



**Sarah McKenzie**  
Manager  
LP Law, Regulatory Affairs

tel 780-420-5375  
fax 780-420-8749  
sarah.mckenzie@enbridge.com

**Enbridge**  
200, 425 – 1<sup>st</sup> Street SW  
Calgary, Alberta T2P 3L8  
Canada

January 4, 2018

**E-FILE**

Mackenzie Valley Land & Water Board  
7th Floor, 4922 48th St, PO Box 2130  
Yellowknife, NT X1A 2P6 Canada

**Attention: Shelagh Montgomery**

Dear Ms. Montgomery,

**Re: Enbridge Pipelines NW Inc. (“Enbridge”)  
Line 21 Segment Replacement Project (“Project”)  
Application for Type A Land Use Permit MV2017P0013  
Application for Type B Water License MV2017L1-0002  
Response to 1981 Draft Environmental Assessment Conditions**

Please find attached, Liiklii Kue First Nation’s request and Enbridge’s response, relating to the 1981 Report of the Environmental Assessment Panel.

Should the Board require any further information, please contact the undersigned.

Sincerely,

Sarah McKenzie  
Manager, Regulatory Affairs

Attachment

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**From:** Daniel T'seleie <DTseleie@oktlaw.com>  
**Sent:** Saturday, October 28, 2017 8:00 AM  
**To:** Duncan Purvis; Ramona Salamucha; Kathleen Shannon  
**Cc:** Lorraine Land  
**Subject:** [External] Recommendations from 1981 Line 21 EA Panel Report

Good morning. I apologize for the formatting issues with the information taken from the 1981 Line 21 EA Panel report. Page numbers are actual document numbers (not pdf page numbers). We can provide clarity on the referenced recommendations if needed.

Below are the recommendations about which we are interested in receiving information. Specifically, how have they been implemented, and how will the spirit of these requirements be reflected in the mitigation measures for the current replacement project.

Thank you.

Daniel T'seleie

Pg. 34 The Panel recommends that before the Project is authorized, the Proponent undertake and publish the results of a more detailed thermal analysis. This analysis should model the behaviour of the pipe in a variety of situations, including cleared and uncleared areas, deep organic soils, frozen and unfrozen ground at different temperatures and the effects of one terrain or permafrost type upon others farther down the pipeline. The analysis should cover the service life of the pipeline, and should take into account the possibility of climatic change over time, particularly air temperatures

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The Panel learned that there may be problems with the general stability of the pipeline right-of-way and surroundings. Slope failures and subsidence due to land clearing or excavation could affect the right-of-way and threaten the integrity

of the pipeline. Frost heave or thaw settlement on the right-of-way could change surface and subsurface water drainage. ..

A special problem may develop in the area southeast of Fort Simpson. This region is characterized by an extensive mosaic of peat plateaux containing permafrost, and wet fens without permafrost, with a

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surface relief of about one metre. Considerable thaw-settlement may take place in the peat plateau areas, and therefore Con- provision must be made for differential movement of the pipe. ...

It will be important to control surface erosion on the pipeline right-of-way, at man-camps, facilities sites, and on access roads. Re-seeding of suitable vegetation cover and reliable erosion control plans are called for. The Panel

learned that the Proponents have such plans but that the specifics of species composition, seeding rates, and schedules have not been determined. ...

[S]pecial precautions will be required to minimize erosion on the pipeline right-of-way. This is especially important where thermal degradation and channelling of water in the right-of-way is a risk.

The Panel recommends that terms and conditions for the project spell out a requirement for a revegetation and erosion control program using species, techniques and schedules shown to be adequate for the task

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The major river crossings (the Great Bear and the Mackenzie) are to be built in the most appropriate season to minimize effects on migrating fish. Minor crossings (some 65 have been identified) will be built in winter as part of the general pipeline construction, following normal pipeline practices for northern Alberta.

The Panel learned that there are five intermediate size crossings. The EIS is deficient in information on both the construction plans for these water crossings and on the fisheries information for evaluation of potential impacts. These crossings should be constructed at seasons which will not adversely affect fish spawning beds or migrating fish. With these points in mind the Panel recommends that the construction plans and schedules for these streams be reevaluated by IPL in cooperation with Department of Fisheries and Oceans to ensure that impacts on fish and other aquatic organisms are minimized.

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The Panel recommends that IPL undertake baseline studies on hunted and trapped species to provide information aimed at both the assessment of the impact of the pipeline construction and operation on wildlife, and the development of mitigation measures. ...

The Panel recommends that Esso develop a plan specifying the necessary equipment and procedures to keep large populations of waterfowl away from an oilspill site.

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The Panel recommends that the Proponents take responsibility for providing an orientation program for all incoming southern workers.

The objective would be to instill an understanding of northern working conditions, including the physical and biological environment and the northern society and its value system. The program should stress the importance of the land to the native people and their culture and economy. The Panel believes that such a program would remove or reduce unfavorable contact or conflicts between the project and the nearby communities.

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The Panel recommends that detailed planning and location of main work camps and work sites for the pipeline be determined in consultation with nearby community leaders. ...

Fort Simpson and Hay River are two other communities which will experience significantly increased work and numbers of people, mainly during pipeline construction. Although the impacts may be less than at Norman Wells, the Panel recommends that all aspects of project development which affect Fort Simpson and Hay River be planned and carried out in close cooperation with local authorities in those communities.

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The Panel recommends that the Proponents provide orientation programs for new local workers, and that the Proponents or government provide literature and advice about the wage economy and in management of personal finances; such literature to be used on a voluntary basis. The Panel further recommends that community advisors, government departments and the Proponents collaborate in planning and monitoring these orientation programs.

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14. It is recommended that IPL undertake baseline studies on hunted and trapped species to provide information aimed at both the assessment of the impact of the pipeline construction and operation on wildlife, and the development of mitigation measures.

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31. It is recommended that recruitment take place close to the work sites.

32. It is recommended that Esso and IPL specify in any agreements with union contractors that access to jobs, as a first priority, take into account the skills and interests of workers in the project area. -

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34. It is recommended that the Proponents make every effort to insure that some contracts are tendered to non-union, northern businesses.

36. It is recommended that the on-site training programs of the Proponents become an integral part of the construction and operation phases of the project.

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46. It is recommended that the proponents provide an orientation for all incoming southern workers to instil an understanding of northern working conditions and northern society and its value system.

50. It is recommended that all aspects of project development which affect Fort Simpson and Hay River be planned and carried out in close cooperation with local authorities in those communities.

Daniel T'seleie  
Student-at-Law  
Olthuis Kler Townshend LLP  
4902 49<sup>th</sup> Street, 3<sup>rd</sup> Floor  
PO Box 1470  
Yellowknife, NT X1A 2P1

C: 867-444-0509  
[dtseleie@oktlaw.com](mailto:dtseleie@oktlaw.com)

### Enbridge Response to LKFN Request Regarding 1981 Report of Environmental Assessment Panel

<b>Page Number</b>	34
<b>Response</b>	<p>The recommendation for the Norman Wells Oilfield Development and Pipeline Project is not applicable to the Line 21 Segment Replacement Project ("Project").</p> <p>Unlike original construction of the Line 21 pipeline, the construction method of the Line 21 Segment Replacement Project is horizontal directional drill ("HDD") with the pipe very deep under the river. The soil at this depth will not be subjected to changes due to air temperature changes.</p>

<b>Page Number</b>	34-35
<b>Response</b>	<p>Enbridge has committed to completing erosion control and reclamation plans for the Project area. These plans will be completed prior to the start of construction, pending regulatory approval.</p>

<b>Page Number</b>	36
<b>Response</b>	<p>Unlike the original pipeline crossing of the Mackenzie River, which was constructed by open cut method, Enbridge proposes to install the replacement segment via HDD, which is recognized as an industry best practice crossing method that minimizes environmental risk to waterbodies. HDD technology enables Enbridge to install the new segment of pipeline deep below the Mackenzie River, so there is no direct interaction with the river and no impact to the river bed itself. Therefore, the Project will not adversely affect fish spawning beds or migrating fish.</p> <p>Enbridge has completed Fisheries and Oceans Canada ("DFO") self assessments and will implement appropriate mitigation to ensure impacts on fish and other aquatic organisms are minimized.</p>

<b>Page Number</b>	39
<b>Response</b>	<p>Adequate baseline wildlife surveys have been completed for the Project. Enbridge has committed to work with local First Nations communities to understand potential impacts of the Project on traditional land use, based on the findings of the Indigenous Knowledge Land Use Study ("IKLUS"). Enbridge will also review the proposed mitigation measures with the First Nations communities and confirm the measures are appropriate for the work and develop additional measures where required. Operations Contingency planning contains provisions for equipment and procedures to keep large populations of waterfowl away from any spill.</p>

<b>Page Number</b>	59
<b>Response</b>	<p>In the Mackenzie Valley Land and Water Board ("MVLWB") Oral Hearing, Enbridge committed to ensuring that all of the workers on the project receive Indigenous awareness training prior to starting work. Enbridge has also committed to working</p>

**Enbridge Response to LKFN Request Regarding 1981 Report of Environmental Assessment Panel**

	with the local communities on the development. (MVLWB transcript day one page 169 lines 10-22). As discussed with the communities, Enbridge is currently working with an Liiklii Kue First Nation (“LKFN”) community member to develop and provide this training.
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<b>Page Number</b>	60
<b>Response</b>	<p>Since consultation was launched in January 2017, Enbridge has provided many varied opportunities for First Nations and local stakeholders to learn about the Project, engage in meaningful dialogue, and express concerns, including the location of the camps. These opportunities include:</p> <ul style="list-style-type: none"> <li>○ Numerous in-person meetings, presentations, phone calls and emails with First Nation organizations, community leaders, municipal authorities and local service providers</li> <li>○ Provided resources to assist communities to better understand the project, including funding for a technical committee</li> <li>○ Two open houses in Fort Simpson</li> <li>○ Community luncheon in Fort Simpson</li> <li>○ Site visits, aerial tours, walk-throughs, and archaeological survey</li> <li>○ Toll-free telephone number, email address and Project website</li> <li>○ Project information packages, updates and fact sheets</li> </ul> <p>The location for the North work camp was chosen for construction efficiency purposes.</p> <p>The South work camp location was chosen to accommodate the concerns of LKFN and Dehcho First Nations (“DFN”) about an influx of workers to the village. The Village of Fort Simpson had concerns about the lack of accommodation for the number of workers and the impact to its tourism industry. The location of the South workcamp was chosen for its proximity to the project.</p>

<b>Page Number</b>	61
<b>Response</b>	<p>Since consultation was launched in January 2017, Enbridge has provided many varied opportunities for First Nations and local stakeholders to learn about the Project, engage in meaningful dialogue, and express concerns. To date, there have been no comments from local First Nations communities stating concern for assisting northerners to become adjusted to life in work camps or at the work site.</p> <p>Enbridge will be providing orientation and training programs to enable local workers to participate in the project, including CSTS-09- Construction Safety Training, PPE (personal protective equipment) requirement and wear, project specific environmental training and emergency first aid.</p>

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<b>Page Number</b>	76
<b>Response</b>	<p>Baseline wildlife surveys have been completed for the Project. In addition, the LKFN has completed an IKLUS that identifies harvesting sites located in the Fort Simpson region. Enbridge has committed to working with the local First Nations communities to understand how the Project may impact hunting and trapping and ensure appropriate mitigation measures are developed and implemented.</p> <p>The current information on the wildlife and wildlife habitat is sufficient for the scope of the Project and no further studies are required for the development of mitigations measures.</p>

<b>Page Number</b>	77-78
<b>Response</b>	<p>Enbridge, in collaboration with its general contractor, has committed to hire local personnel where practical and is working with local service suppliers to provide economic benefits where possible.</p> <p>Enbridge has listened and heard from the local community regarding local skills and interest in the Deh Cho Aboriginal Aquatic Resource Ocean Management (“AAROM”) program. Enbridge has engaged AAROM and is discussing roles for their workers.</p>

<b>Page Number</b>	78
<b>Response</b>	<p>Enbridge, directly and through its general contractor, have already engaged local parties regarding the Project:</p> <ul style="list-style-type: none"> <li>• Cooper Barging has been engaged since January 17, 2017. Discussions have ranged from barging capabilities, barging options, various schedule options, safety, docking and access and costs.</li> <li>• The Village of Fort Simpson has been engaged regarding waste management and potable water. On May 17, 2017, the contractor met with the Village to discuss the requirements for hauling and disposing of camp and construction waste in the local landfill. No issues were raised regarding the waste from the camps and construction operations. It was also raised that the potable water for the camps could come from the Village by using a local contractor that has an account with the Village. No concerns have been raised.</li> <li>• Quicksilver Expediting has been engaged to discuss its capabilities to support the Project with their 16-foot barge with a drop gate. The boat would be outfitted with seats and a place for securing a stretcher, in the event of an emergency. Enbridge’s contractor viewed the boat and related equipment and found it to be perfectly suited for the requirements of the Project.</li> <li>• Rowe’s Construction has been engaged regarding any services and</li> </ul>

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	<p>equipment they would be able to provide, if required. Rowe’s is a large local contractor that offers a wide range of services.</p> <ul style="list-style-type: none"> <li>• Nogha Enterprises Ltd. (the economic development arm of the LKFN) has been engaged to review the overall construction plan. The contractor requested a quote for completing the clearing scope of work. Although Enbridge’s contractor is unionized, it committed to look for any opportunities that could be offered to Nogha. The contractor also committed to being open to hiring several of Nogha workers to train with the camp service provider.</li> <li>• At a joint meeting with AAROM and DFN with representation from LKFN, Jean Marie River First Nation, Sambaa K’e First Nation and Pehdezh First Nation on November 17, 2017, Enbridge listened and understood opportunities for AAROM Guardians to monitor the water during the Project.</li> </ul> <p>All project personnel will be provided with and be required to have the following training:</p> <ul style="list-style-type: none"> <li>• Construction Safety Training System (“CSTS-09”) or Pipeline Construction Safety Training (“PCST”)</li> <li>• Emergency First Aid</li> <li>• Project Specific Environment Protection Training</li> <li>• Project Specific Safety Training</li> </ul>
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<b>Page Number</b>	79
<b>Response</b>	In the MVLWB Oral Hearing, Enbridge committed to ensuring that all of the workers on the project receive Indigenous awareness training prior to starting work. Enbridge has also committed to working with the local communities on the development. (MVLWB transcript day one page 169 lines 10-22). As discussed with the communities, Enbridge is currently working with an LKFN community member to develop and provide this training.

<b>Page Number</b>	79
<b>Response</b>	<p>Since consultation was launched in January 2017, Enbridge has provided many varied opportunities for First Nations and local stakeholders to learn about the Project, engage in meaningful dialogue, and express concerns. These opportunities include:</p> <ul style="list-style-type: none"> <li>○ Numerous in-person meetings, presentations, phone calls and emails with First Nation organizations, community leaders, municipal authorities and local service providers</li> <li>○ Provided resources to assist communities to better understand the project, including funding for a technical committee</li> <li>○ Two open houses in Fort Simpson</li> <li>○ Community luncheon in Fort Simpson</li> <li>○ Site visits, aerial tours, walk-throughs, and archaeological survey</li> </ul>



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	<ul style="list-style-type: none"><li>○ Toll-free telephone number, email address and Project website</li><li>○ Project information packages, updates and fact sheets</li></ul> <p>Enbridge has committed to working with local communities and service providers to provide economic benefits where possible, including in the areas of helicopter support, water taxi, barging, tree clearing, security, accommodations, truck rentals, camp support, gravel and potable water and wastewater/sewage hauling.</p>
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