Indigenous and Northern Affairs Canada | Affaires autochtones et du Nord Canada

Your file - Votre référence
8BD-IPD----

September 23, 2016

Our file - Notre référence
IQALUIT-#1098237

Licensing Department
Nunavut Water Board
P.O. Box 119
GJOA HAVEN, NU, X0B 1J0

Sent via email:licensing@nwb-oen.ca

Re: Technical Review of New Water Licence Application (No. 8BD-IPD----) – Geotechnical and Environmental Baseline Studies – Marie Cardona, Advisian (on behalf of the Government of Nunavut)

To Whom It May Concern,

Thank you for the Nunavut Water Board's August 24, 2016 notice of the above mentioned water licence application.

A memorandum is provided for the Nunavut Water Board's consideration. Comments and recommendations have been provided pursuant to Indigenous and Northern Affairs Canada's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

Please do not hesitate to contact me by telephone at 867-975-4738 or email at Jean.Allen@aandc-aadnc.gc.ca for further information.

Sincerely,

Jean Allen
Water Management Specialist
Water Resources Division
Indigenous and Northern Affairs Canada
P.O. Box 100
Iqaluit, NU X0A 0H0

Encl.

Cc. Scott Burgess, A/Manager, Water Resources, INAC, Nunavut Regional Office (NRO)
Erik Allain, Manager, Field Operations, INAC, NRO

Canada

Memorandum

To: Licensing Department, Nunavut Water Board

From: Jean Allen, Water Management Specialist, Indigenous and Northern Affairs Canada (INAC)

Cc: Scott Burgess, A/Manager, Water Resources, INAC
Erik Allain, Manager, Field Operations, INAC

Date: September 23, 2016

Re: Technical Review of New Application No. 8BD-IPD---- for Geotechnical and Environmental Baseline Studies – Iqaluit Port Development

Applicant: Marie Cardona, Advisian, on behalf of the Government of Nunavut
Project: Geotechnical and Environmental Baseline Studies – Iqaluit Portal Development
Region: Qikiqtani

Comments:

A. Background

On behalf of the Government of Nunavut, Marie Cardona of Advisian (the "applicant") applied for a Type B water licence for a maximum term of 2 years (November 2016 – November 2018) for geotechnical and environmental baseline studies to support the proposed deep water port (68°31'29.07" W, 63°43'26.82" N) and upgrades to the breakwater and boat ramp (68°30'41.45" W, 63°44'24.67" N) as part of the Iqaluit Port Project. While the proposed work is concentrated in the area surrounding the proposed port and breakwater sites (encompassing Crown, Municipal, and Commissioner's land), the use of freshwater may be required for drilling and a sump may be used to dispose of drill muds/cuttings.

A maximum volume of 2 m^3 per day (2 m^3/day) of freshwater (and 2 m^3/day of freshwater or seawater) is proposed and will be sourced from the municipality, while a maximum of 5m^3 drill cuttings will be pumped down the borehole, recirculated on the seabed, or disposed in a sump on land. No camp is proposed, no permanent or temporary structures will be erected, and a maximum crew of 20 is anticipated at the project site at any given time. Geotechnical studies include vibrocore and borehole drilling using a drill rig over land, ice, and/or on a barge. Environmental studies will take place primarily on foot or by boat and is proposed to include water and sediment quality, fish (including benthic invertebrates) and fish habitat, oceanography, migratory and marine birds, terrestrial vegetation and rare plants, and studies involving soil, geotechnical conditions, and geochemistry.

Hazardous materials on site is minimal (i.e., diesel, gasoline, hydraulic and lubricating oils, engine coolants, sample preservatives) and environmental management plans (i.e., spill prevention, waste management, wildlife mitigation and monitoring, abandonment and restoration) will be implemented to mitigate potential risks to the environment.

B. Results of review

On behalf of INAC's Water Resources Division, the following comments and recommendations are provided for the NWB's consideration:

1. Project Area

Source: 1) Water Licence Application, Study Area; and 2) Appendix 1 of supplementary management plans

Comment: While a map of the general area of the project extent was included in the application, additional information should be provided.

Recommendation 1: INAC recommends that a more detailed map be provided that includes proposed locations for the quarry, drilling activities, water use (particularly freshwater), storage of hazardous materials, spill kits, deposit of waste (particularly the sumps), and baseline monitoring.

2. Schedule

Source: 1) Water Licence Application, Box 24, 25; and 2) Supplemental Supporting Application Information, Section 4.

Comment: According to the application, environmental studies are anticipated to commence in the summer/fall of 2016 (the application indicates studies will commence in September 2016, despite a requested date of issuance of November 2016), while summer geotechnical studies were to commence in 2016 or 2017. Seeing that the water licence process is ongoing, it is unclear if and how the schedule may be impacted.

Recommendation 2: INAC recommends that the applicant clarify whether environmental and geotechnical studies originally scheduled for the summer/fall of 2016 will go ahead as planned or whether these studies will be postponed to the summer of 2017.

3. Water Use

Source: 1) Water Licence Application, Box 13; and 2) Supplemental Supporting Application Information, Section 14.

Comment: According to the application and supplementary information document, 2 m^3/day freshwater will likely be required for drilling at the quarry site but freshwater may or may not be required for drilling at the deep sea port. If freshwater is required at the deep sea port, an additional 2m^3 /day of freshwater may be required for drilling activities, yet the application requests only a total estimated quantity of 2m^3/day water for geotechnical drilling.

Recommendation 3: INAC recommends that: 1) the applicant confirm the water source(s) for drilling purposes (Koojesse Inlet vs. Municipal) with the NWB and INAC Inspector, once a final decision has been made; 2) the applicant clarify the total quantity of freshwater requested for drilling purposes; and 3) water sources (freshwater vs. seawater) are distinctly identified in the annual report(s).

4. Freshwater Source

Source: 1) Water Licence Application, Box 13; and 2) Supplemental Supporting Application Information, Section 14.

Comment: In the application, freshwater is used interchangeably with municipal water, but it is unclear whether freshwater will be drawn from nearby water bodies within the municipality or whether treated water will be obtained from the municipal water treatment plant.

Recommendation 4: INAC recommends that the applicant clarify whether or not freshwater will be collected from nearby raw freshwater sources.

5. Disposal of Drill Cuttings

Source: 1) Water Licence Application, Box 13, 14, 15; and 2) Supplemental Supporting Application Information, Section 14.

Comment: The application proposes various potential disposal methods for drill cuttings including: their return to the borehole, recirculation to the seabed, or disposed in a sump on land (at the quarry site). Should a sump be used for the disposal of drill cuttings, additional information should be provided for review (i.e., sump location(s), water management, reclamation and restoration, etc.).

Recommendation 5: INAC requests clarification on the disposal method for drill cuttings and should the drill cuttings be disposed on land, standard terms and conditions regarding sumps are recommended.

6. Spill Contingency

Source: 1) Spill Prevention Plan

Comment: Drilling is proposed on land, over water, and on snow/ice. While general spill response directions are provided for land and water spills in Section 4.2.4, there is no direction for spills on ice or snow.

Recommendation 6: INAC recommends that the Spill Prevention Plan include directions for spill response on snow and ice.

7. Waste Management

Source: 1) Spill Prevention Plan; 2) Waste Management Plan; and 3) Abandonment and Restoration Plan

Comment: The Spill Prevention Plan indicates that contaminated materials will be disposed of according to the Waste Management Plan. While mitigation measures to prevent spills are included, no plans for disposal could be found in the said plan. However, the Abandonment and Restoration Plan does indicate that spills will be cleaned up and areas restored to pre-study conditions.

Recommendation 7: While it is clear that waste will be removed from the site on completion of the baseline studies, disposal of waste has not been included in the management plans referenced above. While it is likely that waste will be disposed in accordance with the municipal water licence, INAC recommends that the plan for disposal of waste is specified in relevant management plans.