From:	Deon Bridge
To:	Phyllis Beaulieu
Subject:	FW: Waterboard licence application 8BW-KUG0809
Date:	Monday, November 10, 2008 2:07:51 PM

From: Livingston, Tom [mailto:TLivingston@GOV.NU.CA]
Sent: Tuesday, November 04, 2008 9:00 AM
To: dbridge@nunavutwaterboard.org
Subject: RE: Waterboard licence application 8BW-KUG0809

Hi, Deon,

Our consultant has replied to your questions in blue below.

Regards,

Tom Livingston

-----Original Message-----
From: dbridge@nunavutwaterboard.org [mailto:dbridge@nunavutwaterboard.org]
Sent: September 2, 2008 3:16 PM
To: Livingston, Tom
Subject: Waterboard licence application 8BW-KUG0809

Hello Mr. Livingston

My name is Deon Bridge and I am the technical advisor at the nunavut water board assigned to the Kugluktuk file. First I would like to apologize for the slow activity on the file. Rest assured I will do everything I can to get the licence to the board for voting as soon as is possible.

The reason i am writing this email is that there are several issues that need to be clarified before the licence application can be considered complete;

First we need to know the maximum pump test volume that will be used- i understand it will be difficult to gauge but for the purpose of the licence a high ball park volume should be known.

Although the capacity of the wells completed under the river is expected to be less than 15 L/s there will be occasions when higher pumping rates will be completed that may be up to 45 L/s for very short periods. In order to allow flexibility in the well construction we request an allowance for pumping at rates up to 45 L/s.

Second what will be done with the pump volume water? It cannot be returned to source as it might have metals, suspended solids etc. in it.

Second what will be done with the pump volume water? It cannot be returned to source as it might have metals, suspended solids etc. in it. If it is to be directed to a sump then what is the size/location of the sump and how will overland flow or overflow be avoided?

Water pumped from the directionally drilled holes will at some times contain silt and sand sized material. It is proposed that these fluids be pumped into an on site lined containment area that will hold any turbid water. This water will be trucked from the site and disposed of at a distance from the river. Note that the water is water pumped from the wells is water that would normally discharge into the river naturally.

Once the wells are properly developed and pumps are installed the water will be pumped from the wells using submersible pumps. This water will be essentially clear and we will have chemical analyses of the water. This water will be pumped directly back into the Coppermine River as it will have a lower level of suspended solids and better water quality than the river itself.

Finally what will happen with the drill holes after testing is complete and how will contamination of the ground water be prevented if the drill holes are not sealed?

Any wells that are not to be used on a long term basis will be sealed using NSF approved bentonite grout. The remaining wells will be protected at the surface from damage and capped to prevent foreign debris from entering the wells.

Thank you for your time, if you have any questions please feel free to contact me directly at 360-6338 or by email at dbridge@nunavutwaterboard.org