



March 24, 2017

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

Dear Ms. Autut,

Re: Water Licence 1AR-NAN1419 – 2016 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 2016 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:
 - Treatment of contaminated soil through volatilization and bioremediation;
 - Sampling and analysis to confirm treated soil met established soil quality remediation objectives;
 - Off-loading of remediated soil from the treatment facilities; and
 - Decommissioning of the soil treatment facilities.

There was no use of fresh water in 2016.

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 2016. 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, treatment of PHC contaminated soil in the former tank farm area was concluded during 2016. All remaining contaminated soil was treated and the treatment facilities decommissioned.

Part D – Conditions Applying to Construction and Operations

No dikes or dams were constructed in 2016.

Part E – Conditions Applying to Water Use and Management

There were no uses of fresh water in 2016.

Part F – Conditions Applying to Waste Disposal and Management

In 2016, 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 2016 is provided in Appendix B.

No significant amounts of waste were generated in 2016. 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.

Waste liners removed from the decommissioned soil treatment facilities are stockpiled in the former tank farm area. The liners will be disposed in the small non-hazardous waste landfill authorised by the Nunavut Water Board. The disposal will be completed in 2017 following which the landfill will be immediately covered and closed.

Part G – Conditions Applying to Modifications

No modifications to water uses were completed in 2016. As described above, the soil treatment facilities in the former tank farm area were decommissioned in 2016. Further information about the soil remediation and decommissioning of the treatment facilities is provided in the Contaminated Soil Remediation 2016 Progress Report attached as Appendix F.

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

No unauthorized discharges or significant spills occurred in 2016. The Spill Contingency Plan for the abandonment and reclamation of the fuel tank farm remained active and in force during the year.

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 2016. The results of the monitoring program are detailed in the monitoring reports appended to this letter (Appendices B, C, D and E).

Part J – Conditions Applying to Abandonment, Reclamation and Closure

2016 abandonment and reclamation activities completed at the former fuel tank farm area are described in the Contaminated Site Remediation Progress Report provided in Appendix F. Treatment of the petroleum hydrocarbon contaminated soil was concluded during 2016.

Outstanding reclamation liabilities associated with the remediation of the former tank farm are estimated at approximately \$50,000 relating to the disposal of waste liners and closure of the non-hazardous waste landfill. Reclamation expenditures in 2016 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,



Johan Skoglund
Group Manager Environment

Appendices:

- Appendix A: Inuktitut translation: Summary of this letter
- Appendix B: 2016 Annual Water Quality Monitoring Report. Stantec. February 9, 2017.
- Appendix C: Inuktitut translation: Executive Summary of 2016 Water Quality Monitoring Report.
- Appendix D: 2016 Annual Geotechnical Inspection Report. BGC Engineering. March 7, 2017.
- Appendix E: Inuktitut translation: Executive summary of 2016 Geotechnical Inspection Report
- Appendix F: Contaminated Soil Remediation 2016 Progress Report. SRK Consulting. February 2017.
- Appendix G: Inuktitut translation: Executive summary of Contaminated Soil Remediation 2016 Progress Report