

From: Engagement <Engagement@ntpc.com>

Sent: Thursday, July 28, 2022 10:04 AM

To: Shannon Allerston <sallerston@mvlwb.com>

Cc: Patrick Smith <psmith@ntpc.com>; Matthew Miller <MMiller@ntpc.com>; David Dewar <ddewar@ntpc.com>; Katherine Harris <kharris@mvlwb.com>; Angela Plautz <aplautz@mvlwb.com>; Chris Hotson <chotson@mvlwb.com>; Emma Junker <ejunker@mvlwb.com>; Belinda Whitford <Bwhitford@ntpc.com>; Alex Love <ALove@ntpc.com>; Engagement <Engagement@ntpc.com>

Subject: Re: Engagement Notification - Taltson Fisheries Act Authorization Amendment

Good morning Shannon,

Apologies for the delay, we are happy to provide a response. See below for the response to both of your inquiries, 1.) OMS Manual updates and 2.) Water Levels and Flows:

OMS Manual Updates

We are currently working on updating the Operations, Maintenance and Surveillance (OMS) Manual to include any additional changes since the 2013 version, and to include more information on the annual shutdowns. As the Overhaul Shutdown is a onetime event, we would prefer to create a separate document which would include the Pulse Flow Standard Operating Procedure. Please let us know if this would be acceptable.

Water Levels and Flows

For the response below, NTPC has conducted a thorough review of research on water levels and flows at Taltson (Hec Res Sim, Specialist Memos, and Annual WL Reports) and provided interpretation (below). In regard to Conditions C.2, C.3 and C.4 of MV2011L4-0002, NTPC can confirm that the overhaul shutdown planned for April through October 2023 will not contravene the conditions of the water license based on the following:

- Condition C.2 of MV2011L4-0002 relates to water levels in Nonacho Lake and the Twin Gorges Reservoir, defining a required range for Nonacho Lake of 319.3 m- 321.6 m (NTPC Datum), and a minimum requirement of 238.9 m (NTPC Datum) for the Twin Gorges Reservoir.
 - Based on continuous monitoring data, the Nonacho Lake level has stayed well within the specified range and the Twin Gorges Reservoir has remained above the minimum requirement at all times since 2014, including during the annual maintenance shutdowns.
 - As, there are no changes planned for the South Valley Spillway or the control structure on the Nonacho Lake Reservoir during the Overhaul Shutdown, they will continue to operate in accordance with C.2 of MV2011L4-0002.
 - In addition, the Nonacho control structure will continue to operate such that a minimum flow of 14 m³/s will be maintained between the outflow of the Nonacho control structure and the Twin Gorges Forebay throughout the overhaul shutdown to maintain the water level elevation in Nonacho Lake Reservoir as per condition of C.3 of MV2011L4-0002.
- Condition C.4 of MV2011L4-0002 specifies a minimum required flow of 28 m³/s be maintained 100 m below the confluence of Trudel Creek and the Taltson River.
 - Excess water within the Twin Gorges Forebay (or water that does not flow through the plant) spills through the South Valley Spillway and discharges into Trudel Creek, which

rejoins the Taltson River downstream of the Elsie Fall (at the confluence). Flow over the spillway typically ranges from 60 m³/s to over 600 m³/s throughout the year (Mean Daily Flow) whereas the flow through the plant is typically maintained below 50 m³/s (Mean Daily Flow), therefore eliminating the flow from the plant is expected to have little impact on the Taltson River Basin in comparison to the South Valley Spillway.

- Flow downstream of the confluence of Trudel Creek and the Taltson River has been observed to be generally higher than the combined flows of the Plant outflow and the spillway due to the additional drainage basin surrounding Trudel Creek (Please refer to Annual Water Licence Report 2021).
- Peak flows downstream of the confluence typically occur between July and August (example: highest flow in 2021 occurred July at 921 m³/s) , and the lowest flows occur between March and May (example: lowest flow in 2021 occurred May at 183 m³/s). The lowest recorded flow between 1994-2021 downstream of the confluence was 61.6 m³/s; higher than the minimum flow requirement by 33.6 m³/s.
- Based on the previous monitoring results, NTPC is confident that the flow 100 m below the confluence of Trudel Creek and the Taltson River would not drop below 28 m³/s at any time during the operation of the facility, during the annual maintenance shutdowns, or during the extended Overhaul Shutdown.

In summary, water that does not flow through the plant during the extended shutdown will continue to flow through the Taltson River Basin at the South Valley Spillway and will rejoin the Taltson River at the confluence via Trudel Creek. The data (above) indicates that the extended Overhaul Shutdown will not impact water levels and flow in the Taltson River basin and therefore NTPC is of the opinion that additional screening is not required because conditions of MV2011L4-0002 will continue to be met throughout the shut down.

Again, thank-you for your inquiry and we look forward to providing you a copy of the Extended Shutdown OMS manual as soon as we can. Please let me know if you have any additional questions comments or concerns.

Sincerely,

David Dewar

Pronouns: He / Him

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From: Shannon Allerston <sallerston@mvlwb.com>
Sent: Wednesday, July 20, 2022 5:06 PM
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Subject: RE: Engagement Notification - Taltson Fisheries Act Authorization Amendment

Email originated outside NTPC.

Thank you for providing notification and an opportunity to comment on the Northwest Territories Power Corporation's (NTPC) intentions to amend its Fisheries Act Authorization for an extended shutdown at the Taltson Hydro Facility between April and October 2023. Board staff note that the modification request for the refurbishment of the turbine and generator at the Taltson facility was recently approved by the Board and NTPC confirmed that all existing Licence conditions would be met. In its recent review of the Aquatic Effects Monitoring Program, Board staff noted that NTPC were directed by the Board in 2021 to update and resubmit an updated Operations, Maintenance and Surveillance (OMS) Manual to reflect mitigation measures, which includes implementation of the Pulse Flow Standard Operating Procedure that was developed in 2020 as a mitigation of the fish stranding. This Manual has not yet been submitted to the Board and, as indicated in Condition C.8, is required for Board approval. NTPC should update and submit its Operations, Maintenance and Surveillance (OMS) Manual, for Board approval, reflecting any changes in operations, maintenance or surveillance for the annual and proposed extended shutdown.

Board staff also note that Conditions C.2, C.3, and C.4 of MV2011L4-0002 all include requirements for water levels and water flows. Board Staff would like NTPC to confirm that the shutdown will not contravene any these Water Licence conditions. Particularly conditions C.3 and C.4, which requires: "The minimum flow of 14 cubic metres per second shall be maintained in the river channel between the outflow of the control structure at Nonacho Lake Reservoir and the forebay of the Twin Gorges Power Facility. Exceptions to this limitation shall be made only after a written request is filed by the Licensee to the Board and a letter of approval is received from the Board" and "A minimum flow of 28 cubic metres per second shall be maintained below the Twin Gorges Power Generation Facility in the river channel at a point 100 metres below the confluence of Trudel Creek and the Taltson River. Exceptions to this limitation shall be made only after a written request is filed by the Licensee to the Board and the Licensee receives a letter of approval from the Board." According to these conditions, any changes in this flow rate requires a formal written request and Board approval. Any request should provide rationale for the exceptions and detailed mitigations to address any impacts that they might cause.

Board staff also reviewed past screenings on file for the Taltson Hydro Facility and note that the scope of these screenings include storage and diversion of water for the operation and maintenance of the

Facility including annual plant shutdowns and minor modifications. In 2011, the Board decided that the Project was exempt from Part 5 of the MVRMA because it had been previously screened under EARPGO (on June 29, 1993) and was licensed prior to June 22, 1984 (see Section 157.1 of the MVRMA). Please comment on why NTPC is of the opinion that the extended shutdown would not require additional screening.

Shannon Allerston, MA, MSc

She/Her

Regulatory Specialist

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From: Engagement <Engagement@ntpc.com>

Sent: Monday, July 18, 2022 1:18 PM

To: Engagement <Engagement@ntpc.com>

Subject: Engagement Notification - Taltson Fisheries Act Authorization Amendment

Good Morning,

Please accept this email, and attached letter as notification that the Northwest Territories Power Corporation (NTPC) will be preparing a *Fisheries Act* Authorization Amendment application for the extended shutdown from April to October 2023 at the Taltson Hydro Facility.

NTPC is planning to conduct an extended shutdown from April to October 2023 to overhaul the turbine and generator within the Taltson generating plant. Details of the shutdown can be found in the attached *Fisheries Act Authorization Amendment – Information Package*. NTPC is planning to complete an FAA Amendment application in the fall of 2022 and have it approved before the April 2023 overhaul shutdown is scheduled to begin

We invite interested parties to provide feedback through one of the following methods:

1. Written communication to the undersigned;
2. Telephone or Skype conference call; or
3. In person meeting.

If you would like to provide feedback, please indicate your preferred method to do so and we will make the necessary arrangements.

We look forward to hearing from you.

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