

From: **John Roesch** <srproject@kitia.ca>
Date: Wednesday, September 21, 2016
Subject: Additional comments on
To: Sonia Aredes <sonia.aredes@nwb-oen.ca>
Cc: jdonihee@willmsshier.com

Hello Sonia, below are some additional comments Neil Hutchison, our aquatic scientist, had on TMAC's proposed language changes to the water license. If John Donihee has any additional comments to supplement Neil Hutchinson's comments, he will pass them on to you.

John Roesch

Hi John

It is not just the language but some technical changes that appear to be important at first glance. I have just reviewed the suggested changes and have not had time to dig into the depths of the reports and previous licence and rationale to cross check my concerns. That would be a major job that I can't get to promptly. But please consider the following:

1. p. 6. 2a. I believe that the Board can change Schedules without an amendment– John D to confirm
2. p. 7. 4. Timeline for acting on revisions – This makes sense to me but JD should confirm legality of acting on plans prior to Board approval
3. p. 22 1. Water volumes – TMAC wants to exclude non-consumptive uses and diverted waters from the Water Licence. The directly contradicts the existing WL term which states "The total volume of the use of Waters from all sources and for all purposes, shall not exceed 480,000 cubic meters per year, unless otherwise approved by the Board in writing." And they say . For clarity, non-consumptive uses and diversions are permitted water uses in accordance with this Licence and are not limited by volume.
- need to know where it says non-consumption and diversion are permitted – this needs some analysis – to clarify where they propose to divert from and where to and what they consider non-consumptive
4. p. 31 21. TMAC wants to replace operating to the standards of the inspector with operating to generally accepted industry best practice as the latter is an "objective standard". I would suggest that the facilities in question are critical to environmental safety and need to meet the inspector's approval, that the inspector will be versed in industry best practice and that reliance on TMACs interpretation of industry best practice is a much more subjective standard than the approval of the inspector.
5. P. 32, 23. Although discharge of contact waters is subject to MMER, as TMAC state, that does not mean that the NWB can't provide for more stringent standards if warranted and they have done so here. The MMER limits are less protective than the limits that TMAC want removed from the licence. Note also that Part c states that the limits may apply to tundra discharge not water discharge. TMAC would need to provide an analysis showing that the MMER limits are protective of the proposed receivers.
6. P. 38, 30. TMAC should provide a comparison of water quality at TL-2 and TL-3 to show the validity of using one as a surrogate for the other.
7. P. 42 5. They only want to report spills that meet criteria of the Spills Regulation as smaller spills may be "environmentally inconsequential". While I respect the regulation I don't think the consequences of a spill can necessarily be determined at the time of occurrence and the analysis would be subjective. In addition, the cumulative record of spills, no matter how "inconsequential" provides a valuable record of the operator care and management practices. Recommend keeping the existing wording.

8. P. 47 16. Thermistors – although they now intend to mine into the talik the data from the thermistors would be a valuable record of how the activity influenced rock temperatures and if their activities changed the magnitude of the talk.

9. P. 49, 20. While monthly data would show the extent of any erosion , it would not provide much opportunity to detect it early and act on it. Suggest weekly inspections.

10. P. 66 Definition of Maximum Average Concentration - they want to remove “consecutive” as any four samples can make up an average. This may be true but removing the requirement for consecutive samples means that they could choose to omit samples from the average calculation. I would recommend that we not accept this.

11. P. 82 4. Remove requirement for reporting on model recalibration and 4 other reporting requirements from Item G.33. I would suggest that these are critical for adaptive management and should be summarized and reported to compare predictions with operational results.

12. P. 83, 7. They want to remove monitoring of inflows and outflows and replace with reporting of the water level in Doris Lake to show “the potential for lake level drawdown”. Monitoring of the lake will show the actual drawdown but, without flows from TL1, 2,3 4 they will not have any data to determine causation of nay change on lake level. Recommend we do not accept this change.