

August, 2020

N1L4-0150 and W2014L4-0001

Patty Ewaschuk, P.Eng
Senior Technical Advisor
Wek' èezhii Land and Water Board
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Update on 2011 Snare Dam Safety Review Outstanding Items

Hello Patty,

Please accept this letter outlining the completed actions for the remaining outstanding items from the 2011 Snare Hydroelectric Facility Dam Safety Review for water licences N1L4-0150 and W2014L4-0001.

The outstanding items from the 2011 Snare Hydroelectric Facility Dam Safety Review are listed below along with an update on the status of each item.

Item 13- Rock fill at Snare Falls Saddle Dam 1

- In 2016 Mecco Engineering completed an investigation to assess the Snare Falls Spillway and Side Dam with design inflow flood figures stated in the Snare Flood Study (Meco 2015). The results of the investigation recommended that the best course of action for NTPC would be to install a heater for the second spillway gate rather than alter Saddle Dam 1 as had been recommended in previous studies.
- The capital project to install a heater in the additional Snare Falls spillway gate was planned to be completed in 2020. This project has been delayed to update the design to include an upgraded control panel for the spillway gates. Design for the upgraded control panel will be completed in 2020 and the upgraded control panel and additional spillway gate heater will be installed in the summer of 2021.

Item 18- Rock fill at canal dyke at Snare Cascades

- In 2017 Courage Projects completed an investigation to further assess the Snare Cascades Spillway with design inflow flood figures stated in the Snare Flood

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study (Meco 2015). The results of the investigation recommended raising the elevation of the canal dyke at Snare Cascades with concrete.

- A design has been completed for raising the elevation of Snare Cascades canal dyke by 0.5m with concrete to meet the design TOD of 185.0m and surrounding it will rockfill.
- This project is in the 2020/2021 capital plan and will be completed by August 2021.

Item 46- Public Safety Plan needs to be completed

- The *Snare Hydroelectric Facility- Public Safety and Awareness Plan* was submitted to the WLWB on May 2, 2017.
- The installation of all signage required in the plan was completed throughout 2018 and 2019.
- It was determined that audible alarms are not required on the Snare Falls and Cascades spillways due to the lack of public access this site. The closest community affected by water levels would be the community of Behchoko.
- Completed

Please advise us if there is any further information we can provide.

From: [Jessica Pacunayen](#)
To: [Roberta Judas](#)
Cc: [Anneli Jokela](#); [Patty Ewaschuk](#)
Subject: FW: Response Letters for Snare DSR Information Request
Date: September 10, 2020 11:33:11 AM
Attachments: [NTPC - 2018 Dam Safety Review - Information Request - April 24 20.pdf](#)
[Snare Hydro 2019 Dam Safety Review Follow-up Questions.pdf](#)
[CPL Response to KGS June 30 letter..pdf](#)
[Snare 2011 Dam Safety Review- Outstanding Items Update- August 2020.pdf](#)

From: Matthew Miller <MMiller@ntpc.com>
Sent: August 12, 2020 11:45 AM
To: Patty Ewaschuk <pewaschuk@wlwb.ca>
Cc: Anneli Jokela <ajokela@wlwb.ca>; Roberta Judas <rjudas@wlwb.ca>; Sergio Catlyn <SCatlyn@ntpc.com>; Lloyd Courage <courageprojects@shaw.ca>; Rick Santiago <RSantiago@ntpc.com>; Joshua Clark <jclark@ntpc.com>; Jessica Pacunayen <jpacunayen@wlwb.ca>; Antenor Farias <AFarias@ntpc.com>; Eddie Smith <ESmith@ntpc.com>; Bradley Harrison <bharrison@ntpc.com>
Subject: Response Letters for Snare DSR Information Request

Hello Patty,

Please find a response letter from KGS on the Snare DSR Recommendations as requested by the WLWB on April 24, 2020. A response letter from NTPC's Interim Dam Safety Engineer on the KGS letter is also attached.

An update on the outstanding items from the 2011 DSR is attached as well.

Apologies for the delay in submitting these items; the combination of the COVID-19, our systems crashing due to the ransomware attack and vacant positions has resulted in delays across the board for NTPC.

Thanks for your time and let me know if there is any other information we can provide at this point.

Cheers,

Matt
875 7917

From: Patty Ewaschuk <pewaschuk@wlwb.ca>
Sent: June 9, 2020 10:03 AM
To: Matthew Miller <MatthewMiller@ntpc.com>
Cc: Anneli Jokela <ajokela@wlwb.ca>; Roberta Judas <rjudas@wlwb.ca>; Colin Steed <ColinSteed@ntpc.com>; Lloyd Courage <courageprojects@shaw.ca>; Rick Santiago <RickSantiago@ntpc.com>; Eddie Smith <EddieSmith@ntpc.com>; Anneli Jokela <ajokela@wlwb.ca>; Jessica Pacunayen <jpacunayen@wlwb.ca>
Subject: RE: Update on Snare DSR Items- May 2020

Email originated outside NTPC.

Your plan to submit the response to the April 24, 2020 information request at the same time as the DSR updates for 2011 and 2018 works for us. As with all submissions, please be sure to identify in your cover letter all relevant Board requirements. So for the DSR updates, information request, and the Annual Report, (and in fact all submission) please reference all WLWB letters, Licence conditions, information requests, etc. that are relevant to the submission. This practice prevents confusion amongst all parties, and improves the usefulness of the public registry in the long-term.

Thanks!

Patty

416-432-6066

From: Matthew Miller <MatthewMiller@ntpc.com>

Sent: May 26, 2020 2:15 PM

To: Patty Ewaschuk <pewaschuk@wlwb.ca>

Cc: Anneli Jokela <ajokela@wlwb.ca>; Roberta Judas <rjudas@wlwb.ca>; Colin Steed <ColinSteed@ntpc.com>; Lloyd Courage <courageprojects@shaw.ca>; Rick Santiago <RickSantiago@ntpc.com>; Eddie Smith <EddieSmith@ntpc.com>; Anneli Jokela <ajokela@wlwb.ca>; Jessica Pacunayen <jpacunayen@wlwb.ca>

Subject: Re: Update on Snare DSR Items- May 2020

Hello Patty,

Updates on work completed in relation to DSR items, Annual dam review and any other site work is included in the annual reports. The letter attached in the previous email is in response to the April 24, 2020 information request from the WLWB which requested a memo from the DSR review engineer regarding recommendations from the 2019 DSR and an update on all 2011 and 2018 DSR recommendations in the 2019 annual report. NTPC responded that a separate submission for the DSR items would be completed for efficiency of reporting and clarity.

NTPC is currently working with KGS (authors of the 2019 DSR) and our interim Dam Safety Engineer to develop a response to the April 24, 2020 information request from the WLWB.

Once this response is completed, we will include it with the 2011 update letter (attached in the last email) in a Snare DSR Items update.

Given the unknowns around when the Annual report will be submitted (with NTPC systems still being down) and the additional effort required to develop the KGS response the detailed DSR update will be submitted separately from the 2019 Annual Report.

Once we have a timeline for submission from KGS I can provide an expected date of submission.

Please let me know if there is any additional information I can provide at this point. Feel free to give me a call to discuss as well at 875 7917.

Thanks for your time,

Matt

From: Patty Ewaschuk <pewaschuk@wlwb.ca>

Sent: May 26, 2020 6:31 AM

To: Matthew Miller <MatthewMiller@ntpc.com>

Cc: Anneli Jokela <ajokela@wlwb.ca>; Roberta Judas <rjudas@wlwb.ca>; Colin Steed <ColinSteed@ntpc.com>; Lloyd Courage <courageprojects@shaw.ca>; Rick Santiago <RickSantiago@ntpc.com>; Eddie Smith <EddieSmith@ntpc.com>; Anneli Jokela <ajokela@wlwb.ca>; Jessica Pacunayen <jpacunayen@wlwb.ca>

Subject: RE: Update on Snare DSR Items- May 2020

Email originated outside NTPC.

April 1, 2016 letter that requires NTPC to include a status of all DSR recommendations in the Annual Report. Since the Annual Report is yet to be submitted, it would probably be best to put the status update in the Annual Report when you submit it. This should include an update on both the 2011 and the 2018 DSR recommendations. Let me know if I've misunderstood or if you have any questions at all.

Thanks,

Patty Ewaschuk, P.Eng

Senior Technical Advisor

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From: Matthew Miller <MatthewMiller@ntpc.com>
Sent: May 22, 2020 12:57 PM
To: Patty Ewaschuk <pewaschuk@wlwb.ca>
Cc: Anneli Jokela <ajokela@wlwb.ca>; Roberta Judas <rjudas@wlwb.ca>; Colin Steed <ColinSteed@ntpc.com>; Lloyd Courage <courageprojects@shaw.ca>; Rick Santiago <RickSantiago@ntpc.com>; Eddie Smith <EddieSmith@ntpc.com>
Subject: Update on Snare DSR Items- May 2020

Hello Patty,

As you aware NTPC systems have been down since late April due to a ransomware attack. This on top of the emergency operating conditions as a result of COVID has delayed NTPC's response to the Snare DSR items request. An update on the Snare DSR items is below:

- There is an letter attached to this email that provides an update on the 2011 Snare DSR Outstanding items
- The contact information in the various management plans will be updated once NTPC has access to its systems again (Recommendation 7, 2019 DSR)
- NTPC is working with the authors of the 2019 DSR at KGS to obtain comments on NTPC's responses to the Recommendations from the 2019 DSR. NTPC's interim Dam Safety Engineer is supporting this process as well.

We will follow up with the requested information from KGS once it is completed.

Thanks and let us know if there is any other info we can provide at this point.

Cheers,

Matt

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