



7th Floor - 4922 48th Street,
P.O. Box 2130, Yellowknife NT X1A 2P6

Tel: 867-669-0506 Fax: 867-873-6610
www.mvlwb.com

Staff Report

Applicant: Northwest Territories Power Corporation	
Location: Jackfish Power Generating Station	File Number: MV2019L1-0001
Date Prepared: April 7, 2021	Date of Board Meeting: April 22, 2021
Subject: Compliance date change request	

1. Purpose

The purpose of this Report is to present to the Mackenzie Valley Land and Water Board (MVLWB/the Board) a compliance date change request submitted by Northwest Territories Power Corporation (NTPC) for Water Licence (Licence) MV2019L1-0001.

2. Background

- October 18, 2019 – Issuance of Licence MV2019L1-0001;
- March 5, 2021 – Request received;
- March 9, 2021 – Request deemed complete and review commenced;
- March 30, 2021 – Reviewer comments and recommendations due and received;
- April 6, 2021– Responses due and received;
- **April 22, 2021 – Request presented to the Board for decision; and**
- October 17, 2044 – Expiration of Licence MV2019L1-0001.

3. Discussion

On October 18, 2019, NTPC received a Type A Water Licence for the operation of the Jackfish Power Generating Facility (Jackfish). When the Licence was issued there were a number of items required to be submitted for Board approval.

On March 5, 2021, the Board received a request from NTPC to change the submission dates of the required reports and studies. The table below outlines the request put forward by NTPC.

Table 1: Submission Date Change Request

Condition	Plan/Report/Study	Submission Date	New Proposed Date
Part E, condition 4	Thermal Plume Delineation Study	90 days following effective date of this licence	May 31, 2021
Part E, condition 5	Thermal Plume Delineation Study Report	August 1, 2021	January 30, 2023
Part F, condition 2	AEMP Design Plan	November 1, 2021	April 30, 2023
Part F, condition 5	AEMP Annual Report	March 31, 2023 and every year thereafter	March 31, 2024 and every year thereafter

The Licence also requires all volume and temperature measurements to be recorded continuously during periods of discharge, this required upgrades to the instrumentation. The current system allows for the temperature data to be recorded by not continuous flow. The temperature and flow data are required for the initial design of the Thermal Plume Delineation Study Design to ensure that the correct area is being monitored.

To account for the COVID-19 delays and to allow time for current operation conditions to pass and/or detailed policies to be developed to complete work under current conditions NTPC is requesting the submission date change.

All of the changes that are being requested by NTPC are interconnected, the correct instrumentation is required for the completion of the Thermal Plume Study Design, and in turn NTPC will need the Thermal Plume Study Design to be approved to complete the work which will feed into the Thermal Plume Delineation Study Report which in turn assists with the design of the AEMP.

In the Licence, Part B, condition 13 states:

The Schedules and any compliance dates specified in this Licence may be updated at the discretion of the Board.

This condition Licence allows the Board to make change to the Schedules and submission dates without a public hearing or Ministerial approval, even though this is a Type A Water Licence.

4. Comments

Board staff have worked with NTPC to ensure that the proposed schedule of the submissions will work with the information requirements needed to progress each of the Reports/Studies/Designs.

5. Public Review

By March 30, 2021, comments and recommendations on the Request were received from 1 reviewer:

- Government of the Northwest Territories – Environment and Natural Resources

There were no concerns identified during the review of this Request.

6. Security

On May 4, 1988, NTPC was witnessed as a crown corporation when the Northern Canada Power Commission was acquired from Her Majesty the Queen in Right of Canada by the Government of the Northwest Territories. As a Crown Corporation, NTPC is exempt from paying security depositions or fees in relation to its hydro facility.

Security is not applicable to this Project as per section 94 of the *Mackenzie Valley Resource Management Act* (MVRMA) because the territorial government is not required to post security pursuant to section 71 of the MVRMA.

7. Conclusion

Based on the information provided in the application and the public review, the proposed changes are not likely to have a significant adverse impact on the environment or be a cause of public concern.

The draft Licence condition changes (highlighted) have been attached for the Board consideration.

Board staff conclude there are no outstanding issues or concerns with this Request.

8. Recommendation

Board staff recommend the Board:

- a) **Make a motion to approve the change to the submission date for the Thermal Plume Delineation Study** as required by Part E, condition 4 to **May 31, 2021** as requested by Northwest Territories Power Corporation for Licence MV2019L1-0001.
- b) **Make a motion to approve the change to the submission date for the Thermal Plume Delineation Study Report** as required by Part E, condition 5 to **January 30, 2023** as requested by Northwest Territories Power Corporation for Licence MV2019L1-0001,
- c) **Make a motion to approve the change to the submission date for the AEMP Design Plan** as required by Part F, condition 2 to **April 30, 2023** as requested by Northwest Territories Power Corporation for Licence MV2019L1-0001.
- d) **Make a motion to approve the change to the submission date for the AEMP Annual Report** as required by Part F, condition 5 to **March 31, 2024** as requested by Northwest Territories Power Corporation for Licence MV2019L1-0001.

A draft decision letter is attached.

9. Attachments

- [MV2019L1-0001 – Water Licence](#)
- [Compliance Date Change Request from NWT Power Corporation](#)
- Review Summary and Attachments
- Draft Water Licence Cover Page
- Draft Water Licence Conditions
- Draft Decision Letter from the Board

Respectfully submitted,

A handwritten signature in black ink on a light yellow background. The signature reads "Tyree Mullaney" in a cursive script.

Tyree Mullaney
Regulatory Specialist

Review Comment Table

Board:	MVLWB																				
Review Item:	Jackfish Power Generation Station - Compliance Date Change																				
File(s):	MV2019L1-0001																				
Proponent:	Northwest Territories Power Corporation																				
Document(s):	Compliance Date Change Request (81 KB)																				
Item For Review Distributed On:	Mar 9 at 09:36 Distribution List																				
Reviewer Comments Due By:	Mar 30, 2021																				
Proponent Responses Due By:	Apr 5, 2021																				
Item Description:	<p>On October 18, 2019, Water Licence (Licence) MV2019L1-0001 was issued to Northwest Territories Power Corporation for the Jackfish Generating Facility in Yellowknife. The Licence includes conditions and requirements for various submissions. On March 5, 2021, NTPC requested that the compliance/submission dates be changed as there is a need to for instrumentation to be updated to assist in ensuring that all volume and temperatures measurement are recorded continuously during periods of discharges.</p> <p>Below you will find a table outlining the submission requirements as well as new proposed submission dates.</p> <table border="1"> <thead> <tr> <th>Condition</th> <th>Plan/Report/Study</th> <th>Submission Date</th> <th>New Proposed Date</th> </tr> </thead> <tbody> <tr> <td>Part E, condition 4</td> <td>Thermal Plume Delineation Study</td> <td>90 days following effective date of this licence</td> <td>May 31, 2021</td> </tr> <tr> <td>Part E, condition 5</td> <td>Thermal Plume Delineation Study Report</td> <td>August 1, 2021</td> <td>January 30, 2023</td> </tr> <tr> <td>Part F, condition 2</td> <td>AEMP Design Plan</td> <td>November 1, 2021</td> <td>April 30, 2023</td> </tr> <tr> <td>Part F, condition 5</td> <td>AEMP Annual Report</td> <td>March 31, 2023 and every year thereafter</td> <td>March 31, 2024 and every year thereafter</td> </tr> </tbody> </table> <p>Using the Online Review System (ORS); reviewers are invited to submit comments and recommendation on the document listed below by the review comment deadline specified. Reviewers may also wish to consider providing an overarching recommendation regarding whether the Board should approve the submission, to provide context for the comments and recommendations and assist the Board with</p>	Condition	Plan/Report/Study	Submission Date	New Proposed Date	Part E, condition 4	Thermal Plume Delineation Study	90 days following effective date of this licence	May 31, 2021	Part E, condition 5	Thermal Plume Delineation Study Report	August 1, 2021	January 30, 2023	Part F, condition 2	AEMP Design Plan	November 1, 2021	April 30, 2023	Part F, condition 5	AEMP Annual Report	March 31, 2023 and every year thereafter	March 31, 2024 and every year thereafter
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	<p>its decision. If reviewers seek clarification on the submission, they are encouraged to correspond directly with the Applicant prior to submitting comments and recommendations.</p> <p>If you have any questions or comments regarding this review or the Online Review System, please contact Tyree Mullaney at tyree@mvlwb.com</p>
Contact Information:	<p>Jen Potten 867-766-7468 Katherine Harris Tyree Mullaney 867-766-7464</p>

Comment Summary

GNWT - ENR - EAM (Environmental Assessment and Monitoring): Central Email GNWT				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Decision
3	General File	Comment (doc) ENR Letter with Comments and Recommendations Recommendation		
1	Topic: AEMP Design	Comment ENR notes that the request delay in the AEMP Design Plan is from November 1, 2021 to April 30, 2023, and for the AEMP Report until 2024. This appears to be a large delay, as the AEMP design could still commence while NTPC updates the instrumentation and plume delineation study. ENR suggests, in the interim, that NTPC could still advance the design and submit an update or host a workshop to demonstrate that work is still being completed on the updated AEMP design to ensure no further delays in the submittals. ENR also has uncertainty on the purpose of the AEMP report delay from 2023 to 2024. ENR is of the opinion that the AEMP Report could still be submitted with the omitted information from the instrumentation and plume study.	Apr 6: The regulatory process for MV2019L1-0001 and information for the AEMP to date has indicated that the AEMP will be focused on thermal effects from the operation of the cooling systems regulated by MV2019L1-0001; The thermal effects of the operation of the Jackfish cooling systems on Jackfish Lake have not yet been defined as additional monitoring equipment is required to properly complete this analysis as part of the Thermal Effects Study NTPC would be open to holding meetings or a workshop on the development of the AEMP but recommends that these would occur after the thermal effects are better quantified through the completion of the Thermal Effects Study. NTPC has been working with the MBLWB, external and internal stakeholders on updating	Proponent response is satisfactory.

		<p>Recommendation 1) ENR recommends NTPC provide a discussion on the AEMP design and AEMP Report Workplan to ensure that further delays are not encountered. A workshop or meeting on the AEMP design may help expedite the process.</p>	<p>monitoring equipment in the Jackfish Facility to comply with the new conditions in MV2019L1-0001 since late 2019. Updated instrumentation was required to monitor flow through the cooling systems as per MV2019L1-0001 and the data is required to complete the Thermal Effect Monitoring Study and subsequent AEMP. The Jackfish Instrumentation study began in late 2019 to determine a plan for updating infrastructure as required. The plan was completed and submitted to the MVLWB in April 2020. NTPC began to implement the instrumentation updates but the process was delayed multiple times due COVID-19 operational constraints, lack of access to systems due to a ransomware attack on NTPC in April 2020 and a lack of internal capacity to complete the required works. NTPC completed a formal submission and ORS review for an extension of submission dates for the Thermal Effects Study in the summer of 2020 but due to continued delays was not able to meet the updated deadlines. NTPC will complete the required instrumentation updates by September 2021 which will ensure the dates presented in this most recent submission for extension of compliance dates will be met. As of March 31, 2021, NTPC has installed and commissioned permanent temperature monitoring in all</p>	
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			<p>three plants utilizing raw water cooling at Jackfish. This temperature monitoring data is continuously collected in 15-minute intervals, and recorded using a data logger connected to NTPCs business information network. The same logger will be used to capture flow data when the installation of flow meters is completed in the summer of 2021. The flow meter installation requires changes to cooling water piping inside the plants, and must be completed during the summer months when electrical demand is low enough for an entire plant to be taken offline. It was not possible to complete these changes during the summer months in 2020 due to COVID restrictions</p>	
2	None	<p>Comment None Recommendation 2) ENR also recommends that NTPC discuss the implications of submitting a AEMP report in 2023 with the omitted information instead of submittal in 2024 with the plume delineation results.</p>	<p>Apr 6: The terms of the AEMP program will be determined after the completion of the Thermal Effects Study as outlined in MV2019L1-0001. Given the current schedule the AEMP would not be fully developed in time for a 2023 submission which is why NTPC is requesting a deferral to 2024 for submission.</p>	<p>Proponent response is satisfactory.</p>