



March 30, 2016

Stephanie Autut
Executive Director
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Dear Ms. Autut,

Re: Water Licence 1AR-NAN1419 – 2015 Annual Report

This letter and enclosed documentation are submitted in fulfilment of Part B Item 2 of Water Licence 1AR-NAN1419 which requires the Licensee to file an Annual Report with the Nunavut Water Board (NWB). The letter is structured as per Schedule B of the Water Licence.

Summary

Key activities completed in 2015 included:

- Discharge of effluent from the West Twin Disposal Area;
- Geotechnical monitoring;
- Water quality monitoring;
- Remediation of petroleum hydrocarbon (PHC) contaminated soil in the former fuel tank farm area, including:
 - Excavation of contaminated soil;
 - Treatment of contaminated soil through volatilization and bioremediation; and
 - Sampling and analysis to confirm treated soil met established soil quality remediation objectives.

There was no use of fresh water in 2015.

As per Part F of Water Licence 1AR-NAN1419, effluent quality limits were met for the effluent discharged into Twin Lakes Creek.

As per Part I of Water Licence 1AR-NAN1419, geotechnical and surface water quality monitoring was completed in 2015. The monitoring programs demonstrated stable conditions and confirmed that implemented closure and rehabilitation measures perform as expected.

As per Part J of Water Licence 1AR-NAN1419, the abandonment and reclamation of the mine continued with the decommissioning of the former fuel tank farm and treatment of PHC contaminated soil. At the end of the 2015 field season, approximately 3,000 m³ of PHC contaminated soil remained in the Upper and Lower Treatment Areas. Treatment of this soil is expected to be completed before the end of 2016.

Part D – Conditions Applying to Construction and Operations

No dikes or dams were constructed in 2015.

As-built construction drawings for the Non-Hazardous Waste Landfill facility are provided for Board review in Appendix B.

Part E – Conditions Applying to Water Use and Management

There were no uses of fresh water in 2015.

Part F – Conditions Applying to Waste Disposal and Management

In 2015, effluent quality limits specified by Water Licence 1AR-NAN1419 at monitoring station 159-4 were met. Further information on surface water quality monitoring undertaken in 2015 is provided in Appendix C.

No significant amounts of waste were generated in 2015. Small quantities of sewage and domestic waste produced at the tank farm remediation site were disposed of in the Arctic Bay landfill and sewage lagoon. Hamlet authorisation to utilize the Arctic Bay landfill was received on March 30, 2015.

A liner remaining in the tank farm area was removed and stored at the dock site. The liner will be transferred to the CanZinco landfill during decommissioning of the landfarm treatment facilities.

Part G – Conditions Applying to Modifications

No modifications to water use and waste disposal related structures and facilities were carried out in 2015.

Part H – Conditions Applying to Emergency Response and Spill Contingency Planning

Approximately 10 kg of lead concentrate impacted soil was spilled during removal of a storage crate at the dock site. The spilled material and adjacent soil were excavated and sampling conducted to confirm all contaminated materials had been remediated. The spill was reported to the NWT/NU Spill Report Line. Further information about the spill is provided in the Contaminated Soil Remediation 2015 Progress Report attached as Appendix G.

Part I – Conditions Applying to the Monitoring Program

Geotechnical and surface water quality monitoring conforming to the requirements of Part I and Schedule I of Water Licence 1AR-NAN1419 were completed in 2015. The results of the monitoring program are detailed in the monitoring reports appended to this letter (Appendices C, D, E and F).

Part J – Conditions Applying to Abandonment, Reclamation and Closure

2015 abandonment and reclamation activities completed at the former fuel tank farm area are described in the Contaminated Site Remediation Progress Report provided in Appendix G. Based on current information about contaminated soil volumes and contaminate concentrations, the treatment of the petroleum hydrocarbon contaminated soil can most likely be concluded by September 2016.

Outstanding reclamation liabilities associated with the remediation of the former tank farm are estimated at approximately \$200,000. Reclamation expenditures in 2015 were in the order of \$200,000.

I trust that this letter and appended documentation meet your expectations. Please do not hesitate to contact me by phone or email should you have any questions or comments.

Sincerely,

A handwritten signature in blue ink, reading "Johan Skoglund". The signature is written in a cursive, flowing style.

Johan Skoglund
Group Manager Environment

Appendices:

- Appendix A: Inuktitut translation: Summary of this letter
- Appendix B: As-Built Construction Drawings Non-Hazardous Waste Landfill. SRK Consulting. 28 August 2015.
- Appendix C: 2015 Annual Water Quality Monitoring Report. Stantec. March 22, 2016.
- Appendix D: Inuktitut translation: Executive Summary of 2015 Water Quality Monitoring Report.
- Appendix E: 2015 Annual Geotechnical Inspection Report. BGC Engineering. March 30, 2016.
- Appendix F: Inuktitut translation: Executive summary of 2015 Geotechnical Inspection Report
- Appendix G: Contaminated Soil Remediation 2015 Progress Report. SRK Consulting. March 2016.
- Appendix H: Inuktitut translation: Executive summary of Contaminated Soil Remediation 2015 Progress Report