



## Memorandum

Project: Resolute Bay Water License Renewal

Subject: Wastewater Treatment System Clarifications

Date: October 27, 2020

To: Bhabesh Roy

From: Daryl Burke

Distribution: Tony Whalen (EXP), Eric Bell (EXP)

This technical memorandum will serve to address additional clarifications as a result of the Resolute Bay Water License Renewal technical hearing. Three questions were raised regarding the wastewater treatment system with responses by EXP provided as follows.

1. A question was asked about the reported concentrations for the wastewater influent characteristics for design and whether this included both the Town and Airport sites.

EXP Response: Based on the current data we have, we believe the concentrations for design reported in the EXP technical memo dated March 20, 2020 to be reflective of the combined wastewater from both the town and airport sites. The recommended values for BOD and TSS were 110 mg/L and 125 mg/L, respectively. These concentrations were recommended based on the current flow data we have available to us. With the installation of the new flowmeter, we anticipate that we will have access to better flow data which may change both our future wastewater flow and concentration values for design. This would all be revisited and recalculated prior to proceeding to detailed design after better flow data is established. As a point of comparison, the highest values we have seen from 2019 sampling data of the raw wastewater for BOD and TSS were 18 mg/L and 35 mg/L respectively.

2. A question was asked about the size of the proposed wastewater treatment plant building.

EXP Response: A conceptual building size of 36 m x 30 m has been proposed. Based on current conceptual treatment process sizing, this would house all mechanical and biological treatment equipment as well as other support spaces such as lab, office, washroom, and maintenance areas.

3. It was asked if the fecal coliform limits were being proposed for before and/or after the construction of the new wastewater treatment facility.

EXP Response: The fecal coliform limits proposed in the EXP memo dated August 29, 2020 are to cover a period prior to construction of the new wastewater treatment facility. The new wastewater treatment facility will include ultraviolet (UV) disinfection that would deactivate the majority of the fecal coliforms present in the incoming wastewater. Prior to detailed to detailed

design, new fecal coliform limits would be established that would be more in line with this significant improvement in treatment performance.

We trust that this memo has adequately responded to the questions raised during the technical hearing. If you have additional questions, please feel free to contact me directly.

Submitted By:



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