

Executive Summary for the Water Licence Amendment & Renewal Application

Licensee: Department of National Defence – 1 Canadian Air Division
Licence: 3BC-ALT1015 Type “B”
Location: Canadian Forces Station (CFS) Alert, Ellesmere Island,
Qikiqtani Region, Nunavut.
Submitted: Department of National Defence – 10 August 2015

Amendment & renewal applications for the Nunavut Water Board (NWB) licence number 3BC-ALT1015 at CFS Alert from the Department of National Defence (DND) are enclosed. These applications contain a completed Supplemental Information Guideline for Landfarms with other supporting documents. As the licence expired on July 31, 2015, a renewal application is included.

Two amendments are proposed within the amendment application because:

1. a modification to the Waste Disposal System was completed in 2013 that included the construction of a new Land Farm Treatment Facility at ALT-10; and
2. water use monitoring at ALT-1 has revealed a higher actual water usage amount than permitted by the licence.

Amendment #1 – New Landfarm Facility (ALT-10)

A new landfarm treatment facility was constructed during the summer of 2013 at the Day Tank Fuel Farm (Lat: N 82°29'58.0"; Long: W 62°21'16.0"). The landfarm dimensions are 13 m by 29.5 m with a capacity of 500 m³. The intended purpose of the landfarm is to remediate hydrocarbon impacted soils. The final record drawings, stamped by a Professional Engineer, are attached in this application. DND would like to request NWB recognition and addition of this landfarm facility as “ALT-10 Landfarm” for the Surveillance Network Program (SNP). The effluent discharge criteria and conditions proposed are identical to those of the existing Landfarm Facility at ALT-11 (3BC-ALT1015 Part D, Items 11, 12, 13, and 14; Part J, Items 7, 8, and 9).

Amendment #2 – Water Use

As identified in the Water Use Inspection visits on July 10th 2013, and recently on June 29th to July 2nd 2015 by Aboriginal Affairs and Northern Affairs Canada (AANDC), the water usage amount at CFS Alert is above the licence limit of 185 m³/day. The actual average metered usage amount is 639 m³/day, which includes the actual average return flow amount of 497 m³/day. The actual average consumption amount by CFS Alert is 143 m³/day. These values are actual observations based on flow meter results. In previous years, DND calculated usage as the difference between intake and return amounts, as rationalized in the formula: Usage = Intake amount at source – Return amount at source. DND would like to propose increasing the following amounts to maintain a maximum potential Station consumption of 185 m³/day:

- a. Increase the water use limit to 700 m³/day;
- b. Increase the return water amount to 515 m³/day.

Alternatively, DND would also like to propose considering the Intake and Return water pipelines (the portion of the pipelines that carries raw water from the intake water source to the water treatment plant and back to the source; approximately 2.5 km in one direction length) as a diversion of the water course. The amount of raw water that is not used for treatment at the water treatment plant is directly returned to the source via the Return water pipeline. The constant flow of water in the Intake and Return water pipelines are required to prevent freezing and damages to the pipeline infrastructure.

Renewal – Water Licence

DND would like to submit the Renewal Application to renew the water licence for 5-10 years term. All proposed amendments to the water licence are contained in the Amendment Application and the Renewal Application. The Operation and Maintenance Plan was reviewed and updated as the only change was that DND retained a new accredited laboratory for analytical services; therefore, the Quality Assurance and Quality Control Plan of the Operation and Maintenance Plan was revised. The up to date Operation and Maintenance Plan is attached in this application package.

Licensee Name Change Request

In addition, please note that the amendment & renewal applications contain a licensee change, within DND, from the previous licensee of Colonel K.G. Horgan at 1 Canadian Air Division, Winnipeg, Manitoba, to:

Colonel D.O. Quinn,
Commander Real Property Operations Group,
Assistant Deputy Minister (Infrastructure & Environment),
101 Colonel By Drive,
Ottawa, ON, K1A 0K2.