



October 20, 2020

Ms. Tyree Mullaney
Regulatory Specialist
Mackenzie Valley Land and Water Board
4922 – 48TH Street
Yellowknife, NT
X1A 2P6

Dear Ms. Mullaney:

**Re: Northwest Territories Power Corporation
Water Licence Renewal Application – MV2020L4-0005
Bluefish Power Generation Facility
Request for Intervention**

On July 16, 2020, Northwest Territories Power Corporation (NTPC) applied for a renewal of Water Licence MV2020L4-0005 related to the continued operation of the Bluefish Hydroelectric Facility. The Government of the Northwest Territories (GNWT), Department of Environment and Natural Resources (ENR) provided initial comments on this application on August 21, 2020 and responses were provided by NTPC on September 3, 2020. On September 17, 2020, ENR met with NTPC's consultant from Golder Associates Ltd. (Golder) to discuss ENR's recommendations and NTPC's responses to the application. ENR also attended the Technical Session on September 22, 2020. Following the technical session, ENR shared its proposed recommendations for intervention with the Tłı̨ch̨o Government (TG) and North Slave Métis Alliance (NSMA) on September 25, 2020, upon which the TG requested to meet ENR to discuss further. ENR met with TG on October 7, 2020, where both parties discussed their proposed recommendations and came to a common conclusion.

From these discussions, ENR would like to provide the following additional comments and recommendations to the Mackenzie Valley Land and Water Board (the Board) for consideration.

Slimy Sculpin Mercury Monitoring

During the public review, ENR inquired about future environmental monitoring at the Bluefish facility and requested additional information to determine whether an Aquatic Effects Monitoring Program (AEMP) may be required. ENR notes that the NSMA commented in support of ENR's comments and recommendations on this matter. The TG also noted concerns with mercury concentration levels in fish and whether they are safe to



consume, recommending this information be directly communicated to the communities. Although satisfied with NTPC's reasoning for not requiring an AEMP, ENR is of the opinion that further mercury monitoring is warranted.

As a condition of previous Water Licences MV2005L4-0008 and MV2009L4-2004, NTPC was required to conduct a mercury monitoring program to evaluate the release of methyl-mercury as a result of the flooding of the 3.4 hectare area between the Existing Dam and the New Primary Impoundment Dam. Slimy Sculpin were monitored from 2012 to 2015. Northern Pike and Lake Trout were monitored in 2012 and 2016. The 2016 monitoring was initiated as a follow-up in response to the higher mercury concentrations shown in Slimy Sculpin. The primary objective of this follow-up study was to confirm that the game fish remained safe for human consumption. Although being satisfied with the decreasing tissue concentration levels in Lake Trout in 2016, another follow-up study was conducted in 2018 for Slimy Sculpin and Northern Pike. From the results of the 2018 report, NTPC concluded that "mercury concentrations have stabilized and/or decreased in Slimy Sculpin, Lake Trout, and Northern Pike and are returning to baseline conditions in the recently inundated area of Bluefish Lake". It was also noted during the Technical Session that, to date, a game fish that exceeds the Canadian Food Inspection Agency guidelines has not been caught (MVLWB, 2020, p.62). For these reasons, NTPC determined the study to be complete.

Given that mercury monitoring has not been conducted since 2018 and the limited datasets provided for Northern Pike and Lake Trout, ENR is of the opinion that additional monitoring is warranted to confirm the trend. Following discussions with TG, in regards to limiting the monitoring impact on large-bodied fish populations in Bluefish Lake, ENR is satisfied that this confirmation could be achieved through monitoring only Slimy Sculpin. ENR is therefore recommending NTPC conduct a Slimy Sculpin mercury monitoring study in 2021 to confirm that mercury concentrations are returning to baseline. The results of the study should be submitted to the Board for review and approval, and the need for further monitoring of Slimy Sculpin and/or of large-bodied fish can be determined at that time.

Engagement with communities is also warranted due to the concerns raised during the public review, the close proximity of Bluefish Lake to communities (Dettah, Ndilo, Yellowknife and Behchokò) and the potential use of the lake for fish harvesting. ENR is of the opinion that NTPC should engage with its stakeholder groups to communicate the results of the mercury monitoring study.



Recommendations:

ENR recommends NTPC conduct a Slimy Sculpin mercury monitoring study in 2021 to confirm the trends in mercury concentrations in Slimy Sculpin.

ENR recommends the study results be submitted to the Board for approval to assist in determining whether further monitoring is warranted.

ENR recommends NTPC engage with stakeholders to communicate the results of the Slimy Sculpin mercury monitoring study.

Water Licence Renewal Process

ENR appreciates the engagement conducted by NTPC with ENR during this renewal process. ENR does not have any further technical comments or concerns at this time other than those expressed herein. ENR is of the opinion that the process can continue as a written proceeding; however, if other Parties request a public hearing, ENR is prepared to participate in the proceedings, either as a written proceeding or a virtual meeting, at the Board's request.

Should you have any questions or concerns, please do not hesitate to contact Patrick Clancy, Environmental Regulatory Analyst at (867) 767-9233 Ext: 53096 or email patrick.clancy@gov.nt.ca.

Sincerely,

Patrick Clancy
Environmental Regulatory Analyst
Environmental Assessment and Monitoring Section
Environmental Stewardship and Climate Change Division
Department of Environment and Natural Resources
Government of the Northwest Territories



References

Golder Associates Ltd (Golder). 2020. Environmental Studies and Screening-Level Environmental Assessment – Blue Fish Hydroelectric Facility. http://registry.mvlwb.ca/Documents/MV2020L4-0005/MV2020L4-0005%20-%20NTPC%20-%20Bluefish%20-%20Environmental%20Studies%20Summary%20and%20Screening-Level%20Environmental%20Assessment-%20July16_20.pdf

Mackenzie Valley Land and Water Board (MVLWB). 2020. Northwest Territories Power Corporation – Bluefish Power Generation Facility MV2020L4-0005 Technical Session. September 22, 2020. http://registry.mvlwb.ca/Documents/MV2020L4-0005/MV2020L4-0005%20-%20NTPC%20-%20Bluefish%20-%20Technical%20Session%20-%20Sept%2022-20-Transcripts%20-%20Sept24_20.pdf