

October 5, 2023

Reference No. W2023L4-0001

Mason Mantla, Chair
Wek'èezhii Land and Water Board
#1-4905 48th St, Yellowknife, NT X1A 3S3

Responses to Technical Session Information Request

Please find below NTPC's responses to the Information Requests (IRs) issued to NTPC by the Wek'èezhii Land and Water Board (WLWB) on September 28, 2023, following the Technical Session on September 26, 2023. The IRs are repeated below with NTPC's response provided.

IR #1 to NTPC:

NTPC to propose the exact dates or duration which it would recommend to limit drawdown of Bigspruce Reservoir and the Snare Falls Forebay to the proposed lower limits. NTPC to also propose criteria (including inflow rate) that would identify the need for NTPC to access the lower limit for Bigspruce Reservoir. The response should explain the operational limitations that must be considered by NTPC, while also minimizing potential impacts to the environment.

NTPC Response:

NTPC has proposed new limits to the lower elevation of the Bigspruce Reservoir, from 217.9 m (715 ft) down to 217.6 m (714 ft), for reasons described during the Technical Session. The threshold for these new lower limits is when inflows to Bigspruce Reservoir are below 70.43 cubic metres per second (i.e., the bottom quartile of historic inflows) on September 1. If this threshold is met, the new lower limits may be required from April 15 to August 15 of the following year.

NTPC proposes notifying the WLWB if the low elevation threshold has been met in the quarterly SNP report for the June-September period. Actual water elevations will be reported in the Water Licence Annual Report.

NTPC wishes that the Licence continue to allow exemptions to high and low water elevations and flows at any time of year with the Board's approval.

The temporary lower elevation of the Snare Falls forebay from 201.8 m (662 ft) to 201.5 m (661 ft) during planned maintenance would be for a maximum of 14 calendar days in a continuous period. This drawdown could occur at any time between May 1 and October 31.

IR #2 to NTPC

NTPC to identify any potential burden or concerns with including each of the following Standard Conditions related to Closure and Reclamation: CLOSURE AND RECLAMATION PLAN (Part I, Condition 1); CLOSURE AND RECLAMATION PLAN – REVISED (Part I, Condition 2); CLOSURE AND RECLAMATION PLAN – FINAL (Part I, Condition 3); PROGRESSIVE RECLAMATION (Part I, Condition 5); PROGRESSIVE RECLAMATION – CARRY OUT AS APPROVED (Part I, Condition 6); PROGRESSIVE RECLAMATION – NOTIFICATION (Part I, Condition 7); RECLAMATION RESEARCH REPORT (Part I, Condition 8); CLOSURE AND RECLAMATION COMPLETION REPORT (Part I, Condition 9); POST- CLOSURE MONITORING AND MAINTENANCE PLAN (Part I, Condition 10); and PERFORMANCE ASSESSMENT REPORT – COMPONENT-SPECIFIC (Part I, Condition 11).

NTPC Response:

NTPC suggests that Standard Condition Part I Condition 3 be included in the Snare Facility Licence, requiring NTPC to submit for approval a Closure and Reclamation Plan (CRP) prior to the expiration of the licence. NTPC requests that the Condition be modified to require the CRP two years prior to expiration rather than three, to provide alignment with the ramp-up to the renewal process.

NTPC agrees with WLWB that Part I Conditions 5 to 11 should be included in the Licence, to avoid the need or an amendment should an opportunity for progressive reclamation arise. NTPC reiterates however that there are currently no opportunities for progressive reclamation of the Snare Facility, as all existing components of the Facility are required for operations.

NTPC does not see any value in the proposed Part I Condition 1 or Condition 2, requiring that the CRP be updated after Licence issuance and at a regular interval throughout the licence term. NTPC reiterates that there is no reasonably foreseeable circumstance in which Snare Hydro would be closed. Further, NTPC notes that there were no comments received on the content of the CRP, other than clarification regarding the role of progressive reclamation (resolved above). As such, there is no value in investing effort by the WLWB, reviewers or NTPC in developing interim versions of the CRP that we have no expectation will be implemented.

There remains the scenario of how the CRP would account for major facility upgrades, such as new dams or generators. It has been NTPC's approach for this application that the scope of the licence be limited to existing operations. As such, any such undertaking would require either a new or an amended licence, and closure planning for the retired infrastructure should be handled through the amendment or new application process.

IR #3 to NTPC:

NTPC to propose a method of verifying that the septic fields are not directly or indirectly depositing waste into receiving waters. Two examples raised to date include a special study or the establishment of a Surveillance Network Program (SNP) station.

- a) If NTPC wishes to propose a Special Study, please describe the study and propose associated Schedule requirements that could be included in the Licence; or
- b) If NTPC wishes to establish an SNP station (or stations) next to the septic field, please describe the frequency of sampling, the parameters to be sampled, and a map identifying proposed locations that would be safe for personnel to conduct sampling; or

- c) If NTPC wishes to propose another method, please provide a fulsome description, as well as the proposed wording for the appropriate Licence requirements.

NTPC Response:

NTPC will propose a Special Study, the purpose of which is to verify that the septic fields are not depositing waste, either directly or indirectly, into the receiving environment. This study could be submitted to the Board for approval within 90 days following issuance of the Licence. The Special Study will include the following components (which the Board may include as a Schedule to the Licence):

- Description of the septic systems, their locations relative to the Snare River, and operating procedures
- Description of downstream receptors that may be impacted by effluent
- Identification, with rationale, of parameters of concern that should be used as indicators of potential impacts from the septic systems
- A description, with rationale, of the site-specific monitoring activities and anticipated duration of monitoring required to identify impacts from Project-related activities on the Receiving Water
- A description of monitoring protocols, methodologies, parameters, and frequencies, including maps or diagrams of the septic systems and monitoring locations
- A description of the quality assurance and quality control measures followed
- Reporting schedule
- A final report that will include:
 - Tabular summaries of all data and information generated
 - An interpretation of the results, including an evaluation of whether a release of effluent has occurred
 - Recommendations for follow-up

IR #4 to NTPC:

NTPC to confirm whether each of the following Standard Conditions would be problematic for inclusion in the Licence: DESIGN AND CONSTRUCTION PLAN (Part E, Condition 10), DESIGN DRAWINGS (Part E, Condition 11), NOTIFICATION – CONSTRUCTION – ENGINEERED STRUCTURES (Part E, Condition 13), NOTIFICATION –CONSTRUCTION (Part E, Condition 14), CONSTRUCT AS DESIGNED – ENGINEERED STRUCTURE(S) (Part E, Condition 16), AS-BUILT REPORT – ENGINEERED STRUCTURE(S) (Part E, Condition 17). For any that are identified as problematic, provide fulsome rationale.

NTPC Response:

NTPC finds these conditions to be acceptable.

IR #5 to NTPC:

For Part E, Condition 5 of the Draft Licence provided with NTPC's Application, NTPC is to provide a revised draft condition that references an existing guidance document and/or specific criteria for determining whether rock from a quarry or borrow is acceptable for Construction (e.g., site roads, rip rap, etc.).

NTPC Response:

Upon further review, NTPC is of the opinion that geochemical criteria or construction rock should not be included in the Licence, as there is insufficient detail at the point about the geochemical nature of the existing quarries, nor what the future use of this rock may be. As such, NTPC proposes to submit a Geochemical Characterization and Management Plan, at least 90 days prior to use of quarry rock as construction material within 100 metres of a waterbody.

The following requirements of the Geochemical Characterization and Management Plan (derived from the Standard Conditions) may be included as a Licence Schedule:

The Geochemical Characterization and Monitoring Plan referred to in Part F, Condition X of this Licence shall include, but not be limited to, the following:

- a) Information regarding geochemical characterization, including:
 - i. A description of geochemical characterization studies to identify PAG materials and/or materials with Metal Leaching potential, including sampling frequencies, rock units, volumes, and test methods;
 - ii. A description of the geochemical characterization of overburden that will be used in Construction or for Closure and Reclamation, including specific measures to ensure that this material meets or exceeds the geochemical cut-off criteria defined for non-PAG;
 - iii. Criteria, with rationale, for defining:
 - a. PAG, non-PAG and Metal Leaching materials; and
 - b. high, moderate, and low risk Waste Rock;
 - iv. Production schedules showing estimated volumes and tonnages of construction rock that will be produced each year over the duration of the Project.
 - b) Information regarding geochemical assessments and supplemental monitoring, including:
 - i. A description of geochemical assessments, including visual inspections, and supplemental sampling and testing of construction material;
 - ii. A description of sampling and analysis of any Seepage or Runoff found outside of the Water management system (e.g., roads, rock pads etc.), or that does not report directly to an SNP monitoring station;
 - iii. A description of monitoring of any field test cells, including sampling frequency, field measurements, and analytical parameters;
 - iv. Linkages to other monitoring programs required under this Licence; and
 - v. Any other information about the monitoring that will be performed to meet the objectives in Part F, Condition 1.
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- c) Information regarding responses to monitoring results:
 - i. A description of how the Licensee will link the results of monitoring to those corrective actions necessary to ensure that the objectives listed in Part F, Condition 1 are met. This description shall include:
 - a. Definitions, with rationale, for Action Levels applicable to the performance of this Plan with respect to geochemical stability as well as Seepage and Runoff quality and quantity;
 - b. For each Action Level, a description of how exceedances of the Action Level will be assessed and, generally, which types of actions may be taken by the Licensee if the Action Level is exceeded;

IR #6 to NTPC:

NTPC to propose a Licence definition for the Dam Safety Engineer.

NTPC Response:

NTPC proposes the following definitions, aligned with those used in the Bluefish Hydroelectric Facility licence (MV2020L4-0005):

Dam Safety Engineer – a qualified Professional Engineer who is responsible for maintaining the Dam(s) as per the design from the Dam Design Engineer and the Operation Surveillance and Maintenance Plan.

Dam Design Engineer – a qualified Professional Engineer who is responsible for the design of the Dam(s).

IR #8 to NTPC:

NTPC to identify any constraints or options regarding the inclusion of a condition in the Licence requiring the submission of the Probable Maximum Flood study along with proposed next steps, if any, for Board approval.

NTPC Response:

The Probable Maximum Flood Study for Snare was a recommended action from the 2018 Snare Dam Safety Review. The project has been awarded and is currently in progress and can be submitted to the board along with the dam safety review that is also ongoing. NTPC does not believe this needs to be a water license condition – the study is also intended to receive review by the current and future DSRs.

IR#9 to NTPC:

NTPC to confirm if, and if so, how future climate change scenarios are being considered in the Probable Maximum Flood study.

NTPC Response:

NTPC confirms that climate change is being considered in the Probable Maximum Flood study, further details will be available when the report is completed and submitted to the WLWB.

NTPC thanks the WLWB for the opportunity to clarify these issues following the Technical Session. If there are any further questions, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read 'David Dewar', with a red circular mark above the 'i' and a red oval mark below the 'a'.

David Dewar
Director Health, Safety & Environment

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