Kustra, Ryan

From: Kustra, Ryan
Sent: Tuesday, January 18, 2011 9:16 AM
To: 'Boswick, Robert (CON)'
Cc: Beyak, Brian; Tracey Braun; Elise Dagdick ; Barnes, Nicholas; Jim Thomas (jthomas@htfc.mb.ca); John Whitaker; Manzer, Mark; Michael Lawrenchuk; William Kennedy
Subject: RE: Keeyask Construction Camp STP
Attachments: 11 01 18 KIP - sewage treatment.doc

Rob,

Attached is the information that you were requesting. In providing this information, I'll give you a call to confirm that it meets your needs, and then will provide a formal response to your letter.

I should add Manitoba Hydro, on behalf of the partnership, intends to develop performance requirements that allow suppliers to submit a design that meets or exceeds those requirements. Since the development of these performance requirements and the design has not been completed some of the information provided such as the residuals management process cannot be fully defined at this time.
As we discussed, we anticipate that Manitoba Conservation will place conditions in the KIP licence, such that the Keeyask partnership will provide you with appropriate information for your review and approval prior to the construction of the wastewater treatment plant.

As a quick reminder, the Keeyask Infrastructure Project includes the construction of a mechanical wastewater treatment plant. While the KIP includes the construction of the plant, it does not include the operation of the plant. There will be no outflow connected to the river.

The operation of the plant and the connection of an outflow pipe with the river will be covered by the Keeyask Generation Project. That application will probably be made this year. We hope to start construction of the GS in 2014.

From: Boswick, Robert (CON) [mailto:Robert.Boswick@gov.mb.ca]
Sent: Tuesday, January 11, 2011 2:15 PM
To: Kustra, Ryan
Subject: Keeyask Construction Camp STP

Good afternoon Ryan,

Attached is a letter requesting additional information regarding the sewage treatment plant proposed for the Keeyask Generating Station construction camp.

Signed original to follow in mail.

Please discuss as necessary.

Robert Boswick, P.Eng.
Environmental Engineer
Manitoba Conservation
Suite 160, 123 Main Street

1. Please confirm the max daily population of the Main camp phase I is 500 person?

Under the Keeyask Infrastructure Project the Main Camp (Phase I) will only have accommodations for 500 people; however, the potable water supply and waste water treatment facilities will be sized to handle a peak of 2500 people. That number is based on an expected capacity for the Keeyask camp of 2000 people, plus a buffer of 500.

2. What will be the max daily flow rate (cubic meters) and organic loading (kilograms of five-day biochemical oxygen demand) on the treatment plant over any 24hr period?

Parameter	Main Camp Phase I	Main Camp Phase II Peak
Population	500 person	2500 person (2000 estimated peak + 500 buffer)
Per capita flow	340 litres/capita	340 litres/capita
Total flow	170 cubic meters/day	850 cubic meters/day
Max day (peak factor of 2)	340 cubic meters/day	1700 cubic meters/day
Average per capita CBOD	80 grams/capita	80 grams/capita
Average CBOD Laod	40 kg/day	200 kg/day
Peak Organic load CBOD (peak factor 1.5)	60 kg/day	300 kg/day

3. Please specify the effluent discharge route and receiving body.

The final outfall location has not been selected; however the intent is for it to be downstream of the camp and generating station into the main channel of the Nelson River. The initial length of outfall channel will be constructed under the KIP, but the actual outfall structure at the river will not be constructed an application is made and received for the Keeyask Generation Project.

4. What will be the total ammonia concentration (mg/l) in the waste water effluent?

The total ammonia concentration would be less than 5 mg/l the total nitrogen would be less than 15 mg/l.

5. What will be the total suspended solids content (mg/l) in the waste water effluent as indicated by the non-filterable residues?

The total suspended solids content would be less than 25 mg/l.

6. What type of disinfection process is proposed for the sewage treatment plant?

UV disinfection is proposed,

7. What method of residual solids management and disposal are proposed for the waste water treatment plant.

The residual sludge management system has not been finalized, however, it is anticipated to include:
Aerobic digestion/stabilization on site, dewatering in a filter box, and disposal at a licensed landfill.