



June 17, 2014

Project No. OTT-00206333-A0 / 2.1

Mr. Bhabesh Roy, M.A.S.C., P.Eng..
Municipal Planning Engineer
Community Government Services
Baffin Region, Government of Nunavut
P.O. Box 379, Pond Inlet, X0A 0S0

Re: Resolute Bay
Resolute Utilidor System: Water License #3BM-RUT1012 Application

Dear Bhabesh:

This is in response to your request for clarification as to the current and future quality of the wastewater effluent being discharged from the Resolute Bay Utilidor system. As you are aware, the Utilidor system is in the process of being upgraded for various reasons, but one result will be a reduction in the bleed water to the wastewater collection system. This bleed water is being added to prevent the sewage flows from freezing but these bleed flows are excessive resulting in a large quantity of wasted treated water.

Currently, there is no wastewater treatment system in place in Resolute Bay (there was a comminutor (grinder) in place but it no longer is operational). Domestic wastewater is discharged into Resolute Harbour at the shore line above the water line (large solids, e.g., paper products, plastics, etc. are present).

The current wastewater quality at the point of discharge is "good" due to the high dilution rate as a result of the added bleed water. Once the Utilidor system is replaced and the bleed water addition is reduced, there will be an anticipated increase in the concentration of effluent parameters. In the event wastewater treatment is added, the effluent quality would be improved. Below is a summary of the effluent quality (existing and future).

Parameter	Concentration		
	Existing	Utilidor Replaced	Post Wastewater Treatment
BOD, mg/L	<10	80 – 100	<25*
TSS, mg/L	<10	80 – 100	<25*
pH	6.5 – 7.5	6.5 – 7.5	6.5 – 7.5
F. Coliforms, MPN/100mL	>10,000	>10,000	<200

*National Performance Standard

The effluent quality from the wastewater treatment system (above) would be what is expected from a secondary treatment system. It must be noted that these values are anticipated performance values and should be used to demonstrate compliance, not to set treatment criteria. An Environmental Risk Assessment would be the means to best determine effluent criteria if the National Performance Standard is deemed to be inappropriate for this site.

exp Services Inc.

*Government of Nunavut
Re: Resolute Utilidor System
Project Number: OTT-00206333-A0
Date: June 17, 2014*

Do not hesitate to contact the undersigned if you have any questions

Sincerely,

A handwritten signature in blue ink, appearing to read "Stephen SBL".

Stephen G. Bliss, M.Sc.E., P.Eng.
Senior Process Engineer

exp Services Inc.

cc: Steven Burden, P.Eng.
exp Services Inc.