



Memorandum

Project Name: Pangnirtung WWTP	Project #: OTT-00204430-A0 /File No: 3.1
To: Bhabesh Roy, P.Eng.	From: Stephen Bliss
Date: February 25, 2015	
Subject: Temporary Bypass of Screened Wastewater During Plant Start-up	
Prepared By: Stephen Bliss, P.Eng.	
Distribution: Nathanael Andoseh (GN), Daryl Burke (exp), Blair Burke (exp)	

Further to our conversation yesterday regarding the Temporary Bypass, this memo is to address why the Temporary Bypass condition for the Pangnirtung WWTP requires an extension. A memo (dated December 10, 2014) described the reasons why a Temporary Bypass would be required until the end of February, 2015.

Through the start-up period, the amount of flow being treated daily was gradually increased with the remainder bypassing the plant. The current operation of the plant has the treated daily flow approaching 100%. There have been operational “glitches” that have required the plant to stop full treatment (e.g. control interconnects not working), but these are generally of short duration. The fact that they are occurring is not surprising as events similar to these can occur during the start-up period.

Currently, one of the membrane treatment trains is off-line due to a failed pump. Replacement pumps are in transit and should be at the plant in early March. The remaining treatment train is capable of treating most (if not all) of the current average daily flows, but there could be circumstances where the total daily flow could exceed the treatment train capacity. Depending on the water level in the Equalization Tank (which can provide a reasonable volume of short-term storage), there may, or may not, be a bypass event. Until the failed pump is replaced, there is the possibility that a portion of the total daily flow could bypass the plant.

Also at the plant, the influent submersible pumps and piping systems require replacement due to general wear and tear (the pumps are worn out which has reduced their pumping capacity as well as allowing them to clog more frequently and the piping has become corroded and is leaking). However, to complete the work, this section of the plant will have to be taken off-line. This will mean that no wastewater can be accepted at the plant. To reduce/minimize the complete bypassing of the plant, it may be possible to have the contractor complete the work on weekends (have no truck delivery) and work in the hours the trucks are not hauling.

Once this work is completed, the plant should be capable of treating 100% of the municipal wastewater generated within the Hamlet. With the upcoming pumping and piping changes, and due to "growing pains" in general, the Temporary Bypass condition should be extended a further three (3) months to the end of May. During this period, other than for the pumping and piping changes, it is not the intent to bypass the plant; however, an occasional bypass event may occur.

Submitted by:

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

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