017, the project was governed under the previous Water Licence S15L8-001. This report follows the format as presented in the updated Water Licence S17L8-002 Schedule 1, Part B: General Conditions, in which more robust requirements of the Annual Water Licence Report are outlined. Where necessary, additional information has been added which may be of interest to the Sahtu Land and Water Board.

It is important to note that the Water Licence was issued in support of upcoming remediation activities at the project sites. However, during the 2017 period the sites remained in pre-remediation status and no site remediation occurred. The sole on-site work activities were conducted during a field program implemented September 6th-15th, 2017 which included the following tasks:

- Water Quality Monitoring per the 2017 Great Bear Lake Sites Water Quality Monitoring Plan as submitted to the Sahtu Land and Water Board (including Surveillance Network Program (SNP) stations);
- Disposal of discarded blasting caps identified on the ground surface at the Silver Bear Mines (controlled burn conducted by a contract Blasting Specialist);
- Construction of improved drum fuel storage facilities at Terra Mine to meet requirements of the renewed Land Use Permit (S17D-003);
- Addressed deficiencies as described in the July 2017 INAC Inspector's Report; and
- Completed soil excavation, testing and backfilling at a discrete petroleum hydrocarbon (PHC) spill area at Sawmill Bay, per an Inspector's Order.

The 2017 Annual Report meets requirements as specified in Water Licence S17L8-002 Schedule 1, Part B: General Conditions and includes

- Appendix A: Surveillance Network Program (SNP) Data Tables;
- Appendix B: SNP Location Figures;
- Appendix C: The 2017 Great Bear Lake Sites 2017 Water Quality Monitoring Report, which includes the results of all surface water monitoring completed in 2017 (including SNP stations); and
- As requested in Schedule 1, Part B, item S, all 2017 SNP monitoring data was provided in Excel format.

3.2 Process Requirements

DIAND - Contaminants and Remediation Division has submitted its 2017 Annual Water Licence Report in accordance with the reporting requirements of Water Licence S17L8-002, Part B, condition 15. Although formal Board approval is not required under the Licence, the Board must be satisfied that the Licensee has met the requirements of the Licence. The purpose of this review was also to consider the 2017 Water Quality Monitoring Report (Appendix C) as well as whether the results and conclusions have been appropriately and accurately reported and support the recommendations. In accordance with the requirements of Annex A of this Licence, the Licensee has also submitted an electronic summary of all data generated under the Surveillance Network Program (SNP).

This Report was required by Licence S17L8-002 Part B, condition 15:

Beginning March 31, 2018, and no later than every March 31 thereafter, the Licensee shall submit an Annual Water Licence Report to the Board. The Report shall be in accordance with Schedule 1, item 1.

4. Comments

Upon completion of the field program in September of 2017, field observations and data were integrated with results of laboratory analyses. As directed by the Sahtu Land and Water Board, these findings have been synthesized into a concise data report presenting only 2017 findings. Per the requirements of the most recent Water Licence (S17L8-002, amended October 30, 2017), a Baseline Water Quality Monitoring Report will be produced at least six months prior to remediation which synthesizes the 2017 results with previous monitoring data to complete multiyear spatial and temporal trend analysis. While statistical analysis was not to be included within the 2017 data report, for the primary parameters of concern a summary level comparison of current and previous results was conducted.

5. Other Agency Comments

The 2017 Annual Report was distributed to members of the current SLWB Deline Distribution List which includes 29 review organizations, requesting a reply by May 1, 2018. Of the 29 organizations to which the plans were distributed, 9 are represented within the Sahtu Settlement Area. Review comments were received from:

- GNWT – Department of Environment and Natural Resources (ENR);
- Sahtu Renewable Resources Board (SRRB)

A summary of comments are provided below. For complete comments and responses, please see Review Comment Table in Attachment 1.

GNWT-ENR (ID1) – recommends that INAC-CARD submit all water quality data associated with the Great Bear Lake Sites Remediation Project to the Board public registry in an accessible file type (e.g., csv or xls).

INAC-CARD responded that they are in the process of scheduling meetings with Cumulative Impact Monitoring Program (CIMP) to determine the most appropriate method to share data with the department, including database formatting requirements. The suitability of using the Board Registry as a repository for all digital monitoring data (i.e. from the larger Water Quality Monitoring Programs) will be discussed with both CIMP and Board staff.

GNWT-ENR (ID2) - recommends that INAC-CARD complete the attached metadata template and provide it with the associated water quality data to the Board public registry in an accessible file type (e.g., csv or xls).

INAC-CARD responded that in addition to initiating discussions with CIMP as noted above, all available information from within the Metadata Template has been provided as part of the 2017 Water Quality Monitoring Report.

SRRB (ID1) - The report and appendices are well organised and clearly written.

SRRB (ID2) – Appendix C of the report is clear and well written. The methods are standard, following protocols for sampling, transport, analysis of samples and reporting of results. QA/QC for the analysis is good. Good community representation, with roughly half of the field team from Deline. According to the reports, CARD also does community meetings in Deline roughly twice a year, which is an important opportunity for updates on project status. Please provide the name of the analytical lab for radionuclide analysis in the method section.

INAC-CARD responded that the 2017 Water Quality Monitoring Report will be updated with information about the laboratory and provided to the Sahtu Land and Water Board on or before May 14, 2018.

6. Conclusion

Reviewer comments were generally positive about the format and content of the report. An updated version (2.0) of Appendix C – the 2017 Water Quality Data Report was received by the SLWB on May 14, 2018 with the minor clarification as requested by the SRRB (ID2). Staff are of the opinion that the results and conclusions have been appropriately and accurately reported and support the recommendations.

7. Recommendation

Board staff recommend that the Board:

- Receive the Great Bear Lake Sites 2017 Annual Water Licence Report for information, noting that the Board is satisfied that the Licensee has met the requirements of the Licence.

8. Attachments

8.1 Review Comment Table

Respectfully submitted,



Bonnie Bergsma
Regulatory Specialist