



**Mackenzie Valley Land and Water Board**  
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**Staff Report**

<b>Applicant:</b> Enbridge Pipelines (NW) Inc.	
<b>Location:</b> Fort Simpson, NT	<b>Application:</b> MV2017L1-0002 and MV2017P0013
<b>Date Prepared:</b> January 30, 2018	<b>Meeting Date:</b> February 1-2, 2018
<b>Subject:</b> New Type B Water Licence and Type A Land Use Permit Applications	

**1. Purpose/Report Summary**

The purpose of this Staff Report is to present to the Mackenzie Valley Land and Water Board (MVLWB/the Board):

- a) New Land Use Permit (Permit) MV2017P0013 and Water Licence (Licence) MV2017L1-0002 Applications submitted by Enbridge Pipelines (NW) Inc. (Enbridge) to conduct off Right-of-Way activities for the maintenance of the Norman Wells Line 21 pipeline (from Norman Wells, NT to the Alberta/NT border) near Fort Simpson, NT (the Project);
- b) Consider the Spill Contingency Plan;
- c) Consider the Waste Management Plan; and
- d) Consider the Engagement Plan.

**2. Background**

- March 23, 2017 – New Permit and Licence Applications received;
- March 31, 2017 – Applications deemed incomplete;
- April 19, 2017 – Additional information was received through discussions with the Government of the Northwest Territories (GNWT) and Board legal counsel to clarify eligibility – Applications deemed complete and review commenced;
- April 25, 2017 – Enbridge submits additional information to support their Applications;
- May 5, 2017 – Enbridge submits further information to support their Applications;
- May 25, 2017 – Board invokes paragraph 22(2)(b) of the Mackenzie Valley Land Use Regulations (MVLUR) and issues two Information Requests (IRs); IR 1 to Enbridge and IR 2 to Łíídlıı Kúé First Nation (LKFN);
- June 7, 2017 – IR 1 responses due and received;
- June 15, 2017 – Reviewer comments and recommendations on IR 1 due and received;
- June 20, 2017 – Dehcho First Nations (DFN) comments on Enbridge’s response to IR 1 received (late); and IR 2 response due and received;
- June 21, 2017 – Responses to reviewer comments received from Enbridge on IR 1;

- July 20, 2017 – Board directed Board staff to provide Enbridge an opportunity to respond to DFN’s June 20, 2017 comments;
- July 21, 2017 – Enbridge submitted response to DFN’s June 20, 2017 comments;
- July 26, 2017 – National Energy Board (NEB) released notice to parties of postponement of the concurrent NEB process;
- August 3, 2017 – Board determines that s.157.1 of the *Mackenzie Valley Resource Management Act* (MVRMA) applies to this project (i.e., project exempt from preliminary screening);
- August 10, 2017 – Draft Work Plan distributed for review;
- August 16, 2017 – Comments due on draft Work Plan;
- August 17, 2017 – Work Plan approved by the Board;
- September 15, 2017 – Pre-Hearing Conference held by Board staff;
- October 3, 2017 – Interventions due;
- October 5, 2017 – Motion received from LKFN requesting permission of the MVLWB to file supplementary submissions – LKFN motion sent to the distribution list by Board staff;
- October 10, 2017 – Responses received from GNWT indicating that they supported LKFN’s motion to submit supplementary information for these proceedings;
- October 11, 2017 – Responses received from Canadian Northern Economic Development Agency (CanNor) indicating they supported LKFN’s motion to submit supplementary information for these proceedings, and from Enbridge indicating that they did not object to the late filing, provided that their deadline for responding to interventions be extended by one day;
- October 12, 2017 – Board approves the motion submitted by LKFN which would allow their supplementary submissions to be added to the MVLWB record and approves the one-day extension to Enbridge’s deadline to respond to interventions;
- October 13, 2017 – Enbridge Responses to Interventions due and received;
- October 16, 2017 – Interveners’ Public Hearing presentations due (received from GNWT and from LKFN);
- October 17, 2017 – Board staff sent out a note to DFN and Smbaa K’e First Nation (SKFN) that the deadline to submit a presentation for the public hearing had passed and asked for an update on when it was expected. DFN Public Hearing presentation was received (late). Motion received from LKFN requesting permission of the Board to redact certain information from the publicly available version of the Indigenous Knowledge and Land Use Study that was submitted with their presentation;
- October 18, 2017 – SKFN Public Hearing presentation received (late), as well as a letter to the Board indicating that they hoped the Board would accept the new information provided by LKFN;
- October 19, 2017 – Email received from Enbridge stating they did not intend to raise any objections regarding LKFN’s additional evidence or their motion regarding confidentiality. The Board allows the new information, as submitted by LKFN with their Public Hearing Presentation, to be placed on the MVLWB record and approves the motion submitted by LKFN which would allow the submission of a redacted version of the Indigenous Knowledge and Land Use Study and the Public Hearing Presentation to be submitted to the MVLWB record for the online public registry;
- October 20, 2017 – LKFN submits the redacted version of the Indigenous Knowledge and Land Use Study and their Public Hearing Presentation;
- October 27-28, 2017 – Public Hearing in Fort Simpson, Part 1. Adjourned until January 8-9, 2018;
- November 10, 2017 – DFN submits questions to Enbridge and a letter was issued from the MVLWB to the interveners on the reconvening of the Public Hearing;

- November 14, 2017 – Enbridge requests an extension to respond to the November 10, 2017 questions from DFN, from November 17 to November 24. Board staff granted an extension to November 21;
- November 21, 2017 – Enbridge responses to DFN questions received;
- November 22, 2017 – Pre-Hearing Conference, for Reconvened Public Hearing, held by Board staff;
- December 4, 2017 – Updated presentations due (if applicable following the November 10, 2017 letter to Parties) and received;
- January 8-9, 2018 – Reconvene the Public Hearing in Fort Simpson, NT;
- January 12, 2018 – Written Closing Arguments from Interveners due and received;
- January 17, 2018 –Written Closing Arguments due and received from Enbridge; and
- **February 1-2, 2018 – Applications presented to the Board for decision.**

### 3. Discussion

#### Applications

The existing Line 21 pipeline extends from Norman Wells, NT to Zama, Alberta, a total length of 869 km. In 2016, through regular maintenance and inspection, increased rates of slope movement were identified near the Mackenzie River crossing, approximately 9 km east of Fort Simpson, NT. In order to protect the pipeline from the impacts of further slope movement, and to support continued safe operation of the pipeline, Enbridge is proposing to replace a segment of the existing pipeline under the Mackenzie River. The Project includes installation of up to 2500 meters of new pipeline below the Mackenzie River, using a Horizontal Directional Drilling (HDD) method. The existing segment of pipe will be decommissioned in place.

The scope of activities off the Right-of-Way, as applied for by Enbridge is listed below:

- 1) Site Clearing, Use, and Maintenance:
  - All access roads (except those already permitted), camps, staging/laydown storage, well sites, barge landing, sumps, related facilities, and south and north work sites, where necessary.
- 2) Mobilization of Equipment:
  - Transportation and set up drill and supporting equipment.
- 3) The Use of Water:
  - For drilling fluid make-up water and hydrostatic testing.
- 4) Site Restoration:
  - Surface grades and drainages will be restored;
  - Excavations will be backfilled;
  - Brushing and peat will be rolled back over disturbed area;
  - The north shore shoofly access and the north shore barge landing will be remediated; and
  - Erosion and sediment controls will be installed.
- 5) Demobilization:
  - Demobilization of drilling and supporting equipment at the north and south work sites and all camp infrastructure.

- 6) Water Discharge:
  - Pump-off discharge (to land) of: ponded surface water (if required), hydrostatic test water, separated water from drilling fluid, unused stored water (if required).
- 7) Drilling Mud, Drill Fluid and Drill Cuttings Storage and Disposal:
  - Spent drill fluid and/or cuttings disposal sumps to be located off the Right of Way.
- 8) Camp Setup and Operation:
  - Camps will be set up off the Right-of-Way.
- 9) Waste Storage:
  - Some wastes may be temporarily stored off the Right-of-Way prior to offsite disposal, e.g., domestic wastes, cleared vegetation.
- 10) Fuel Storage:
  - Depending on the final layout of the drill and supporting equipment at the north and south work sites, fuel may be stored on and/or off the Right-of-Way.

#### Preliminary Screening

On August 3, 2017, the Board met and confirmed the activities associated with the Applications were exempt from Part 5 of the MVRMA pursuant to section 157.1 of the MVRMA and issued reasons for decision on [August 10, 2017](#).

#### Management Plans

A Waste Management Plan, Spill Contingency Plan, and Engagement Plan were included with the Applications. Further evaluation and discussion of these plans is included in section 4 below (Comments).

#### Eligibility

On March 31, 2017, Board staff issued an incomplete letter to Enbridge stating that Board staff were reviewing the proof of eligibility under section 18 of the MVLUR and were waiting for further clarification from the GNWT.

Discussions between the GNWT – Department of Justice and Board legal counsel occurred on April 19, 2017 to clarify eligibility. The Applications were deemed complete on April 19, 2017 and proceeded to the next phase of the regulatory process.

#### Fees

The Licence and Permit Application fees were received on April 13, 2017 (attached).

Subsection 8(1) of the Waters Regulations sets out the water use fees payable by a licensee for the right to the use of water, calculated on an annual basis, and must be paid annually. Enbridge has not submitted water use fees to date.

#### Term – Licence

At the October 27-28, 2017 public hearing Enbridge confirmed they were seeking a term of three to five years for the Licence. At the January 8-9, 2018 reconvened public hearing Board staff asked the Interveners their thoughts on an appropriate length of term for the Licence. GNWT, DFN, and SKFN

indicated they would provide a response within their final written arguments to the Board. LKFN indicated that a term of three years would be an appropriate timeframe as the Environmental Management Agreement (EMA) they had negotiated and signed with Enbridge has a term to the end of 2020.

In their closing arguments, the GNWT recommended a term of five years for the Licence based on the project duration, minimum monitoring requirements, and the anticipated term of the associated Permit. DFN and SKFN did not provide recommendations to the Board regarding the Licence term. Subsection 26(2) of the *Waters Act* allows for a Licence term of not more than 25 years.

Term – Permit

Enbridge has applied for a term of five years for the Permit. Subsection 26(5) of the MVLUR allows for a Permit term of not more than five years.

**4. Reviewer Comments**

**a. Management Plans**

Waste Management Plan

Enbridge submitted a Waste Management Plan with their Permit and Licence Applications. The Waste Management Plan is intended to provide guidance regarding the handling, storage, and treatment or disposal of wastes generated. The Waste Management Plan will manage wastes so as to reduce and recycle wastes as much as feasibly possible, reduce or eliminate potential negative social and environmental impacts from waste generation, and to comply with all applicable acts, regulations and authorizations.

During the regulatory process, comments were received on the Waste Management Plan and are outlined in Table 1 below.

Table 1: Reviewer Comments and Enbridge Responses Received Throughout the Regulatory Process on the Waste Management Plan

Location	Reviewer	Recommendation	Enbridge Response
Initial Comments on Applications dated May 15, 2017	GNWT-Department of Lands	Should the Proponent intend to deposit waste in an NWT community Solid and Liquid Waste Disposal Facility, ENR requests that the Proponent demonstrate in the Waste Management Plan, or to the Board, that the receiving communities Solid and Liquid Waste Disposal Facility holds a Water Licence that authorizes the disposal of any industrial waste streams originating from outside municipal boundaries. The Proponent should also demonstrate to the Board that the community has been consulted, and has consented in writing,	In its Waste Management Plan, Enbridge has proposed to dispose of domestic waste (produced at the camps and work areas) and sanitary wastes (produced at the camps) at municipal facilities (preferentially the Village of Fort Simpson) only (no industrial waste). Prior to disposing any waste types produced by the Project, Enbridge will consult with the applicable disposal facility or municipality to ensure the facility approves of the waste types to be disposed of and can assess whether they are licensed to accept the waste. Agreements will be in place

Location	Reviewer	Recommendation	Enbridge Response
		regarding the use of its infrastructure for disposal of the waste streams and quantities in question, and the disposal of such wastes will not contravene the Waters Act or the Environmental Protection Act and related Regulations and Guidelines.	between the Project contractor and the municipal waste disposal facilities prior to disposing wastes that clearly state what waste types will be accepted, together with any criteria that must be met before hauling wastes to the facility.
Initial Comments on Applications dated May 15, 2017	GNWT-Department of Lands	1) Specify the type of drilling mud (e.g. water-based, oil-based, gel, or of other non-aqueous types), and all additives to be used in this project. 2) Depending on the mud type, more parameters may need to be tested before discharging filtered water in watercourse. In this situation, only testing for turbidity is performed.	Drilling fluids used for the Project will be water-based (e.g. water and bentonite mixture) and all supplemental additives to be used will be submitted to the MVLWB or the Lands Inspector in compliance with any applicable conditions of land use permit and/or water license. Water discharged to the environment will be sampled and analyzed prior to any discharge event to ensure there will be no impacts to the surface or aquatic environment.
Initial Comments on Applications dated May 15, 2017	SKFN	The Waste Management Plan (WMP) in Appendix IV of the Application includes a Waste Information Sheet for "Hydrotest Fluids - Methanol" (p. 60), which is described as being "very toxic to aquatic life." The expected/potential characteristics of used hydrotest water and the risks of its release should be explicitly outlined by Enbridge so that all parties can understand the potential risks of hydrostatic testing. <b>Recommendation:</b> SKFN recommends that Enbridge provide detail on both the expected and worst-case-scenario physical and chemical characteristics of used hydrotest water so that the risks of a spill can be understood by all stakeholders.	Hydrotesting will be completed only on new piping and pipe components. The hydrotest water will not come in contact with any hydrocarbon source throughout the course of the Project. Potential impacts to the water will be restricted to metals such as iron (from metal flakes). It is expected that the hydrotest water quality will be similar to the water quality in the Liard River where the water will be sourced. No methanol, glycol or any other chemical additives are planned to be added to the water to accommodate the tests. Water samples will be obtained before and after hydrotests to assess water quality and the most suitable method of disposal.
Intervention dated October 3, 2017	SKFN	- Before waste is deposited and once Enbridge has completed its planning and site reconnaissance, Enbridge should be required to submit a revised waste management plan	- Enbridge will provide an updated WMP prior to commencement of drilling activities. Further, as required by draft Permit Condition

Location	Reviewer	Recommendation	Enbridge Response
		<p>detailing the volume of drilling muds anticipated, locations and sizes of proposed sumps, and more detailed information about the soils at the sumps location. Alternatively, an approach to including community representation in the process should be outlined. Currently, Enbridge’s proposal states that: “Disposal sumps for managing onsite disposal of drilling fluids and cuttings will be identified onsite once mobilization has begun, in consultation with the GNWT Land Use Inspector. AER Directive 50 guidelines will be followed when identifying sump locations and dimensions and determining the suitability of the receiving soils. Consultation must include representatives of the traditional land owners.</p> <ul style="list-style-type: none"> <li>- The waste management plan should include a brief analysis of alternatives to on-site waste disposal. SKFN and other affected Dehcho First Nations should be provided an opportunity to review and comment on the revised plan.</li> <li>- Groundwater monitoring within the vicinity of the sumps should be required if proposed drilling fluids and/or reagents change from the current plan.</li> </ul>	<p>40, any revisions to the WMP will be submitted to the Board for approval.</p> <ul style="list-style-type: none"> <li>- The WMP on file with the Board discusses alternatives to on-site disposal [See WMP sections 4.3.1 and 4.3.2]. The WMP was filed with the MVLWB on March 23, 2017 and posted by the MVLWB on April 19, 2017 on the ORS for review and comment.</li> <li>- Enbridge has already confirmed on the record that “the drilling mud will be bentonite-based and will not contain any additives that may cause adverse effects to the environment.”(See section 2.2.3 of the WMP, filed as Appendix IV to the Applications.) For further information, see the Material Safety Data Sheets and analytical reports for the drilling fluids (including additives contemplated for use during the Project), filed as Appendix B to the WMP.</li> <li>- Given the composition of drilling fluids proposed for onsite disposal, it is Enbridge’s view that groundwater monitoring is not required. See also response to GNWT, Topic 5.</li> </ul>
<p>Public Hearing – October 27, pg 71 of the transcript</p>	<p>GNWT</p>	<p>“In regard to the MSDS sheets that’s labelled mud drilling waste information sheet, in that description the components of the drilling mud are explained as a mixture of hydrocarbons and it may contain corrosives. So I’m just wondering if there was an error in the MSDS sheet that was provided with the waste management plan in that hydrocarbon based drilling muds will not be used for this project, or any other corrosives?”</p>	<p>“So, I -- I can't answer that question right now without reviewing the details of that program, but I can commit that -- that statement around using non-toxic components as part of the drilling program is being adhered to.”</p>

Location	Reviewer	Recommendation	Enbridge Response
Public Hearing – October 27, pg 227 of the transcript	Enbridge	n/a	“We've committed to follow AER's [Alberta Energy Regulator] Directive 50 in the construction of our sumps.”
Public Hearing – October 28, pg 39 of the transcript	SKFN	“As additional information becomes available, such as what we've just heard finally today, is Enbridge able to commit to revising their draft management plan and making it available on the registry for party review as a condition of the license?”	“Yes, as we finalize our waste management plan we would be happy to share that plan with the Board as -- as well as Intervenors.”
Public Hearing – January 8, pg 106 of the transcript		“That said, and in line with the opening comments, the agreement doesn't replace the regulatory responsibilities and the -- the -- the recommendations that GNWT has brought forward are very much in line with the comments that Samba K'e has previously made and would support such recommendations as the Turbidity Monitoring Plan and the -- what we've referred to as revised Waste Management Plan but, certainly, more detail respecting sumps and ongoing monitoring of sumps and the communication of those revised plans.”	n/a
Public Hearing – January 9, pg 35-36 of the transcript	SKFN	“LKFN and DFN have requested that the drilling waste be removed from site. Although SKFN is supportive of the other Dene parties' positions, we suggest that at minimum a revised Waste Management Plan should detail an assessment of the two (2) options: removing site -- removing the drilling waste from site or using sumps so that Enbridge's decision-making process is clear and can be evaluated by the parties.”	n/a

Based upon the input received, Board staff are of the opinion that the Waste Management Plan should be updated to reflect the components of the activities applied for under this Permit and Licence and to address the comments received during the regulatory process.

Spill Contingency Plan

Enbridge submitted a Spill Contingency Plan with their Permit and Licence Applications. The purpose of the Spill Contingency Plan is to provide guidance to on-site personnel in the event of an accidental release of materials that may cause adverse environmental impacts during the Project. The Spill Contingency Plan provides the protocols for personnel to follow in response to a spill.

During the regulatory process comments were received on the Spill Contingency Plan and are outlined in Table 2 below.

Table 2: Reviewer Comments and Enbridge Responses Received Throughout the Regulatory Process on the Spill Contingency Plan

Location	Reviewer	Recommendation	Enbridge Response
Intervention dated October 3, 2017	SKFN	SKFN recommends that either under section 5.1 of the Plan or part 2 of the license, the company be required to provide SKFN with reporting of all spills in their territory. This includes both notification of the incident and provision of any follow up reporting associated with addressing the incident. Notification of the spill should be immediate with detailed reporting within 30 days. SKFN should be notified of any further follow-up between regulators and Enbridge regarding the spill.	It is Enbridge’s view that draft Permit Condition 36 – Report Spills, does not require modification. The information requested falls outside of the limited scope of the Applications before the MVWLB. That said, Enbridge commits to updating the Project Engagement Plan, in collaboration with SKFN and DFN communities, which may include additional potential notifications.
Intervention dated October 5, 2017	LKFN	Emergency response plans and procedures: - Protocols and plans to notify LKFN members of emergencies during project construction are needed. - LKFN and other affected First Nations must be involved in the development and implementation of plans to respond to environmental and other emergencies during project operations.	- Enbridge commits to updating the Project Engagement Plan, in collaboration with LKFN and DFN communities, which may include notification protocols.

Based upon the input received, Board staff are of the opinion that the Spill Contingency Plan can be approved as submitted. The items outlined in Table 2 above, can be addressed through revision to the Engagement Plan.

Engagement Plan

Enbridge submitted a Stakeholder Engagement Summary document with their Permit and Licence Applications, which included a section titled “Forward-looking Project Engagement Plan”.

During the regulatory process comments were received on the Engagement Plan; these are outlined in Table 3 below.

Table 3: Reviewer Comments and Enbridge Responses Received Throughout the Regulatory Process on the Engagement Plan

Location	Reviewer	Recommendation	Enbridge Response
Intervention – comments on draft conditions dated September 29, 2017	LKFN	<p>Enbridge must develop an updated communications and engagement plan in close collaboration with Smbaa K’e First Nation, Dehcho First Nations, Liidlii Kue First Nation, Pedzeh Ki First Nation, and other affected First Nations, individuals, or groups. This communication and engagement plan should be updated annually in collaboration with all parties to continually address concerns. As part of the communications and engagement plan, annual reports, engagement records and any communications reports and other records with respect to monitoring, maintenance and malfunction should be proactively shared directly with affected First Nations and also should be posted to a publicly accessible registry. To help ensure that engagement with First Nations is meaningful, Enbridge is requested to maintain records that chronologically track complaints by Aboriginal groups and landowners, including municipal and regional governments, relating to the Project beginning with the commencement of construction and continuing through operations. The complaint tracking records should include:</p> <p>a) the date the complaint was received;</p> <p>b) the form in which the complaint was received (for example, telephone, mail, email, or other communication methods that may evolve over time);</p>	<p>The engagement record filed with the MVLWB demonstrates Enbridge's efforts to engage with LKFN prior to filing the Applications. Specific to the Applications before the Board, engagement discussions with LKFN and DFN communities are ongoing. Enbridge entered into a process agreement with the LKFN in order to carry out technical discussions, community engagement activities and negotiations to address potential impacts and benefits related to the Project. Technical discussions to understand and resolve concerns related to these Applications as well as the full scope of the Project and Line 21 operation have been held through a technical committee involving LKFN, SKFN, PKFN, DFN and Enbridge. Further, Enbridge commits to updating the Project Engagement Plan, in collaboration with LKFN and DFN communities, which may include the items outlined above.</p>

Location	Reviewer	Recommendation	Enbridge Response
		<p>c) the date and summary of all subsequent telephone calls, visits, correspondence, site monitoring/inspections, follow-up reports and other related documentation;</p> <p>d) updated contact information for all persons involved in the complaint;</p> <p>e) a detailed description of the complaint; and</p> <p>f) any further actions to be taken or an explanation why no further action is required.</p>	
Intervention dated October 3, 2017	SKFN	<p>SKFN recommends that Enbridge be required to work with SKFN and other First Nation Parties to develop an engagement plan that meets all parties interests. In SKFN's view, this plan should contain provisions that include, but are not limited to:</p> <p>a. Provision of a plain language annual report, both digitally and in hardcopy, provided to First Nation Administration. This report will focus on informing members, through a straightforward narrative, on the activities that have taken place in their territory. This report should include both proponent activities, and also ENR, Lands or NEB inspections and outcomes.</p> <p>b. Quarterly meetings with representatives of each affected Dehcho First Nation, updating on Enbridge activities, operations, reports and any regulatory triggers.</p> <p>c. A requirement that written reports of engagements be jointly agreed upon by the Parties present.</p> <p>d. A requirement that entries to the engagement log referenced by Enbridge be jointly agreed to by all implicated Parties. The log should chronologically track concerns raised by Indigenous local and regional governments, landowners, municipal and other governments and provide detail about</p>	<p>- The engagement record filed with the MVLWB documents concerns raised by SKFN and other First Nations at the time the Applications were filed, including how each concern was resolved. Since filing the Applications, Enbridge has continued to engage with SKFN and DFN communities. Technical discussions to understand and resolve additional concerns related to these Applications as well as the full scope of the Project and Line 21 operation have been held through a technical committee involving LKFN, SKFN, PKFN, DFN and Enbridge.</p> <p>- Specific to the Applications before the Board, engagement discussions with SKFN and DFN communities are ongoing. In those discussions, Enbridge committed to updating the Project Engagement Plan, in collaboration with SKFN and DFN communities, which may include the items outlined above.</p>

Location	Reviewer	Recommendation	Enbridge Response
		<p>how Enbridge has addressed each specific concern.</p> <p>e. Annual review and revisions with all Parties to the engagement plan. An opportunity for all Parties to comment to the Board on the annual report of engagement.</p> <p>f. Funding to support Smbaa K'e First Nation's costs related to engaging in and understanding Enbridge's construction and operation activities.</p> <p>g. More detail is required about how preferential hiring for local labourers is being pursued. The commitment as currently worded is only in the log portion of the submission and is weak, vague and not possible to track. The engagement plan should include firm commitments and clear plans for ensuring priority local / regional and First Nation hires.</p>	
Intervention dated October 3, 2017	SKFN	<p>SKFN recommends that either under section 5.1 of the Plan or part 2 of the license, the company be required to provide SKFN with reporting of all spills in their territory. This includes both notification of the incident and provision of any follow up reporting associated with addressing the incident. Notification of the spill should be immediate with detailed reporting within 30 days. SKFN should be notified of any further follow-up between regulators and Enbridge regarding the spill.</p>	<p>It is Enbridge's view that draft Permit Condition 36 – Report Spills, does not require modification. The information requested falls outside of the limited scope of the Applications before the MVWLB. That said, Enbridge commits to updating the Project Engagement Plan, in collaboration with SKFN and DFN communities, which may include additional potential notifications.</p>
Intervention dated October 2, 2017	DFN	<p>The engagement plan focuses on regulatory approval milestones and less on relationship building between Enbridge and DFN and DFN communities. We recommend that Enbridge take a more holistic approach to engagement. This would include Communications &amp; Engagement Plan: Enbridge must develop an updated communications and engagement plan in close collaboration DFN and DFN communities. This communication and</p>	<p>Specific to the Applications before the Board, engagement discussions with DFN and DFN communities are ongoing. Technical discussions to understand and resolve concerns related to these Applications, as well as the full scope of the Project and Line 21 operation have been held through a technical committee involving LKFN, SKFN, Pehdzeh Ki First Nation ("PKFN"), DFN and Enbridge. In those discussions,</p>

Location	Reviewer	Recommendation	Enbridge Response
		<p>engagement plan should be updated annually in collaboration with all parties to continually address concerns. Continued, meaningful communications is crucial for these concerns to be addressed and allayed. As part of the communications and engagement plan, annual reports, engagement records and any communications reports and other records with respect to monitoring, maintenance and malfunction should be proactively shared directly with affected First Nations and also should be posted to a publicly accessible registry. To help ensure that engagement with First Nations is meaningful, DFN would like Enbridge to maintain records that chronologically track complaints by Aboriginal groups and landowners, including municipal and regional governments, relating to the Project beginning with the commencement of construction and continuing through operations; and demonstrate how Enbridge has addressed the concerns raised.</p>	<p>Enbridge committed to updating the Project Engagement Plan, in collaboration with DFN and DFN communities, which may include the incorporation of a commitment tracker.</p>
<p>Public Hearing – October 27, pg 54 of the transcript</p>	<p>Enbridge</p>	<p>n/a</p>	<p>“Through ongoing discussions with First Nations, Enbridge has committed to updating the Project Engagement Plan and community communication and engagement protocols. This will be done in collaboration with these communities.”</p>
<p>Public Hearing – October 28, pg 135 of the transcript</p>	<p>Enbridge</p>	<p>n/a</p>	<p>“Enbridge commits to be very specific in the update of its engagement plan.”</p>
<p>Public Hearing – January 8, 2018, pg 69-70 of the transcript</p>	<p>DFN</p>	<p>“As a condition of the permitting and licensing, Enbridge should develop a project-specific Engagement Plan that details an engagement process with DFN and impacted First Nations regarding the project's construction schedule, timeline changes, and</p>	<p>n/a</p>

Location	Reviewer	Recommendation	Enbridge Response
		<p>notification process to Dehcho First Nations and -- and impacted First Nations regarding any inadvertent releases or hadous -- hazardous waste spills, relevant monitoring objectives and outcomes, notification of the discovery of archeological and cultural resources, contracting opportunities related to project activities, and there's probably more details required that we will outline in our final written arguments.”</p> <p>“DFN further recommends to the Board that a condi -- condition of - per -- further, as a condition of their permitting and licence, the project-specific Engagement Plan should be developed with input from DFN and impacted First Nations.”</p>	
Public Hearing – January 9, 2018, pg 16 of the transcript	DFN	“We are looking to develop a better relationship with Enbridge and we are hopeful these processes will initiate the start of a new relationship. Any new frameworks that will inform the basis of how this new working relationship between Dehcho and Enbridge should -- should be reflected in an updated Engagement Plan in order to ensure that the Board is both aware and informed on any potential new developments.”	n/a

Based upon the input received, Board staff are of the opinion that the Engagement Plan should be updated to address the comments received and the commitments made during the regulatory process.

Other Comments on Draft Permit and Licence Conditions

During the regulatory process, comments and recommendations were received on the Draft Permit and Licence Conditions and are presented in further detail within the actual Draft Permit and Draft Licence (attached). An overview of where these are included within the attached Draft Permit and Licence Conditions is provided below:

Draft Licence Conditions

- Part A: Scope and Definitions
- Part B: General Conditions
- Part E: Conditions Applying to Construction
- Part F: Conditions Applying to Modifications

- Part G: Conditions Applying to Water and Waste Management
- Part H: Conditions Applying to Aquatic Effects Monitoring Program
- Part I: Conditions Applying to Spill Contingency Planning
- Part J: Conditions Applying to Closure and Reclamation

Draft Permit Conditions

- (b) Time
- (c) Type and Size of Equipment
- (d) Methods and Techniques
- (f) Control or Prevention of Ponding of Water, Flooding, Erosion, Slides, and Subsidence of Land
- (g) Use, Storage, Handling, and Ultimate Disposal of Any Chemical or Toxic Material
- (j) Protection of Historical, Archaeological, and Burial Sites
- (q) Biological and Physical Protection of the Land

**b. Interventions**

Board staff received four interventions:

- Łíídlıı Kúé First Nation (LKFN)
- Smbaa K'e First Nation (SKFN)
- Dehcho First Nations (DFN)
- Government of the Northwest Territories (GNWT)

LKFN provided several recommendations in their Intervention (attached) which included:

- Harmonization with the NEB process
  - NEB and MVLWB processes have not been harmonized, and as a consequence, there is significant duplication of the process
- Consultation
  - Allowing LKFN to make a supplementary submission would assist the MVLWB in ensuring its constitutional obligation to consult and accommodate affected Indigenous parties
  - LKFN has not been adequately engaged by Enbridge or adequately consulted about the project
    - Accommodation
      - Enbridge to provide capacity funding
      - Long-term relationship agreement
      - LKFN-Enbridge Environmental Management Committee to be established for the life of Line 21 facilities within LKFN territory
      - Royalty and revenue sharing agreement
- Cumulative impacts
  - LKFN is concerned about impacts arising from the project
- Permafrost
  - Linear disturbance can create risks of permafrost thaw and degradation
  - Need further information to properly assess risks to propose appropriate mitigation measures
    - To develop and provide a monitoring program (e.g. Dehcho K'ehodi / Guardians)
- Mobilization of Equipment
  - Could impact ability of LKFN members accessing the land (hunt, trap, fish, and gather)
    - Finalized construction to be provided to LKFN

- Sump
  - o Could fail or impact permafrost conditions
    - Should not be permitted
- Site restoration
  - o Natural revegetation is not appropriate, and clearing could lead to permafrost thaw and degradation
- Monitoring Program
  - o Women's advisory panel
  - o Lead independent monitoring programs, during and following work, to monitor for potential impacts (guardianship program)
- Spills
  - o Ensure that regionally relevant, coordinated emergency response systems are in place and practiced
  - o LKFN is notified of emergencies
- Habitat
  - o Impacts related to barge traffic and land area, and release of drilling fluids
    - Provide a Water Quality Monitoring Plan
- Closure
  - o Clear criteria to determine that decommissioned pipeline segment has been successfully closed and can be abandoned
- Engagement Plan
  - o Developed in collaboration with affected First Nations
- Conditions (Licence)
  - o Include DFN Advisory Committee and DFN environmental monitoring
  - o Engagement Plan
  - o Water Use
    - Schedule and water usage
  - o Construction
    - DFN environmental monitoring program and water quality and quality testing
  - o Modifications
    - DFN to be notified
  - o Water and Waste Management
    - Reports to be submitted to DFN for review
    - Soil and Erosion Control Management Plan cited in NEB conditions to be applied to these conditions
  - o AEMP
    - Water Quality Monitoring Plan to be in place prior to work activities (include details on the Turbidity Monitoring Plan)
    - Barge schedules and landing procedures
    - Annual Report on issues and impacts to aquatic environment
  - o Spills
    - Spill Contingency Plan to include Emergency Response Plan
    - Record wildlife activity in immediate vicinity
    - Monitoring program to include permafrost monitoring and leak detection investigation program
    - Monitoring program must allow for ground-presence for visual observations and measurement of depth to pipeline
- Conditions (Permit)

- Comply with those put forward by DFN in NEB process:
  - Spills
    - Spill response plan and emergency response plan
    - File a leak detection system
  - Drilling fluids
    - To use only bentonite clay and water
    - Provide a risk assessment of a blowout during drilling
    - Protocols for notification of any spills or releases
  - Contingency Plan
    - To prepare if proposed HDD cannot be successfully completed
  - Monitoring Program
    - Implemented during decommissioning and continue for 5 years after
    - Enbridge should fund community-based environmental monitoring initiatives
    - Monitoring to be designed to increase understanding of the permafrost regime
  - Engagement Plan
    - List of triggers provided

SKFN provided several recommendations in their Intervention (attached) which included:

- Consultation
  - Indicated that it was the collective responsibility of the NEB and the MVLWB to fulfill the duty of the Crown
  - Characterized their concerns as longstanding, having been repeatedly communicated to Enbridge and the Crown, with little to no meaningful accommodation
- Engagement Plan
  - To be developed in conjunction with First Nations and to cover construction and operation phases
  - To be updated and resubmitted
- Monitoring Program
  - Board to require Enbridge provide financial and technical resources under the guardian program
  - Women's advisory panel
- Waste Management Plan
  - Sumps vs. Alternatives, Drilling Fluids, and Groundwater Monitoring
  - To be updated and resubmitted
- Harmonization with NEB process
  - Frustrated with the need to complete some of the same steps twice
  - For MVLWB to allow parties to use the NEB Registry for this file
- Conditions (Permit)
  - Commencement of Notifications
  - Sumps from Water
  - MSDS Chemicals
  - Waste Management Plan (how to post on registry)
  - Summary of Changes
- Conditions (Licence)
  - Annual Report

- Security
- Modifications
- Spills
- Closure and Reclamation Plan
- Evidence with the NEB
  - Turbidity Monitoring Program
    - Enbridge states that it is being developed and will be made available prior to the start of construction

DFN provided several recommendations in their Intervention (attached) which included:

- Permafrost
  - Changes to the landscape in the region due to permafrost thaw
- Monitoring Program
  - Guardian Program
  - Stewardship
- Impact to community from temporary workers
  - Women's advisory panel
- Conditions
  - Engagement Plan
  - Drilling Fluids
  - Spill
  - Archaeological Sites
  - Definition of Secondary Containment
  - Need for an Interim Closure and Reclamation Plan/Closure and Reclamation Plan

GNWT provided several recommendations in their Intervention (attached) which included:

- Drilling Waste
  - Condition for a Sump Construction and Monitoring Plan
- Turbidity Monitoring
  - Turbidity Monitoring Program
  - Include a management response framework including action levels and proposed management responses
- Security
  - Split between Land and Water
  - Does this include winter operations? What effect will this have on the overall number...if anything?
    - Discussion with ENR
      - September 22, 2017 was when new information was provided by Enbridge. GNWT responded on September 29, 2017.

**c. Public Hearing – October 27-28, 2017**

The Board held a Public Hearing on October 27-28, 2017 in Fort Simpson, NT. Interveners and members of the public raised the following topics:

Interveners:

- Turbidity Monitoring Plan
  - Work with stakeholders to develop and revise Plan

- Activities included off the Right-of-Way
  - o Confirmation of what activities are on and off the Right-of-Way
- Permafrost
  - o Avoidance is preferred mitigation
- Engagement Plan
  - o Engagement Log to be updated
  - o Hiring practices
  - o Review of management plans
  - o Independent community-based monitoring program
  - o Location of sumps
  - o Frequency of reporting
  - o Community and stakeholder engagement, including updates and protocols
- Sumps
  - o Location, number, and dimensions
  - o Community input into sump placement
- Management Plans to be updated
  - o Waste Management Plan
    - Include sumps
    - Correct Material Safety Data Sheets (MSDS)
  - o Erosion Control Plan
    - Project specific
    - Reduce impacts to wildlife
  - o Engagement Plan
    - Add all triggers
- Noise
  - o To include noise mitigation measures
- Wildlife
  - o Providing historical data to communities
- Fish Habitat
  - o Drill timing
  - o Mitigations for inadvertent return
  - o Downstream fish habitat assessment
- Employment
  - o Training
    - Indigenous Awareness Training
  - o Camp policies
    - Code of Conduct for employees (links to Engagement Plan)
- Independent monitors (e.g. Dehcho K'ehodi / Guardians program)
- Other
  - o Accommodation of families living on/near to project
  - o Various socio-economic matters (outside of Board jurisdiction)

General Public:

- Engineering
  - o Standards used for pipeline
- Ecological knowledge (traditional and scientific)
  - o Caribou and Inconnu studies
  - o Climatologists to work with local Traditional Knowledge holders

- Economic effects of development
  - o Benefits to local families, businesses
- Restricting access
  - o Gate
- Potential negative effects on local families
  - o Access to land
  - o Compensation
- Noise
  - o Effects on wildlife
- Water
  - o Possible effects on downstream water quality

A list of commitments was compiled from the Public Hearing transcripts and were confirmed with Enbridge (attached). The Commitment Table includes a “Board staff analysis” column that indicates possible means of implementation. This is not intended as direction to the applicant, only suggested solutions as interpreted by Board staff. The table was posted to the MVLWB Registry on December 11, 2017.

**d. Reconvened Public Hearing – January 8-9, 2018**

The Board held the Reconvened Public Hearing on January 8-9, 2018 in Fort Simpson, NT. Interveners and members of the public raised the follow topics:

LKFN joint presentation with Enbridge (attached)

- Concluding a Participation Agreement and an Environmental Management Agreement that will resolve their differences related to the Line 21 Segment Replacement Project. As such, LKFN confirmed they had no remaining concerns regarding the use of water and temporary land being applied for.

Intervener Presentations:

- GNWT (attached)
  - i. No concern with water use requirements;
  - ii. Recommend that a Sump Construction and Monitoring Plan be required in the Water Licence and that Enbridge submit the plan 90 days after the Water Licence is issued for the review and approval of the Board;
  - iii. Recommend that a formal requirement for a Turbidity Monitoring Plan be included as a condition of the Licence. The GNWT also recommended that this plan include a management response framework including action levels and proposed management responses; and
  - iv. Recommend that security for this undertaking total \$863,402. Security under the Water Licence should be set at \$337,551 to cover water related liability and security under the Land Use Permit should be set at \$525,851 to cover land related liability.
- SKFN (attached)
  - i. Rely on wildlife;
  - ii. Protection of water;
  - iii. Independent monitors;
  - iv. Engagement;
  - v. Employment;

- vi. Monitoring Program; and
  - Women’s advisory panel
- vii. Previous comments still stand.
- DFN (attached)
  - i. Independent monitors;
  - ii. Camp setup and operations;
  - iii. Management Plans to be updated;
    - Engagement Plan
    - Spill Contingency Plan
    - Closure and Reclamation Plan
  - iv. Drilling waste disposal;
  - v. Archaeological resources; and
  - vi. Continuous in-stream turbidity monitoring.
- LKFN (attached)
  - i. Community-based monitoring programs for environmental, fisheries and other impacts;
  - ii. Permafrost;
  - iii. Use of Traditional Knowledge; and
  - iv. Timing of project activities.
- General Public:
  - i. Economic effects of development;
    - Benefits to local families, businesses
    - Significance in regional (including the Sahtu region) and territorial economies
  - ii. Personal experiences in work in the oil and gas industries; and
  - iii. Potential effects on land and water.

A list of commitments was compiled from the transcripts of the reconvened Public Hearing (attached). The Commitment Table includes a “Board staff analysis” column that indicates possible means of implementation. This is not intended as direction to the applicant, only suggested solutions as interpreted by Board staff. The table was posted to the MVLWB Registry on January 23, 2018.

**e. Written Closing Arguments**

On January 12, 2018, Interveners submitted their written closing arguments to the Board. A summary of these submission is as follows:

- GNWT (attached)
  - i. Recommendations submitted with their intervention, on September 29, 2017, remain unchanged, except those set out below, which were amended based on new information provided:
    - Sump Construction and Monitoring Plan
      - No longer recommend the inclusion of groundwater wells as Enbridge commits to using bentonite as the only drilling additive
      - Recommend this plan requires approval prior to sump construction
    - Turbidity Monitoring Plan
      - Recommend this plan requires approval prior to commencement of drilling
    - Security (provided an updated RECLAIM estimate)



- i. Previously had concerns regarding fish and fish habitat monitoring and protection, wildlife impact monitoring and mitigation, permafrost impacts and protection, the effect of the project on local families who actively use and rely on the project area, the socio-economic impact of the work camps, the overall Project impact on the local community, and other matters
- ii. Environmental Management Agreement
  - Confirmed they had reached an agreement with Enbridge which includes an Environmental Management Committee to be comprised of representatives from each affected Dene community and Enbridge
  - The Environmental Management Committee enables the Dene parties and Enbridge to work together to address environmental and socio-economic issues and concerns
  - Agreement also provides a process and capacity funding to monitor water and fish, wildlife, cultural resources and the environment
- iii. Process Agreement
  - Establishes mechanisms that address mitigation of impacts on local harvesters and land users, protect LKFN community members' safety and ability to continue harvesting and land use, facilitate better communication with the local community, and ensure that the local community is able to benefit from employment and contracting opportunities associated with the Project
- iv. With the agreements in place, LKFN has confidence that its remaining concerns regarding the Project have been or can be addressed and are not asking for any further conditions

On January 17, 2018, Enbridge submitted their written closing arguments to the Board (attached). These are summarized below:

- Recommendations submitted with their initial comments on the draft Conditions (Version 1), on May 18, 2017, remain unchanged, except those set out below:
  - i. Turbidity Monitoring Plan and Surveillance Network Program
    - Do not support the recommendation to include the Turbidity Monitoring Plan as a condition of the Licence
    - They have voluntarily submitted a draft to the Board and are working to finalize the plan which includes engaging with the GNWT and parties to the Environmental Management Agreement
    - State that the NEB has full jurisdiction over potential impacts of all drilling activity relating to the Project, regardless of whether any drilling waste migrates off the right-of-way
    - Should the NEB approve the project, Enbridge would be required to implement the plan, therefore the inclusion of a condition by the MVLWB would be unnecessary and redundant
    - Recommend that a single condition be imposed by either the NEB or the MVLWB, but not both
- Commits to updating the Engagement Plan

## 5. Topics for Board's Consideration

This section discusses five topics for the Board to consider as it deliberates on the Applications:

- a. Sump Construction and Monitoring Plan

- b. Turbidity Monitoring Plan and Surveillance Network Program
- c. Noise Management Plan
- d. Permafrost Monitoring
- e. Matters of Board Jurisdiction

**a. Sump Construction and Monitoring Plan**

During the regulatory process recommendations were received regarding the submission of a Sump Construction and Monitoring Plan to be included as a condition of the Licence. These are outlined in Table 4 below.

Table 4: Reviewer Recommendations and Enbridge Responses Received Throughout the Regulatory Process Regarding the Submission of a Sump Construction and Monitoring Plan

Location	Reviewer	Recommendation	Enbridge Response
Intervention dated September 29, 2017	GNWT	Recommends that a Sump Construction and Monitoring Plan be required in the water licence and that Enbridge submit the plan 90 days after the Water Licence is issued for the review and approval of the Board.	Enbridge disagrees that groundwater monitoring wells are required in an SNP program. The drilling mud proposed to be disposed in sumps will be bentonite-based and will not contain any additives that may cause adverse effects to the environment. Given this, from the perspective of environmental protection, it is not clear to Enbridge what the utility would be of including groundwater monitoring wells in a monitoring program for sumps.
Public Hearing – October 27, pg 62 of the transcript	Enbridge	n/a	“So in those areas based on the soil monitoring program for the sump construction, there would be additional permafrost verification as part of that soil program.”
Public Hearing – October 27, pg 69 of the transcript	Enbridge	n/a	“Yes, we'd be willing to provide -- provide sample results to the Mackenzie Valley Land and Water Board as part of our sump construction procedures.”
Public Hearing – January 8, pg 20 of the transcript	GNWT	“The GNWT recommends that a sump construction and monitoring plan be required in the Water Licence, and that Enbridge submit the plan ninety (90) days after the water license is issued for the review and approval of the Board.”	n/a
Public Hearing – January 8, pg	GNWT	“So in our intervention we did say that information in this plan would include	n/a

Location	Reviewer	Recommendation	Enbridge Response
39-41 of the transcript		<p>site-specific information on the sump locations, such as soil characteristics, grade, and proximity of water bodies, as well as final design details on the sumps, such as depth and capacity, operational retail such as capping method, material used.</p> <p>We also noted an important part would be the monitoring and maintenance details which would include a schedule of monitoring program, which parameters will be assessed, so slumping of the sumps, pooling of water, status on the regrowth of vegetation. And there would also be a requirement under the monitoring program to out -- outline any observations that would require action.”</p> <p>“So while ENR had originally referenced a possible inclusion of groundwater monitoring in our comments on the draft Water Licence, ENR concurs with Enbridge's statement in their response from October 13th that groundwater wells are not necessary.”</p> <p>“So we do still think that the Sump Construction and Monitoring Plan would include a monitoring aspect, but it would be more of a visual monitoring and inspections as opposed to groundwater wells.”</p>	
Public Hearing – January 8, pg 106 of the transcript	SKFN	<p>“That said, and in line with the opening comments, the agreement doesn't replace the regulatory responsibilities and the -- the -- the recommendations that GNWT has brought forward are very much in line with the comments that Sambaa K'e has previously made and would support such recommendations as the Turbidity Monitoring Plan and the -- what we've referred to as revised Waste Management Plan but, certainly, more detail respecting sumps and ongoing monitoring of</p>	n/a

Location	Reviewer	Recommendation	Enbridge Response
Public Hearing – January 9, pg 36 of the transcript	SKFN	sumps and the communication of those revised plans.” “Throughout the hearing, SKFN has recommended groundwater monitoring wells with controls upstream of the sumps in wells downstream as part of a network surveillance program. Yesterday we heard that the GNWT doesn't feel this is necessary because non-toxic drilling muds are to be used. We acknowledge this, but, non-toxic doesn't necessarily mean zero environmental effect. We would expect the salt content, for example, may, even at levels within thresholds, still have some effect on local soils and plant vegetation. There is nothing to prevent a more stringent approach than what is in the regulations and, in fact, I believe the regulations themselves note that landowners may apply more stringent considerations. We suggest that given the substantial difference between what Dene parties have requested and what Enbridge plans to do, that groundwater monitoring be a minimal accommodation.”	n/a
Closing Arguments dated January 12, 2018	GNWT	Throughout this review process, the GNWT has identified that drilling waste management and disposal is a key component of this project. To this end, the GNWT has recommended the submission of a sump construction and monitoring plan, to be approved by the Board prior to the commencement of this component of the project. Such a plan should contain information regarding the handling and analytical testing of sump contents, disposal methods, and any monitoring and maintenance activities. This will ensure that the disposal of drilling waste is conducted appropriately and that the land and water remains protected. Should such a plan become a requirement of the water licence, the	The GNWT also addressed sump monitoring in its written argument. On this issue, Enbridge notes that at the oral hearing on January 8, 2018, the GNWT confirmed as follows (Transcript Day 3, p. 42, 2-11): It's GNWT's position that provided bentonite is the only drilling additive used, there would be no need for groundwater wells. Bentonite may only result in increased in TSS, which are already elevated in groundwater and difficult to test for in groundwater. So we do still think that the Sump Construction Monitoring Plan would include a monitoring

Location	Reviewer	Recommendation	Enbridge Response
		GNWT is committed to providing its technical review and comments in a timely manner to the MVLWB.	aspect, but it would be more of a visual monitoring and inspections as opposed to groundwater wells.

**b. Turbidity Monitoring Plan and Surveillance Network Program**

During the regulatory process, recommendations were received regarding the submission of a Turbidity Monitoring Plan and Surveillance Network Program to be included as a condition of the Licence. These are outlined in Table 5 below.

Table 5: Reviewer Recommendations and Enbridge Responses Received Throughout the Regulatory Process on the Submission of a Turbidity Monitoring Plan and Surveillance Network Program

Location	Reviewer	Recommendation	Enbridge Response
Initial Comments on Applications dated May 15, 2017	GNWT-Lands	It is recommended that, because of the possibility of releases to surface waters, water quality sampling be conducted upstream and downstream from the area where the releases may occur to provide baseline information on water quality, as well as information during operations.	Enbridge is developing a turbidity monitoring protocol that will be implemented during the HDD. The protocol will include sampling locations upstream and downstream of the drill path.
Intervention dated September 29, 2017	GNWT	In the GNWT's comments on the draft Water Licence submitted September 29 <sup>th</sup> , the GNWT recommended that a formal requirement for a Turbidity Monitoring Plan be included as a condition of the licence. The GNWT also recommended that this plan include a management response framework including action levels and proposed management responses.	Enbridge has developed a stand-alone TMP for the Project which includes: provision for a watercourse monitor(s) to be on-site during HDD activities, sampling locations upstream and downstream of the drill path, and steps to be taken if a suspected inadvertent return occurs. Should the NEB approve the Project, Enbridge will already be required to implement the TMP. The inclusion of a condition to the Water Licence requiring a TMP would be redundant.
Intervention – comments on draft conditions dated September 29, 2017	LKFN	Water Quality Monitoring Program: - Enbridge must provide a detailed Water Quality Monitoring (WQM) plan that will be in place prior any work activities. The WQM must outline details of monitoring procedures including the types equipment will be used to monitor	- Enbridge has developed a stand-alone TMP for the Project that addresses the information identified above. The TMP was filed with the NEB on July 25, 2017 [Filing ID A85119-9 ]. For the MVLWB's reference, a copy of the TMP is attached.

Location	Reviewer	Recommendation	Enbridge Response
		<p>turbidity during drilling activities (i.e. Sonde deployment or hand held Lamotte Sampling), rationale of WQM efforts, frequency of sampling, geographic extent of sample sites based on the zone of influence and frac-out/spill response contingency plans. The WQM needs to outline the methods used and degree of sampling effort during drilling activities. Given the sensitivity of fish habitat at site and the potential for frac-outs to occur during spawning periods.</p> <ul style="list-style-type: none"> <li>- WQM monitors need to be working in shifts to ensure monitoring is occurring during all HDD activities (i.e., should the HDD be a continuous 24-hour drill)</li> <li>- Deploy turbidity monitoring devices (i.e., sondes) along the thalweg at each transect so that turbidity is continuously monitored and graphed, outside of the point samples being collected by the crew.</li> <li>- Provide details within the proposed Turbidity Monitoring Plan on what “contingency measures” will be implemented should an advertent return is suspected.</li> <li>- Provide detailed plan for how frac out will be mitigated and managed in terms of response from the drilling team, suspension of drilling activities until issue is resolved, and what cleanup activities will be carried out if drilling mud is released and discovered in the river, along the banks and/or in wetlands.</li> </ul>	<ul style="list-style-type: none"> <li>- The TMP includes turbidity monitoring 24 hr/day, provided the conditions are safe to do so.</li> <li>- With respect to LKFN’s recommendation that Enbridge deploy turbidity monitoring devices at each transect, Enbridge does not propose to use anchored in-stream monitoring devices for turbidity monitoring. This is primarily based on the sediment dispersion modelling conducted and filed with the National Energy Board on July 25, 2017 [NEB Filing ID A85119-8]. For the MVLWB’s reference, a copy of the Mackenzie River Sediment Modelling RPS Report is attached. In the unlikely event that drilling fluid enters the Mackenzie River through an inadvertent return, it is not expected to settle on the river bed due to the amount of turbulent flow present. Also, anchored in-stream monitoring devices would be anticipated to interfere with regular barge traffic on the Mackenzie River.</li> </ul>
Public Hearing – October 27, pg 77 of the transcripts	GNWT	<p>“Yes, we are aware that the draft turbidity management plan has been provided to the Land and Water Board on the record. So in that regard, the GNWT and other parties have recommended that the water licence include a requirement for the inclusion of a turbidity monitoring</p>	<p>“The turbidity monitoring plan is a plan that was developed to recognize the importance of water, in particular, to First Nations, but to -- to the environment. The commitment has been made in the plan to communicate with stakeholders. The details of that</p>

Location	Reviewer	Recommendation	Enbridge Response
		<p>plan. I believe Enbri -- Enbridge's response was that this would -- was already a requirement of the National Energy Board process and as such, inclusion in the water licence would be redundant. Can Enbridge outline then how stakeholder input has been incorporated into the existing turbidity monitoring plan and how and when monitoring results will be communicated back to stakeholders?"</p>	<p>communication are not in this draft plan, but the intention is to have a detailed plan for communicating turbidity monitoring results throughout the drilling process."</p>
<p>Public Hearing – January 8, pg 20-22 of the transcripts</p>	<p>GNWT</p>	<p>“In the GNWT's comments on the draft Water Licence, which we submitted on September 29th, the GNWT recommended that a formal requirement for a Turbidity Monitoring Plan be included as a condition of the license. The GNWT also recommended that this plan include a management response framework, which would include action levels and proposed management responses. In their October 13th response, Enbridge disagreed with the inclusion of Turbidity Monitoring Plans and details, including SNP locations, within the Water Licence, stating that it was already a requirement from the National Energy Board. GNWT notes that an increase in turbidity, or a release of water high in suspended solids, would be considered a waste, thus the recommendation for inclusion of the Turbidity Monitoring Plan within the Water Licence. Further, under the NWT regulatory regime, there are requirements for stakeholder input in review of the plans required under the Water Licence prior to implementation. This adds an increased transparency in this regulatory process. An opportunity to review and input into these plans was echoed by other parties to this process. For clarity, the</p>	<p>n/a</p>

Location	Reviewer	Recommendation	Enbridge Response
		<p>GNWT does not anticipate that this will result in -- in a duplication of sampling efforts, but will provide a different mechanism for approvals and reporting related to a single plan. The GNWT would also like to provide an update to the Board in that we have had discussions with Enbridge representatives in December regarding our concerns with the previous version of the Turbidity Monitoring Plan. It is our understanding that an updated plan is currently being drafted and will be forthcoming."</p>	
<p>Public Hearing – January 8, pg 106 of the transcripts</p>	<p>SKFN</p>	<p>"That said, and in line with the opening comments, the agreement doesn't replace the regulatory responsibilities and the -- the -- the recommendations that GNWT has brought forward are very much in line with the comments that Samba K'e has previously made and would support such recommendations as the Turbidity Monitoring Plan and the -- what we've referred to as revised Waste Management Plan but, certainly, more detail respecting sumps and ongoing monitoring of sumps and the communication of those revised plans."</p>	<p>n/a</p>
<p>Public Hearing – January 9, pg 39-40 of the transcripts</p>	<p>SKFN</p>	<p>"We also support the comments that GNWT made yesterday regarding the Turbidity Monitoring Plan. We've had the same questions in reviewing the plan that was initially submitted. It's not clear how upstream conditions will be calculated and, therefore, how the threshold 8 percent NTU would be calculated. And it isn't acceptable that a CCME threshold would need to be exceeded before some actions are put in place. We do see and -- and understand that this appears to be an issue of shared jurisdiction but we agree with GNWT's perspective that if it is properly harmonized with the</p>	<p>n/a</p>

Location	Reviewer	Recommendation	Enbridge Response
		<p>NEB, the Land and Water Board condition should be able to build on or support any related conditions that are specific to drilling. Ultimately, SKFN and other Dene parties, ideally and likely will be closely involved in turbidity monitoring and water quality and the Mackenzie falls in the GNWT jurisdiction. So, it makes sense from our perspective, that there would be a mechanism through the conditions that ensures that the information related to turbidity monitoring is easily available and accessible for review through NWT's co-management system."</p>	
<p>Closing Arguments dated January 12, 2018</p>	<p>GNWT</p>	<p>The MVLWB has the authority to require turbidity monitoring to detect the presence of drilling "waste," as that term is defined in the Waters Act, resulting from an inadvertent return. While the NEB has the authority to regulate drilling, the NEB is not the only regulatory body with authority to regulate waste resulting from drilling. The NEB and MVLWB have advised parties that for the Line 21 Segment Replacement, the NEB will regulate activities on the right-of-way and the MVLWB will regulate activities off the right-of-way. As sumps may be located both on and off the right-of-way, both the NEB and MVLWB have the authority to regulate this waste stream. As opposed to drilling waste deposited and contained within in-ground sumps, an inadvertent return of drilling fluids during drilling operations under the Mackenzie River is very unlikely to remain within the defined right-of-way. The current in the Mackenzie River will result in a migration of waste downstream. This provides a compelling basis for the MVLWB to regulate this unintended</p>	<p>In its final submissions dated January 12, 2018, the Government of the Northwest Territories ("GNWT") provided a number of recommendations, including a formal requirement for a Turbidity Monitoring Plan ("TMP") to be included as a condition of the water license. Enbridge has voluntarily prepared a draft TMP and is working to finalize that plan, including engaging in ongoing discussions with GNWT and parties to the EMA. Should the National Energy Board ("NEB") approve the Project, Enbridge will already be required to implement the TMP; therefore, the inclusion of a condition requiring a TMP would be unnecessary and redundant (as would the surveillance network program). Enbridge acknowledges GNWT's arguments regarding jurisdiction over the deposit of waste in waters within a federal area in the Mackenzie Valley. However, to be clear, Enbridge submits that the NEB has full jurisdiction over potential impacts of all drilling activity relating to the Project,</p>

Location	Reviewer	Recommendation	Enbridge Response
		<p>potential deposit of waste in the water licence by ensuring early detection of and preventing excessive quantities of such potential waste from being deposited in the Mackenzie River through a robust turbidity monitoring plan. There will not be any conflict if both the NEB and MVLWB authorizations require Enbridge to monitor turbidity to detect the presence of drilling waste and take certain actions if such waste is detected. As both the NEB and MVLWB are boards established under federal legislation, a conflict will only exist if dual compliance is impossible. In <i>Greater Vancouver (Regional District) v. Darvonda Nurseries Ltd.</i>, 2008 BCSC 1251, a decision in the environmental regulatory law context, Justice Wedge of the British Columbia Supreme Court held at paragraphs 104 to 106 that no conflict exists solely because a law or permit imposes further or stricter restrictions or conditions than another law or permit Justice Wedge's reasoning is equally applicable to this context. Compliance by Enbridge with whichever of the turbidity monitoring requirements is stricter in any regard will not result in a breach of the turbidity monitoring requirements of the other board and so there will not be any conflict. If there is an exceedance under the MVLWB's turbidity monitoring plan, a requirement that Enbridge temporarily cease drilling and take appropriate actions to prevent further deposit of that drilling waste in the Mackenzie River is fully within the MVLWB's authority. As the MVLWB has the authority to regulate the</p>	<p>regardless of whether any drilling waste migrates off the right-of-way. The issues of potential inadvertent returns, drilling contingency and mitigation measures, including, but not limited to, the TMP, were thoroughly considered by the NEB at the oral hearing in October 2017. GNWT participated fully in the NEB proceeding, including submitting Information Requests to Enbridge regarding the turbidity monitoring protocol. As a result, there is no regulatory gap regarding these issues. In its rationale for why the MVLWB should require a TMP as a condition of the water license, the GNWT stated that the MVLWB process would allow for public review of and comment on the draft TMP prior to its finalization. Respectfully, there have already been extensive opportunities for stakeholders to provide comments on the TMP – through both the MVLWB and the NEB processes. Further, the EMA provides a mechanism to collaborate with local Indigenous groups on the details of the TMP. Finally, as acknowledged by the GNWT at the oral hearing on January 8, 2018, Enbridge has begun, and is continuing, discussions with the GNWT regarding updates to the TMP. Should the NEB or MVLWB determine that a condition regarding the TMP is necessary, in order to prevent the potential for conflicting requirements or interpretation of the requirements by regulators, Enbridge recommends that a single condition imposed by either the</p>

Location	Reviewer	Recommendation	Enbridge Response
		<p>deposit of all types of waste in waters, it logically follows that the MVLWB also has the authority in a water licence to require temporary cessation of any activity that results in an unintended deposit of waste to a body of water. This would result in a lawful incidental effect over the NEB's authority to regulate drilling. The NEB's authority to also regulate drilling waste and require temporary cessation of drilling if there is an exceedance does not oust the MVLWB's authority over the same matters. If the MVLWB and NEB wish to avoid duplication, despite duplication being entirely lawful as noted above, the GNWT believes that the MVLWB should regulate this unintended potential deposit of waste by requiring a turbidity monitoring plan. The MVLWB's process will allow for public review of and comment on the draft turbidity monitoring plan prior to finalizing the plan, whereas there is no such public review under the NEB's process. Having a board that is based on the principles of co-management and located in the Northwest Territories consider any comments received and regulate this unintended potential deposit of waste will greatly assist in ensuring a robust turbidity monitoring plan. As the GNWT noted in its closing oral argument to the NEB, we encourage the NEB and MVLWB to coordinate their decision-making processes to ensure that, where desired, duplication is avoided and, most importantly, that all issues that have been raised and are within the authority of one or both boards receive due consideration by at least one board.</p>	<p>MVLWB or the NEB – not both. Please also refer to Enbridge's responses to GNWT's recommendations regarding aquatic effects monitoring, TMP, and surveillance network program (topics 3, 4 and 5), filed October 13, 2017.</p>

**c. Noise Management Plan**

During the regulatory process, recommendations were received on the submission of a Noise Management Plan to be included as a condition and are outlined in Table 6 below:

Table 6: Reviewer Recommendations and Enbridge Responses Received Throughout the Regulatory Process on the Submission of a Noise Management Plan

Location	Reviewer	Recommendation	Enbridge Response
Public Hearing – October 27, pg 131 of the transcripts	SKFN	“Given the lack of information that was included in the original environmental and socio-economic assessment report, and given the lack of clarity around commitments to mitigation, is Enbridge willing to develop a noise mitigation plan that would include some consideration of effects on specific sensitive receptors that would include monitoring so that there could be responses if acceptable limits to peak noises were exceeded?”	“Based on the results of the -- of the ESA which concluded no significant residual impact, noise mitigation study we would not be willing to commit to a noise mitigation -- mitigation study at this time.”
Public Hearing – October 28, pg 46 of the transcripts	SKFN	“Given that these sensitive time periods can't be avoided, as you've just described, is it still your position that you would not be supportive of having a comprehensive noise management plan as a condition of the license?”	“So we understand the concerns around the impact on noise and wildlife, and Enbridge agrees to explore potential noise abatement strategies.”
Public Hearing – January 9, pg 38 of the transcripts	SKFN	“Also respecting camps and the health and well-being of those within the camps, which hopefully would include some Sambaa K'e First Nation workers, and with consideration of impacts to wildlife in the area, there needs to be a comprehensive Noise Mitigation Plan submitted.”	n/a
Public Hearing – January 9, pg 39 of the transcripts	SKFN	“We'd like to see a very clear condition that requires that a comprehensive Noise Management Plan be developed which specifies appropriate levels for sensitive receptors which should include human and caribou and that it forecasts the sound levels within the project footprints. The plan should -- should clear -- clear mitigation approaches.”	n/a

**d. Permafrost Monitoring**

During the regulatory process, recommendations were submitted to the Board regarding the need for permafrost monitoring to be conducted in areas off the Right-of-Way. Possible permafrost-

related conditions are presented in further detail for the Board's consideration in the Draft Permit (attached).

**e. Matters of Board Jurisdiction**

This section provides an overview of Board jurisdiction regarding the previously described proposed Plans. To put the discussion in context, the following sets out the overall jurisdiction of the Board and the specific scope of the activities proposed by Enbridge.

- The Land and Water Boards of the Mackenzie Valley regulate the use of land and water and the deposit of waste through the issuance of land use permits and water licences.
- The Board's authority to regulate the management of waste is described in subsection 26(1) of the MVLUR and sections 11 and 27 of the *Waters Act*
- The scope of the draft Licence states that "This Licence entitles the Licensee to use Water and dispose of Waste for industrial undertakings for the off Right-of-Way activities associated with the installation of a new segment of pipeline, including the following:
  - i. Withdrawal and use of Water from the Mackenzie River and the Liard River;
  - ii. Construction, use, and maintenance of all access roads, well sites, camps, barge landing site, sumps, and related facilities;
  - iii. Installation and maintenance of erosion control measures;
  - iv. Other related activities, including Reclamation; and
  - v. Fuel and hazardous materials storage."

*Jurisdictional Notes - Sump Construction and Monitoring Plan*

- Such a plan falls within the jurisdiction of the Board and is guided by existing practice.
- The Land and Water Boards of the Mackenzie Valley developed and approved the [MVLWB Guidelines for Developing a Waste Management Plan \(2011\)](#).
- These guidelines can be applied to a wide range of projects and provide details on how waste should be managed for the specific project.
- These guidelines also provide general information on what should be included in the Waste Management Plan for deposit of waste to a sump.

*Jurisdictional Notes - Turbidity Monitoring Plan and Surveillance Network Program*

- Argument as submitted by GNWT
  - "The MVLWB has the authority to require turbidity monitoring to detect the presence of drilling "waste," as that term is defined in the *Waters Act*, resulting from an inadvertent return. While the NEB has the authority to regulate drilling, the NEB is not the only regulatory body with authority to regulate waste resulting from drilling.
  - The NEB and MVLWB have advised parties that for the Line 21 Segment Replacement, the NEB will regulate activities on the Right-of-Way and the MVLWB will regulate activities off the Right-of-Way. As sumps may be located both on and off the Right-of-Way, both the NEB and MVLWB have the authority to regulate this waste stream.
  - As opposed to drilling waste that is deposited and contained within in-ground sumps, an inadvertent return of drilling fluids during drilling operations under the

Mackenzie River is very unlikely to remain within the defined Right-of-Way. The current in the Mackenzie River would result in a migration of waste downstream.

- This provides a compelling basis for the MVLWB to regulate this unintended potential deposit of waste in the water licence by ensuring early detection of and preventing excessive quantities of such potential waste from being deposited in the Mackenzie River through a robust turbidity monitoring plan.
  - There will not be any conflict if both the NEB and MVLWB authorizations require Enbridge to monitor turbidity to detect the presence of drilling waste and take certain actions if such waste is detected. As both the NEB and MVLWB are boards established under federal legislation, a conflict will only exist if dual compliance is impossible. In *Greater Vancouver (Regional District) v. Darvonda Nurseries Ltd.*, 2008 BCSC 1251, a decision in the environmental regulatory law context, Justice Wedge of the British Columbia Supreme Court held at paragraphs 104 to 106 that no conflict exists solely because a law or permit imposes further or stricter restrictions or conditions than another law or permit. Justice Wedge's reasoning is equally applicable to this context. Compliance by Enbridge with whichever of the turbidity monitoring requirements is stricter in any regard will not result in a breach of the turbidity monitoring requirements of the other board and so there will not be any conflict.
  - If there is an exceedance under the MVLWB's turbidity monitoring plan, a requirement that Enbridge temporarily cease drilling and take appropriate actions to prevent further deposit of that drilling waste in the Mackenzie River is fully within the MVLWB's authority. As the MVLWB has the authority to regulate the deposit of all types of waste in waters, it logically follows that the MVLWB also has the authority in a water licence to require temporary cessation of any activity that results in an unintended deposit of waste to a body of water. This would result in a lawful incidental effect over the NEB's authority to regulate drilling. The NEB's authority to also regulate drilling waste and require temporary cessation of drilling if there is an exceedance does not oust the MVLWB's authority over the same matters.
  - If the MVLWB and NEB wish to avoid duplication, despite duplication being entirely lawful as noted above, the GNWT believes that the MVLWB should regulate this unintended potential deposit of waste by requiring a turbidity monitoring plan. The MVLWB's process will allow for public review of and comment on the draft turbidity monitoring plan prior to finalizing the plan, whereas there is no such public review under the NEB's process. Having a board that is based on the principles of co-management and located in the Northwest Territories consider any comments received and regulate this unintended potential deposit of waste will greatly assist in ensuring a robust turbidity monitoring plan.
  - As the GNWT noted in its closing oral argument to the NEB, we encourage the NEB and MVLWB to coordinate their decision-making processes to ensure that, where desired, duplication is avoided and, most importantly, that all issues that have been raised and are within the authority of one or both boards receive due consideration by at least one board.'
- Arguments as submitted by Enbridge

- ‘In its final submissions dated January 12, 2018, the Government of the Northwest Territories (“GNWT”) provided a number of recommendations, including a formal requirement for a Turbidity Monitoring Plan (“TMP”) to be included as a condition of the water license. Enbridge has voluntarily prepared a draft TMP and is working to finalize that plan, including engaging in ongoing discussions with GNWT and parties to the EMA. Should the National Energy Board (“NEB”) approve the Project, Enbridge will already be required to implement the TMP; therefore, the inclusion of a condition requiring a TMP would be unnecessary and redundant (as would the surveillance network program).
- Enbridge acknowledges GNWT’s arguments regarding jurisdiction over the deposit of waste in waters within a federal area in the Mackenzie Valley. However, to be clear, Enbridge submits that the NEB has full jurisdiction over potential impacts of all drilling activity relating to the Project, regardless of whether any drilling waste migrates off the Right-of-Way. The issues of potential inadvertent returns, drilling contingency and mitigation measures, including, but not limited to, the TMP, were thoroughly considered by the NEB at the oral hearing in October 2017. GNWT participated fully in the NEB proceeding, including submitting Information Requests to Enbridge regarding the turbidity monitoring protocol. As a result, there is no regulatory gap regarding these issues.
- In its rationale for why the MVLWB should require a TMP as a condition of the water license, the GNWT stated that the MVLWB process would allow for public review of and comment on the draft TMP prior to its finalization. Respectfully, there have already been extensive opportunities for stakeholders to provide comments on the TMP – through both the MVLWB and the NEB processes. Further, the EMA provides a mechanism to collaborate with local Indigenous groups on the details of the TMP. Finally, as acknowledged by the GNWT at the oral hearing on January 8, 2018, Enbridge has begun, and is continuing, discussions with the GNWT regarding updates to the TMP.
- Should the NEB or MVLWB determine that a condition regarding the TMP is necessary, in order to prevent the potential for conflicting requirements or interpretation of the requirements by regulators, Enbridge recommends that a single condition imposed by either the MVLWB or the NEB – not both. Please also refer to Enbridge’s responses to GNWT’s recommendations regarding aquatic effects monitoring, TMP, and surveillance network program (topics 3, 4 and 5), filed October 13, 2017.’

*Jurisdictional Notes - Noise Management Plan*

- Noise can be managed incidentally under subsection 26(1) of the MVLUR (see paragraphs (b) to (e)).

*Jurisdictional Notes – Permafrost Monitoring*

- Impacts to permafrost constitutes a land disturbance, and therefore falls under Board jurisdiction.
- As presented in section 5d above and in the draft Permit, the Board has standard conditions that can mitigate possible impacts to permafrost. Permafrost encountered during sump construction will also be addressed by Enbridge, who stated in the Public Hearing (October 27-28, 2017) that they would avoid any permafrost so encountered.

Possible permafrost impacts could be addressed in a Sump Construction and Monitoring Plan.

## **6. Security**

Enbridge completed the Land Use Permit Security Worksheet with their Application and determined a total security of \$98,115.50 (attached). During the review of the Applications, GNWT noted that a RECLAIM model for Oil and Gas related activities should have been used to calculate security for this project. The GNWT recommended that Enbridge conduct an estimate of security using the RECLAIM Model v.7.0 (Oil and Gas Version) and to provide all supporting information and associated rationale needed to complete the estimate.

In their intervention, dated September 29, 2017, GNWT stated that discussions had taken place between themselves and Enbridge regarding the amount of security that should be required to cover project-related liabilities (attached). Due to the technical nature of the RECLAIM Model, the GNWT agreed to conduct an initial estimate of liability and share it with Enbridge for review and discussion. In a response, Enbridge indicated a general agreement with the draft estimate, with some minor areas of difference. At that time, the GNWT recommended a total of \$863,402 be required for the undertaking (\$525,851 for land liability and \$337,551 for water liability).

During the January 8-9, 2018 reconvened public hearing, Board staff asked GNWT some clarification questions regarding the amount of security being recommended and some of the line items within the RECLAIM Model. The GNWT submitted their closing arguments on January 12, 2018 and amended their recommendation on security based on the new information provided during the public hearing, as well as through discussions with Enbridge following the public hearing (attached). The amended recommended security total is now \$856,835 (\$522,909 for land liability and \$333,926 for water liability).

A breakdown of GNWT's security estimate is provided in Table 7 on the following page.

The draft Licence contains conditions (Part C, items 2 and 3) which would allow the Board to request Enbridge to submit an updated reclamation liability estimate and to ensure that there is sufficient security to address the total current site liability.

The draft Permit contains Condition 47 which sets out the amount of security to be deposited by Enbridge prior to commencement of the land-use operation. There is no other mechanism, other than an amendment, to change the amount of security required under a Permit.

Table 7: Summary of the Security Estimate Provided by GNWT

Capitol Cost Item	Component	Cost	Land Liability	Water Liability
Wells and Facilities		\$0	\$0	\$0
Buildings and Equipment		\$388,605	\$242,803	\$145,803
Chemicals and Contaminated Soil Management		\$51,186	\$25,593	\$25,593
Surface and Groundwater Management		\$0	\$0	\$0
Interim Care and Maintenance		\$0	\$0	\$0
Subtotal: Capital Costs		\$439,791	\$268,396	\$171,396
Indirect Cost Item	Component	Cost	Land Liability	Water Liability
Mobilization/Demobilization		\$225,310	\$137,502	\$87,808
Post-Closure Monitoring and Maintenance		\$51,000	\$31,124	\$19,876
Engineering	5%	\$21,990	\$13,420	\$8,570
Project Management	5%	\$21,990	\$13,420	\$8,570
Health and Safety Plans/Monitoring & QA/QC	1%	\$4,398	\$2,684	\$1,714
Bonding/Insurance	1%	\$4,398	\$2,684	\$1,714
Contingency	20%	\$87,958	\$53,679	\$34,279
Market Price Factor Adjustment	0%	\$0	\$0	\$0
Subtotal: Indirect Costs		\$417,043	\$254,513	\$162,530
<b>TOTAL COSTS</b>		<b>\$856,835</b>	<b>\$522,909</b>	<b>\$333,926</b>

## 7. Conclusion

The draft Permit conditions are based upon the standard condition list, reviewer comments, and Board staff recommendations. The draft Licence conditions are based on reviewer comments and Board staff recommendations. Board staff conclude that the conditions contained within the draft Permit and draft Licence should mitigate the potential environmental impacts this development may have on the land and water.

Board staff conclude the Spill Contingency Plan, as submitted, meets the criteria set out in the guidelines and can be approved.

At this time, Board staff concludes that there are outstanding issues with the Waste Management Plan and the Engagement Plan as described in section 4 above. These Plans should be re-submitted to reflect updates as agreed to during the review and to reflect the scope of the activities as applied for (see attached Draft Land Use Permit Decision Letter from the Board).

## 8. Recommendation

As previously discussed in this Staff Report, Board staff have highlighted the following options for the Board's decision prior to the consideration of the Permit and Licence:

### **Sump Construction and Monitoring Plan**

- 1) Include a condition within the Licence requiring the submission of a Sump Construction and Monitoring Plan.  
**OR**
- 2) Do not include a condition within the Licence requiring the submission of a Sump Construction and Monitoring Plan.

### **Turbidity Monitoring Plan and Surveillance Network Program**

- 1) Include a condition within the Licence requiring the submission of a Turbidity Monitoring Plan and include a Surveillance Network Program as an Appendix to the Licence.  
**OR**
- 2) Do not include a condition within the Licence requiring the submission of a Turbidity Monitoring Plan nor a Surveillance Network Program as an Appendix to the Licence.

### **Noise Management Plan**

- 1) Include a condition within the Permit and/or Licence requiring the submission of a Noise Management Plan.  
**OR**
- 2) Do not include a condition within the Permit and/or Licence requiring the submission of a Noise Management Plan.

Board staff recommend the Board:

- a) Make a motion to approve the Type A Land Use Permit, with a term of five years, and associated Reasons for Decision (subject to final review by Board Chair);
- b) Accept the attached Decision Letter to the Minister of Environment and Natural Resources, with attached Type B Water Licence and Reasons for Decision (subject to final review by Board Chair), recommending approval;
- c) Make a motion to approve the Spill Contingency Plan;
- d) Make a motion to deny the Waste Management Plan and require re-submission as set out in the attached Draft Permit Decision Letter; and
- e) Make a motion to deny the Engagement Plan and require re-submission as set out in the attached Draft Permit Decision Letter.

## **9. Attachments**

- Applications – [Land Use Permit](#) and [Water Licence](#)
  - [Supplemental Information](#) – Revised Appendix II and VII
  - [Supporting Information](#) – Biophysical Assessment Report
  - [Supporting Information](#) – Updates to Applications
  - [Land Use Permit Security Worksheet Estimate](#)
  - [Licence and Permit Application fees receipt](#)
- [Letter from NEB to the Board dated May 28, 2017 – For Board’s Information](#)
- [Enbridge Hearing Order Issued by the NEB – For Board’s Information](#)
- Interventions by [LKFN](#) (including [comments](#) on draft conditions), [SKFN](#), [DFN](#), and [GNWT](#) (including [comments](#) on draft conditions)
- Public Hearing dated October 27 and 28, 2017
  - Transcripts for [Day 1](#) and [Day 2](#)

- [List of Commitments from October 28-29, 2017 Public Hearing](#)
- Public Hearing dated January 8 and 9, 2018
  - Transcripts for [Day 1](#) and [Day 2](#)
  - [LKFN Joint Statement with Enbridge](#)
  - Presentations by [GNWT](#), [SKFN](#) (including [Attachments](#)), [DFN](#), and [LKFN](#) (including [Attachments](#))
  - [List of Commitments from combined October 27-28, 2017 and January 8-9, 2018 Public Hearing](#)
- Written Closing Arguments by [GNWT](#), [SKFN](#), [DFN](#), [LKFN](#), and [Enbridge](#)
- [Review Summary and Attachments](#) (from initial review of applications)
- Land Use Permit:
  - Draft Land Use Permit Cover Page
  - Draft Land Use Permit Conditions
  - Draft Land Use Permit Decision Letter from the Board
- Water Licence:
  - Draft Water Licence Cover Page
  - Draft Water Licence Conditions
  - General Procedures (Water Licence)
  - Draft Water Licence Recommendation Letter to the Minister
  - Draft Notification Letter of Water Licence sent to Minister
- Draft Reasons for Decision
- Draft Decision Letter from the Board
  - Water Use Fee Calculator

Respectfully submitted,



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Regulatory Specialist



David Finch  
Regulatory Specialist