



National Energy  
Board

Office national  
de l'énergie

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# Reasons for Decision

In the Matter of

**NOVA Gas Transmission Ltd.**

Application dated 18 August 2016 for the  
Peace River Mainline Abandonment Project

**MH-002-2017**

**March 2018**

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Canada

# National Energy Board

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## Glossary of Terms and Abbreviations

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Abandoned pipeline	A pipeline the operation of which has been abandoned with leave of the Board as required by paragraph 74(1)(d) of the <i>National Energy Board Act</i> (NEB Act) and that remains in place (as defined in section 2 of the NEB Act).
Abandoned Pipeline Monitoring	The third stage of the Board's oversight of a pipeline that is abandoned in place. Involves monitoring and reporting to the Board.
ACE	Abandonment Cost Estimates
Applicant or Company	The party that submitted the application; in this case NOVA Gas Transmission Ltd. (NGTL).
Application	Application submitted to the National Energy Board by NGTL on 18 August 2016 for the Peace River Mainline Abandonment Project.
ATP	Application to Participate. The form by which interested parties applied to participate as a Commenter or an Intervenor in this hearing.
Board or NEB	National Energy Board established by section 3 of the <i>National Energy Board Act</i> .
CAEPLA/PRMLC	Canadian Association of Energy and Pipeline Landowners Associations / Peace River Mainline Landowner Committee
CEAA	<i>Canadian Environmental Assessment Act</i>
Commenter	A person or group who is directly affected by and/or has relevant information or expertise regarding the Project and who has been approved by the Board to participate in the hearing by submitting a letter of comment.
CP	Cathodic protection; a technique to prevent the corrosion of a metal surface.



CSA Z662-15	Canadian Standards Association Z662-15, Oil and Gas Pipeline Systems
Decision (Reasons for Decision)	The document prepared by the Board that contains the Board's decisions on NGTL's Application, the reasons for the decisions and the conditions that would apply if the Application is granted.
EAE	Enhanced Aboriginal Engagement. A National Energy Board initiative to reach out to Aboriginal groups that may be affected by a proposed project early in the hearing process.
EPP	Environmental Protection Plan
ESA	Environmental and Socio-Economic Assessment
evidence	Reports, statements, photographs, and other material or information that Participants submit as part of the record. Evidence is used to support a Participant's position on the Application.
final argument	The position of NGTL and Intervenors on the decisions the Board should make and the reasons why the evidence supports these decisions.
for approval	When a condition requires a filing with the Board "for approval", NGTL must not commence the indicated action or activity until the Board issues its written approval of the filing.
GML 55	Gunn Métis Local 55 (Lac Ste. Anne Métis)
harms	Impacts of the Project that have a negative effect on safety, the public, the environment, or economy.
hearing or proceeding	The Board's MH-002-2017 public hearing for its regulatory review of NGTL's Application for the proposed Peace River Mainline Abandonment Project; a public process that the Board uses to gather and test evidence so it can make fair and transparent decisions; can include written or oral portions, or both.
Hearing Order	The Order issued by the Board on 10 April 2017 setting out the process for the Board's consideration of NGTL's Application for the Project.

including	Use of this term, or any variant of it, is not intended to limit the elements to just those listed. Rather, it implies minimum requirements with the potential for augmentation, as appropriate.
IR / Information Request	A written question to an Applicant or Intervenor in relation to its evidence, filed by the Board, an Intervenor or the Applicant during the written portion of the hearing pursuant to the deadlines set out by the Board, to which a response must be subsequently filed.
ILI / In-line inspection	An inspection of a pipeline from the interior of the pipe using an inspection tool; also called intelligent or smart pigging.
Intervenor	A person or group who is directly affected by and/or has relevant information or expertise regarding the Project and who has been approved by the Board to participate in this hearing as an Intervenor.
List of Issues	A list of issues that the Board considered in this hearing – see Appendix I.
List of Parties	After the close of the Application to Participate process, the Board issued a list of the parties that have been granted standing to participate in the hearing; includes the Applicant and Intervenors.
LAA	Local Assessment Area; the area in which both project-related environmental effects can be predicted or measured with a level of confidence that allows for assessment, and where there is a reasonable expectation that those potential effects in the LAA will be a concern.
Mountain Métis	Mountain Métis Nation Association
NGTL	NOVA Gas Transmission Ltd.
NPS	Nominal pipe size
OTE	oral traditional evidence
Participant	An individual, company or group who has applied and been approved by the Board to participate in the MH-002-2017 hearing. For this hearing, the term Participants includes the Applicant, Intervenors and Commenters.
Parties	Includes the Applicant and Intervenors in the hearing; does not include Commenters.

PDA	Project Disturbance Area; the anticipated area of physical disturbance associated with the Project’s Physical Abandonment Activities. Each PDA includes the area of excavation and associated workspace for vehicle and equipment movement, soil storage, etc.
PFP	Participant Funding Program established by the National Energy Board pursuant to section 16.3 of the <i>National Energy Board Act</i> .
Physical Abandonment Activities	<p>The first stage of the Board’s oversight of abandonment projects.</p> <p>Includes: In-field activities associated with abandonment that may have an effect on the environment, including clearing, mowing, grading, scrapping, soil removal and reclamation activities.</p> <p>Reclamation is the process of re-establishing a disturbed site to a former or other productive state. Reclamation activities are activities that take place to restore the land to a state comparable with the surrounding environment. In natural environment areas, or where rare or sensitive native plant species and communities are present, reclamation promotes the eventual re-establishment of habitat quality on lands affected by right-of-way development to as native a state as is consistent with the current and surrounding land use.</p> <p>Physical Abandonment Activities does not include: activities associated with routine surveying operations, data collection activities (e.g., geophysical surveys, bore holes, and test pits) or operations and maintenance activities (to which NEB “Operations and Maintenance Activities on Pipeline” under the NEB Act apply).</p>
Project	NGTL’s proposed Peace River Mainline Abandonment Project as described in Chapter 1.
RAA	Regional Assessment Area; the area that establishes the context for determining significance of Project specific effects. It is also the area within which potential cumulative effects are assessed.

Reclamation Monitoring	<p>The second stage of the Board’s oversight of abandonment projects.</p> <p>After most Physical Abandonment Activities are complete, the company will monitor the right-of-way and report to the Board on the status of reclamation. The purpose is to identify any areas that require additional reclamation to restore the land to a state comparable with the surrounding environment, to perform any additional reclamation activities, and to identify when the lands have been restored to that state.</p>
record	All relevant submissions and evidence filed or submitted orally in the hearing, including documents which are found on the public registry such as the Application and the Hearing Order.
Recovery Strategy	Recovery Strategy for the Woodland Caribou ( <i>Rangifer tarandus caribou</i> ), Boreal Population in Canada (2012).
RoW	right-of-way
SLCN	Sturgeon Lake Cree Nation
Tariff	The terms and conditions under which the service of a pipeline are offered or provided, including the tolls, the rules and regulations, and the practices relating to specific services.
TLRU	traditional land and resource use
TLU	traditional land use

## **Recital and Appearances**

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**IN THE MATTER OF** the *National Energy Board Act*, R.S.C. 1985, CN-7, as amended and the Regulations made thereunder;

**IN THE MATTER OF** an application dated 18 August 2016 by NOVA Gas Transmission Ltd. (NGTL), a wholly owned subsidiary of TransCanada PipeLines, for approval pursuant to subsection 74(1)(d) of the *National Energy Board Act* and section 50 of the *National Energy Board Onshore Pipeline Regulations* to abandon a section of the Peace River Mainline, as described;

**IN THE MATTER OF** Hearing Order MH-002-2017 dated 10 April 2017;

**HAVING CONSIDERED** written evidence and written final argument filed in the MH-002-2017 proceeding; and

**HAVING HEARD** oral traditional evidence of Gunn Métis Local 55 (Lac Ste. Anne Métis) and Mountain Métis Nation Association in Edmonton, Alberta on 22 August 2017 and oral cross examination of the Applicant NGTL by Counsel for the National Energy Board in Calgary, Alberta on 8 November 2017;

**BEFORE:**

Ms. Lyne Mercier	Presiding Member
Dr. Keith Chaulk	Member
Mr. Jacques Gauthier	Member

**Appearances**

**Participants**

**Witnesses**

Mr. Sander Duncanson  
Mr. Mark Graham

NOVA Gas Transmission Ltd.

Mr. Bryce Lord  
Mr. Jason Kellock  
Mr. Jeff Burke  
Mr. Wade Pruett  
Ms. Lindsay Mitchell

Mr. William (Bill)  
McElhanney

Gunn Métis Local 55  
(Lac Ste. Anne Métis)  
and Mountain Métis Nation  
Association

Elder Charlie Delorme  
Ms. Hilda Hallock  
Elder Lois Cunningham  
Ms. Murleen Crossen  
Ms. Tracy L. Friedel

Mr. Paul Johnson  
Ms. Jana Nicholson

National Energy Board

## Disposition

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The National Energy Board (NEB or Board) regulates pipelines throughout their entire lifecycle from construction and operation to abandonment.

Subsection 74(1)(d) of the NEB Act and section 50 of the *NEB Onshore Pipeline Regulations* require companies to obtain leave (approval) of the Board to abandon a pipeline. The Board holds a public hearing process to consider a proposed abandonment project. As described in the Board's *Filing Manual*, when assessing a proposed abandonment project, the Board requires the applicant to provide rationale for the abandonment and measures to be employed in the abandonment, as well as evidence that:

- the proposed abandonment will be carried out in a technically safe manner;
- potential environmental, socio-economic, economic and financial effects are identified and addressed; and
- all landowners and other persons potentially affected are sufficiently notified and have their rights protected.

There are two methods to abandon a pipeline: it can be left in place or removed. For either method, the Board identifies potential harms posed by the project and if approved, attaches conditions to mitigate those harms in an appropriate manner.

When a pipeline is removed, the Board's conditions to its approval include a requirement for the company to monitor and report to the Board on the status of reclamation activities until the Board is satisfied that the area is satisfactorily reclaimed. Only when all conditions have been satisfied, which include conditions related to Reclamation Monitoring, does the Board's oversight over a removed pipeline cease.

When a pipeline is abandoned in place, the Board continues to regulate after the Reclamation Monitoring stage and holds companies accountable to monitor and maintain an abandoned pipeline in a safe and environmentally sound manner for as long as it remains in the ground. The Board's issue resolution process is always available for any party to raise concerns regarding an abandoned pipeline.

The Board has considered the evidence and submissions made by all Participants in the MH-002-2017 proceeding. Having considered and weighed all of the evidence before it, the Board issues Order ZO-N081-003-2018 (Order), the effect of which is to grant NOVA Gas Transmission Ltd. (NGTL) leave to abandon a section of the Peace River Mainline, as applied for (Project). This Project involves both methods of abandonment, as specified in the Application, and Chapter 1 of the Reasons for Decision report.


To date the Board has received relatively few applications for projects to abandon pipelines. As such, and as reflected in the research presented by all Parties in the proceeding, there are uncertainties as to potential outcomes. Mitigation measures have been largely untested by

industry. The Board has addressed this uncertainty by issuing requirements for monitoring and continued consultation. The Board expects NGTL to continue to learn, adapt and apply its knowledge accordingly. In addition, as part of the Board's on-going research on the abandonment of pipelines, the Board will gather knowledge through its oversight of projects such as this one, for pipelines that are removed and for pipelines that are abandoned in place. The Board's oversight includes condition compliance, potential inspections, audits and event reporting, and as mentioned, continues for as long as the pipeline remains in the ground.


The Board's analysis and conclusions are set out in the Reasons for Decision report. In reaching its conclusions, the Board considered all evidence on the record that was presented and established through the hearing process in compliance with the principles of natural justice. The regulatory documents on file in the MH-002-2017 proceeding are available on the Board's website, [www.neb-one.gc.ca](http://www.neb-one.gc.ca).



L. Mercier  
Presiding Member



K. Chaulk  
Member



J. Gauthier  
Member

## Chapter 1

# Introduction

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This chapter summarizes the Board's assessment and public process for the Project. The Board's detailed consideration of all the issues addressed in its process is contained in the following chapters.

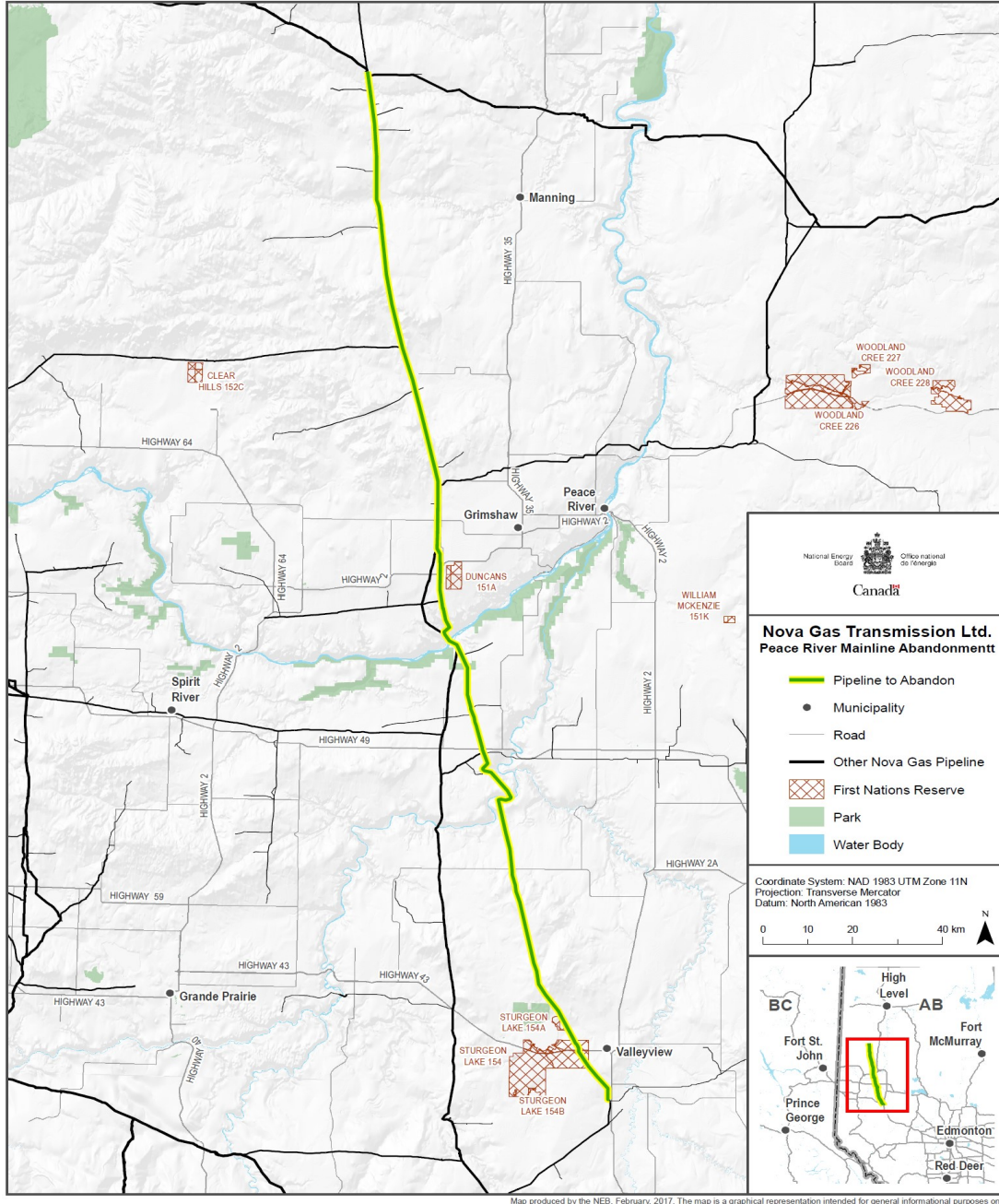
### 1.1 What did NOVA Gas Transmission Ltd. (NGTL) apply for?

On 18 August 2016, NGTL filed an application with the Board to abandon a section of the Peace River Mainline (PRML or Pipeline) and associated facilities, as follows:

1. South Section of the PRML:
  - a) approximately 266 km section of the 508 mm (NPS 20) outside diameter PRML between the Meikle River Compressor Station and the Valleyview Compressor Station;
  - b) removal of an approximately 9 km section of pipeline on Sturgeon Lake Cree Nation (SLCN) Reserve Land;
  - c) removal of an approximately 100 m section of pipeline on a watercourse in NE 13-77-25 W5M; and
  - d) abandonment in place of the remaining approximately 257 km of pipeline;
2. abandonment in place of approximately 2 km section of the 114.3 mm (NPS 4) outside diameter Watino Lateral pipeline;
3. abandonment in place of a 0.8 km section of the 114.3 mm (NPS 4) outside diameter Hotchkiss North Lateral pipeline;
4. removal of a communication building and tower at the decommissioned Trout River Sales Meter Station site;
5. removal of remaining valves at the Dixonville North Meter Station;
6. removal of facilities associated with the PRML at the previously decommissioned Valleyview Compressor Station site; and
7. removal of all above ground pipeline facilities associated with the Project, including 12 block valves, 31 side valves and sales taps, and three scraper trap sites.



**Figure 1-1: Project Location Map**



NGTL stated that given the integrity concerns associated with the South Section of the PRML, they assessed whether that section of the PRML could be decommissioned or abandoned. NGTL considered criteria such as the ability to meet current and future service requirements through other NGTL facilities, the integrity of the line, safe operation of the pipeline, as well as current and future operating costs and determined that the South Section was not necessary to meet customers' future natural gas transportation demands.

On 28 August 2012 NGTL filed an application with the NEB to decommission the 266 km loop of the Peace River Mainline system between the Meikle River Compressor Station and Valleyview Compressor Station. On 13 December 2012 the Board advised NGTL that the proposed activities were more appropriately characterized as abandonment activities. On 8 February 2013, NGTL subsequently withdrew its Decommissioning Application, and after no viable alternatives to abandonment were identified, began planning its Abandonment Application.

NGTL stated the abandonment plan for the Project that was developed based on its technical expertise and industry knowledge, as well as input from affected landowners, stakeholders and Aboriginal communities. NGTL stated that the abandonment plan was developed in accordance with the *National Energy Board Act* (NEB Act), the *Onshore Pipeline Regulations* (OPR) and Canadian Standards Association (CSA) Z662-15 and was influenced by discussions with industry and stakeholders and a review of technical papers prepared by government-industry groups, including:

- Pipeline Abandonment: A Discussion Paper on Technical and Environmental Issues (Pipeline Abandonment Steering Committee 1996)
- Pipeline Abandonment Assumptions: Technical and Environmental considerations for development of Pipeline Abandonment strategies (Canadian Energy Pipeline Association 2007)
- Understanding the Mechanisms of Corrosion and their Effects on Abandoned Pipelines (Det Norske Veritas 2015)

NGTL stated its determination of the most appropriate method of abandonment is based on expected land use and is guided by three key principles:

- 1) Safety – ensuring that the method of abandonment would minimize risk to the public.
- 2) Environmental Protection – ensuring that the method of abandonment of the facilities would have minimal long-term environmental impacts.
- 3) Cost Effectiveness – meeting safety and environmental protection objectives in a cost effective manner.

When determining the method of abandonment, NGTL considered the land use categories for the Project. Land use categories includes agricultural, non-agricultural and other such as environmentally sensitive areas, water crossings, public paved road crossings, gravel crossings, railway crossings and other crossings such as utilities. Existing and prospective future development of land is also considered. In the application, NGTL proposed to abandon the majority of the pipeline in place. NGTL identified the risks of pipelines abandoned in place and provided mitigation.

## **1.2 How did the Board assess the application?**

The Board assessed the potential harms of the proposed Project. The Board considered and weighed all of the evidence placed before it, including feedback from Participants in making its decision on the Project as described throughout this report.

### **1.2.1 The Hearing Process**

The Board considers all matters that appear to be directly related to the Project and relevant. The Board considered the issues provided in the List of Issues attached as Appendix I, which were issued at the outset of the proceeding in the Board's Hearing Order MH-002-2017 (Hearing Order).

The Board carried out its enhanced Aboriginal engagement activities for the Project commencing with the receipt of the Project Application on 18 August 2016. On 22 November 2016 the Board sent letters to 23 potentially affected Aboriginal groups and organizations. The Board also hosted Open House information sessions for the public on 8 and 9 of February 2017 in Grande Prairie and Peace River, AB, respectively, to provide information about the Project and the Board's hearing process.

Pursuant to subsection 24(1) of the NEB Act, the Board held a public hearing for the abandonment Application. On 26 January 2017, the Board directed NGTL to serve a Notice of Public Hearing (Notice) and Application to Participate to all persons and groups engaged by NGTL in its stakeholder engagement process or otherwise identified as well as on persons and agencies identified by the Board. Included in the Notice was the List of Issues related to the Project to enable people who were directly affected by the proposed Project to determine if they wanted to participate in the public hearing to express their concerns or interests.

On 10 April 2017, the Board issued a Hearing Order describing the Project and hearing process for the Project. The Hearing Order included the steps in the hearing process and guidance on how to participate, as well as a List of Issues.

The Board received five expressions of interest to participate in the public hearing:

1. Centra Gas Manitoba Inc. was granted Intervenor status but did not participate in the hearing.
2. Mr. Gregory Loewen was granted Intervenor status but chose to be represented by the Canadian Association of Energy and Pipeline Landowner Associations / Peace River Mainline Landowner Committee (CAEPLA / PRMLC).
3. CAEPLA/PRMLC was granted Intervenor status, and participated in the hearing but withdrew its participation on 2 November 2017, noting that its issues were resolved with NGTL.

4. Gunn Métis Local 55 (Lac Ste. Anne Métis) (GML 55) was granted Intervenor status, and Mountain Métis Nation Association (Mountain Métis) was later granted status as joint participant. GML 55 and Mountain Métis participated in the hearing but submitted a letter to the Board on 3 November 2018 changing their participation status, as described below.
5. Duncan's First Nation was granted Commenter status but did not file a Letter of Comment.

The funding opportunity for the NGTL hearing was announced on 18 October 2016 with a funding envelope of \$500,000. The Participant Funding Program (PFP) received two applications requesting a total of \$160,000. After reviewing the applications, the PFP awarded \$156,791. More information on the program and the funding awards can be found on the Board's web-site. ([www.neb-one.gc.ca](http://www.neb-one.gc.ca))

The hearing had written and oral components. Evidence was filed in writing, as well as Information Requests (IRs), responses to IRs, and final argument. The two oral components included oral traditional evidence (OTE), which was held on 22 August 2017 in Edmonton, Alberta, and oral cross examination of NGTL's witnesses on 8 November 2017 in Calgary, Alberta.

Appendix II of this Decision lists the Board's rulings and procedural updates for the MH-002-2017 proceeding.

### **1.2.2 Weight Attributed to Evidence of GML 55 and Mountain Métis**

On 3 November 2017, GML 55 and Mountain Métis advised the Board that:

Subject to Board approval of the Potential Conditions filed October 23 with necessary amendments, we are pleased to advise the Board that GML 55 and Mountain Métis have resolved with NGTL issues related to NGTL's proposed PRM Abandonment Project. Accordingly, please be advised that GML 55 and Mountain Métis are withdrawing from further participation in the PRM Abandonment and any further intervention in the regulatory proceedings in respect of this Project subject to the opportunity to provide a final written statement if permitted by the Board. Neither party will be in attendance on November 7<sup>th</sup>.

On 6 November 2017 the Board sought clarification from GML 55 and Mountain Métis on the nature of their hearing withdrawal, specifically asking whether they were withdrawing from participating in the hearing or whether they have decided not to participate in oral cross examination, and are seeking to file written argument. The Board clarified that the draft potential conditions, if applicable, are subject to change when the Board makes its final decision on the

Project after the close of the record, and invited GML 55 and Mountain Métis a second opportunity to provide comment on the Potential Conditions<sup>1</sup>.

On 7 November 2017, GML 55 and Mountain Métis responded by stating that GML 55 and Mountain Métis place general importance on all of the potential conditions, and specific importance on specific conditions. GML 55 and Mountain Métis sought to provide final argument on the basis that it would be an important addition to the material the Board is considering as it will provide a distinctly Aboriginal component to hearing finality.

To facilitate GML 55 and Mountain Métis' continued participation, the Board allowed the groups to adopt their written evidence and file final argument. The Board stated that it would determine the appropriate weight to assign to the written evidence, given that NGTL did not have an opportunity to cross examine the Parties on their evidence as a result of their withdrawal from the oral portion of the hearing. On 1 December 2017, GML 55 and Mountain Métis submitted final argument.

In its Reply Argument dated 6 December 2017, NGTL expressed concerns regarding GML 55 and Mountain Métis' final argument. NGTL restated that, since the Aboriginal groups withdrew from the oral portion of the hearing on 3 November 2017, it was not provided with the opportunity to test the accuracy and completeness of their evidence. NGTL argued that it would be contrary to the rules of natural justice for the decision maker to place weight on this evidence as it was not subject to examination during the oral hearing. NGTL further stated that several statements in GML 55 and Mountain Métis' final argument contained no evidentiary support at all or were contrary to its previous positions in the proceeding.

The Board acknowledges that the GML 55 and Mountain Métis' withdrawal denied NGTL the opportunity to orally cross examine GML 55 and Mountain Métis on their written evidence. The Board scheduled the oral cross examination portion of these proceedings from the outset, through its issuance of the 10 April 2017 MH-002-2017 Hearing Order. On 8 November 2017, Counsel for GML 55 and Mountain Métis was aware, and acknowledged that the Board would attribute whatever weight it deems appropriate to the written evidence as a result of the withdrawal.

In exercise of its discretion, the Board has decided to give some, but minimal weight to GML 55 and Mountain Métis' written evidence, to preserve natural justice and particularly procedural fairness in these proceedings. Although GML 55 and Mountain Métis' procedural intentions are still ambiguous, the Board finds that their intention was to withdraw from the oral portion of the hearing, and not the entire proceeding. The Board has given full weight to GML 55 and Mountain Métis' OTE, which was open for oral questioning by the company and the Board.

The Board notes that GML 55 and Mountain Métis have expressed conflicting positions throughout the proceeding. As described above, and noted by NGTL in their final argument, GML 55 and Mountain Métis withdrew on the basis that their concerns have been resolved, and

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<sup>1</sup> On 23 October 2017 the Board made draft potential conditions for the Project available for review and comment by Parties to the hearing (NGTL and Intervenors). GML 55 and Mountain Métis did not provide comments to the Board by the deadline provided.

they were satisfied with the Board’s draft potential conditions that were to be considered in the event the Board were to approve NGTL’s application. On the other hand, in their final argument, GML 55 and Mountain Métis took the position that the Project as proposed should be denied, and support the draft potential conditions only in the alternative.

The Board notes that in attempting to reconcile the inconsistency in GML 55 and Mountain Métis’ position, particularly on the topic of the appropriate method of abandonment, the evidence on which the Board may rely to support GML 55 and Mountain Métis’ position that their concerns have not been resolved, and the pipeline should be removed, carries minimal weight pursuant to the Board’s procedural ruling described above.

Despite this, the Board has thoroughly considered the appropriateness of NGTL’s proposed method of abandonment, and all other aspects of the application, given the general importance of this topic to Canadians, and the Board’s mandate to protect the safety and environment.

### **1.3 What did the Board decide?**

The Board takes no issue with the company’s rationale for abandonment. The Board is of the view that this section of the PRML is no longer used or useful to the company or any third parties, and notes that the issue of the rationale, or “whether to abandon” was unopposed. Properly abandoned pipelines pose less potential harms than operating pipelines.

When considering the balance between the benefits and the burdens associated with the proposed method of abandonment for the Project and alternatives, the Board is of the view that the Project is in the public interest and is consistent with the requirements of the NEB Act. Upon completion of its assessment the Board has approved the company’s proposed Application and attaches Order ZO-N081-003-2018 with conditions to the approval.

#### **1.3.1 Abandonment Project Stages**

There are three general stages of the Board’s oversight in a pipeline abandonment project:

- 1) **Physical Abandonment Activities**

Includes: In-field activities associated with abandonment that may have an effect on the environment, including clearing, mowing, grading, scrapping, soil removal and reclamation activities.

Reclamation is the process of re-establishing a disturbed site to a former or other productive state. Reclamation activities are activities that take place to restore the land to a state comparable with the surrounding environment. In natural environment areas, or where rare or sensitive native plant species and communities are present, reclamation promotes the eventual re-establishment of habitat quality on lands affected by right-of-way (RoW) development to as native a state as is consistent with the current and surrounding land use.

Does not include: activities associated with routine surveying operations, data collection activities (e.g., geophysical surveys, bore holes, and test pits) or operations and maintenance activities (to which NEB “Operations and Maintenance Activities on Pipeline” under the NEB Act apply).

2) Reclamation Monitoring

After most Physical Abandonment Activities are complete, the company will monitor the RoW and report to the Board on the status of reclamation. The purpose is to identify any areas that require additional reclamation to restore the land to a state comparable with the surrounding environment, to perform any additional reclamation activities, and to identify when the lands have been restored to that state.

3) Abandoned Pipeline Monitoring

An **abandoned pipeline** is defined in section 2 of the NEB Act as “a pipeline the operation of which has been abandoned with the leave of the Board as required by subsection 74(1)(d) and that remains in place.”

The Board continues to regulate pipelines abandoned in place and requires companies to monitor and report on them as well as respond to any concerns raised by the public.

The stages may overlap. For example, not all Physical Abandonment Activities must be complete before Reclamation Monitoring begins. Figure 1-2 illustrates the stages of the Board’s oversight of abandonment projects attributed to the two different methods of abandonment.

**Figure 1-2: Stages in NEB Oversight of Abandonment Projects**

Method of Abandonment	Physical Abandonment Activities	Reclamation Monitoring	Abandoned Pipeline Monitoring
Abandonment by removal	✓	✓	✗
Abandoned pipeline (left in place)	✓	✓	✓

**1.3.2 Conditions**

The Board imposes conditions that it considers necessary or desirable and in the public interest. The purpose of conditions is to mitigate potential risks and effects associated with a project so that the project can be abandoned in a safe manner that protects the public and the environment. As part of the hearing process, the Board drafts potential conditions that it may include in any approvals related to the Project, so that the Board will have the benefit of Parties’ comments on the draft potential conditions, in the event the Board issues an approval.

On 23 October 2017, the Board made draft potential conditions for the Project available for review and comment by Parties to the hearing (NGTL and Intervenors). The Board considered all comments it received before finalizing the terms and conditions it will impose on the Project.

The Board has included 22 conditions in Order ZO-N081-003-2018 that it has issued to NGTL in respect of the Project. The following chapters in this Decision explain the context for the conditions which the Board has imposed for the Project. In addition to conditions addressing specific technical issues, the Board imposes standard Conditions 1, 2 and 3, holding NGTL to all its commitments, plans or programs included, referenced or agreed to on the hearing records. To assist the Board and all stakeholders in tracking progress and compliance, and to assist the Board in planning appropriate compliance verification activities, the Board imposes conditions requiring NGTL to file an activity schedule, progress reports and a signed confirmation of Project completion and compliance (**Condition 13, *Physical Abandonment Activity Schedule, Condition 19, Condition Compliance by and Accountable Officer, and Condition 22, Sunset Clause***).

The Board recognizes that the duration of the condition compliance stage for the Project is relatively lengthy, as necessary in the circumstances. There is relatively little industry experience in abandoning pipelines. As the company, Board, and public gain knowledge and adapt, NGTL may wish to seek relief, with appropriate supporting rationale, from any conditions as may be required.

### **1.3.3 Company Commitments**

The Board takes the commitments made by applicants seriously and throughout its deliberations the Board carefully considered all commitments made by NGTL in this proceeding. Commitments relevant to specific concerns are discussed in the applicable chapter and are not summarized here. All commitments made by NGTL in its Application or in its related submissions during the proceeding have become regulatory requirements, by virtue of **Condition 5 (*Commitments Table*)**.



## Chapter 2

# Engineering and Safety Matters

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## 2.1 Abandonment Activities

### *Views of NGTL*

#### *NGTL Engineering Abandonment Design Principles*

NGTL stated that the proposed activities will be carried out in accordance with the Canadian Standards Association (CSA) Z662-15, *Oil and Gas Pipeline Systems*, the OPR, and the NEB Act. NGTL stated that the abandonment plan was also influenced by discussions with industry and stakeholders and a review of technical papers prepared by government-industry groups.

### *Views of the Board*

The Board is satisfied that the abandonment was designed based on standard industry practices and relevant industry and stakeholder research. NGTL has provided sufficient evidence to demonstrate that the technical papers that influenced the development of the abandonment plan were those most relevant to the Project.

## 2.2 Displacement and Cleaning Activities

### *Views of NGTL*

NGTL stated that the Peace River Mainline (PRML) will be purged of all gas and pigged in six sections using three existing pigging facilities and four temporary pigging facilities. The NPS 4 Watino lateral and the section of the NPS 4 Hotchkiss North lateral will be cleaned using nitrogen and mechanical cleaning pigs with temporary pigging facilities.

NGTL stated that the cleaning pig runs will consist of using a nitrogen plug ahead of two mechanical cleaning pigs and will be propelled using compressed nitrogen or air. If volumes of solids or liquids in excess of 10 litres for the PRML or two litres for the Watino and Hotchkiss Laterals are collected during two consecutive runs, subsequent cleaning runs will be completed.

NGTL stated that the contaminant volume expected within the PRML was developed based upon the amount of materials collected during previous cleaning and inline inspection (ILI) tool runs. NGTL stated that the expected amount of materials to be collected in cleaning the PRML during abandonment is expected to be within the same magnitude.

NGTL stated that due to the expected quantity of mobile materials and the insolubility of the expected materials remaining in the pipeline that cleaning solutions and/or water washes would provide limited added cleaning benefit compared to the use of mechanical cleaning pigs. In

addition, NGTL expected that the minimum pressure required to utilize cleaning solutions and/or water washes would be above what the PRML would be able to sustain.

NGTL stated that the company would quantify any remaining mobile materials via sampling at each pipe demolition cut-out location to provide an indication as to the quantity and type of mobile materials remaining in the pipe after cleaning. If sufficient volumes are collected, and the laboratory results exceed applicable criteria, then NGTL will complete a risk-based assessment to further evaluate if any additional mitigation is required. NGTL confirmed that the cut-out locations where sampling is to be undertaken will be representative of areas along the pipeline where mobile materials are most likely to collect and may in fact over-represent the amount of mobile materials present after cleaning.

NGTL stated that the sampling program extends to the Sturgeon Lake Cree Nation (SLCN) Reserve Lands, where the pipe is to be removed, and that the company intends to use the information collected from sampling the removed sections of pipe to evaluate the effectiveness of its overall cleaning program. NGTL's project schedule indicated that the company plans to remove the pipe on the SLCN Reserve Lands after some pipe isolation and removal activities have been completed on other sections of the PRML. NGTL stated that if the cleaning and removal of the pipe on the SLCN Reserve Lands were to be completed prior to cleaning the remainder of the PRML, various activities would be delayed by as much as a year due to environmental restricted activity periods and seasonal access limitations.

NGTL committed to evaluating any recommended practices that may be developed as part of Pipeline Abandonment Research Steering Committee (PARSC) project "PARSC 007 – Recommended Practice for Cleaning Pipelines for Abandonment", which is expected to be published in 2017, to make adjustments to the cleaning program for the PRML.

### *Views of the Board*

The Board is satisfied that the general design of NGTL's displacement and cleaning plan will ensure the pipe is cleaned and that the cleaning is verified to be effective. However, the Board is of the view that NGTL's plans to commence some segmentation activities prior to completing a cleaning validation program will yield an increased risk of requiring additional cleaning to be undertaken after segmentation. The effect of this would be an increased environmental disturbance to accommodate temporary pig launchers and receivers. The Board therefore imposes **Condition 4 (Pipe Cleaning Validation Plan and Report)** requiring NGTL to:

- a) Implement a Cleaning Validation Plan (Plan) on the segment of pipe to be removed from the SLCN prior to segmenting or removing the remaining pipe. The Plan shall include testing and analysis of the residual contaminants, both mobile and non-mobile, and estimation of the volumes remaining in the pipe after the initial cleaning.

NGTL shall submit a report to the Board, at least 14 days prior to any segmentation or removal of the remaining portions of the pipeline, describing the SLCN segment findings from the Plan and any further cleaning to be completed, including the rationale for any changes made as a result of these findings.

- b) NGTL shall submit a report to the Board, 90 days after all pipe removal and segmentation activities are complete describing the findings from the Plan for the entirety of the PRML and any changes made to the cleaning procedure including any additional cleaning procedures that were required on the remaining pipe.

## **2.3 Cathodic Protection**

### *Views of NGTL*

NGTL stated that nine cathodic protection (CP) facilities (rectifiers and thermal electric generators will be removed and CP will no longer be maintained on the PRML.

NGTL stated that maintaining CP on the PRML would not necessarily protect the integrity of the pipeline. In addition, it is also not technically feasible to maintain CP on the PRML as the fuel source for the thermal electric generators, which provide electricity for the CP, is the natural gas within the PRML.

### *Views of the Board*

The Board is satisfied that the CP facilities should be removed and no longer maintained. NGTL has provided sufficient evidence to demonstrate that maintaining CP would not be technically feasible.

## **2.4 Corrosion, Pipe Collapse, and Subsidence**

### *Views of NGTL*

NGTL stated that the abandonment plan was based upon the findings of the Det Norske Veritas 2015 report in relation to the risks associated with pipeline corrosion, pipeline collapse, and soil subsidence.

NGTL stated that based on the Petroleum Technology Alliance Canada (PTAC) research, under average soil conditions and pipe depths it could take up to 9,000 years for the PRML to collapse from the weight of a truck. NGTL also stated that any resulting subsidence would be highly variable based on local conditions, but would be expected to be less than 10 cm.

NGTL stated that catastrophic pipe collapse is not expected and ground subsidence is not expected to be significant and will be mitigated in agricultural areas by normal tilling practices. NGTL stated that corrosion by-products are not expected to affect or contaminate water sources.

NGTL stated that inspection of the pipeline post-abandonment for corrosion damage via ILI was not feasible because the CSA Z662 standard requires the company to segment and cap the pipeline, making the use of ILI tools impossible. NGTL stated that the alternative would be discrete examination excavations to evaluate corrosion, but that this would create unnecessary disturbances to the local environment.

NGTL stated that once equivalent land capability is achieved, no further post-abandonment activities, including monitoring, are planned.

### ***Views of the Board***

The Board is satisfied that NGTL's abandonment plan is based upon sound assumptions and the expected risks for subsidence and pipe collapse are reasonable based upon existing industry knowledge. However, the Board is of the view that NGTL's plans to cease monitoring of the pipeline once equivalent land capability has been achieved and to rely on normal tilling practices to mitigate any subsidence are insufficient. The effect of this would be to rely on affected stakeholders such as landowners to report on any issues found, without any proactive measures for the company to identify and mitigate risks associated with corrosion, pipe collapse, and subsidence. The Board therefore imposes **Condition 16 (*Abandoned Pipeline Monitoring Plan*)** requiring NGTL to file with the Board, for approval, within 120 days after the commencement of Physical Abandonment Activities, a systematic, explicit, comprehensive and proactive Abandoned Pipeline Monitoring Plan applicable to all areas of the Project where the pipeline is abandoned in place.

The Board is also of the view that if a hazard such as pipe collapse or subsidence were identified, it should be reported to the Board to ensure the incident is investigated and corrective and preventative actions are taken. The Board therefore imposes **Condition 17 (*Event Reporting*)** requiring NGTL to file with the Board, within 120 days after the commencement of Physical Abandonment Activities, confirmation that NGTL will submit a preliminary and detailed incident report to the Board by letter pursuant to existing Board guidance for event reporting, in reference to all areas of the Project where the pipeline is abandoned in place and any of the following events occur:

- a) pipe collapse;
- b) pipe exposure;
- c) subsidence;
- d) confirmed water conduit effects;
- e) contamination; and,
- f) any other hazards identified through the ***Abandoned Pipeline Monitoring Plan (Condition 16)***.

## **2.5 Emergency Management**

### *Views of the Board*

The Board recognizes that public safety is paramount throughout the lifecycle of any project, and this includes emergency management and third-party damage prevention. During the Physical Abandonment Activities phase, issues relating to emergency management and third-party damage prevention require NGTL to comply with the existing regulatory requirements as if the pipeline was operating. Upon completion of the Physical Abandonment Activities, the mandate of the Board for public safety continues. In the unlikely event that there is an emergency or damage prevention matter related to the abandoned works, the Board has the authority under subsection 48(1.1) of the NEB Act to order a company to take measures in respect of the abandoned pipeline should it be necessary for the safety and security of the public, of the company's employees or the abandoned pipeline; or for the protection of property or the environment.

## Chapter 3

# Economic and Financial Matters

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In making a decision on an application pursuant to subsection 74(1)(d) of the NEB Act, the Board considers all information presented that appears to be directly related and relevant, and the toll and tariff impacts. The evidence provided by NGTL included details of the costs associated with the proposed abandonment, confirmation of commercial third party consultation, details related to the original book cost and accumulated depreciation of the facilities, and the impact of the Project on future tolls and services. NGTL also provided information related to its financing of the Project and on the impact of the abandonment on NGTL's Abandonment Cost Estimate (ACE). The Board's level of analysis of the issues is generally commensurate with the scope and impact of the applied-for project.

### 3.1 Views of NGTL

#### 3.1.1 Project Cost

NGTL initially estimated the cost for the project to be \$22.5 million, however this estimate was later updated to \$29.7 million due to enhanced scope definition, primarily related to estimated remediation, reclamation and contingency costs. NGTL stated that its cost estimate includes all activities associated with the abandonment of the pipeline facilities as outlined in its abandonment plan, including physical removal, reclamation activities and monitoring until equivalent land capability is achieved. NGTL stated that through simplifying allocation assumptions, it estimated that \$21.2 million of the total estimated cost of \$29.7 million is attributable to the sections of the pipeline and associated facilities that are to be removed.

NGTL stated that its determination of the most appropriate method of abandonment is based on current land use and is guided by three key principles: safety, environmental protection and cost effectiveness. NGTL is of the view that the impacts to its shippers associated with the cost of abandonment is an important factor to consider in determining the appropriate method of abandonment. For example, NGTL customers and the end users they serve are generally concerned with the costs of abandonment and the associated impact to the tolls they pay on the NGTL System. NGTL stated that it must balance all of these factors to ensure it abandons a pipeline in a manner that avoids or limits impacts to landowners, Aboriginal groups, and other stakeholders, and also avoids or limits adverse effects on the environment while being consistent with prudent and cost effective management of the system. NGTL believes that the abandonment plan developed for the Peace River Mainline (PRML) balances all of these factors and represents a plan that minimizes the risk to the public, will have minimal long-term environmental impacts and meets the objectives of cost effectiveness.

NGTL stated that to accurately estimate the potential costs associated with full removal of the entire pipeline, a more comprehensive scoping and cost estimate process would be required. However, NGTL extrapolated the pipe removal costs associated with the removal of 9.3 km of

NPS 20, as proposed in its Application, to determine an estimate to remove the entire length of pipeline. Based on this, NGTL estimated it would cost approximately \$128.1 million to remove the entire pipeline and associated facilities.

### **3.1.2 Commercial Third Party Consultation**

NGTL informed the Tolls, Tariff, Facilities and Procedures Committee (TTFP) (a group of approximately 100 NGTL System customers and stakeholders that work collaboratively with NGTL to address NGTL System matters) of the Project at the 22 July 2016 TTFP meeting. NGTL confirmed that all potentially affected commercial third parties have been notified of the Application and that to date, no comments or concerns have been received by NGTL.

### **3.1.3 Impacts on Remaining Rate Base and Tolls**

NGTL stated that the original book cost of the facilities to be abandoned is \$42.7 million, which will be credited from the appropriate plant account. This amount is also the accumulated depreciation which will be debited to the appropriate depreciation account for an ordinary retirement. Consequently, NGTL was of the view that there would be no expected impact on the remaining rate base. NGTL further stated that the Project is expected to have no material impact on tolls on the NGTL System, or on the current transportation services offered on the NGTL System.

### **3.1.4 Financing, Abandonment Funding and Abandonment Cost Estimate**

NGTL stated it will provide interim funding for all costs associated with the Project and that funding will be available. NGTL stated it intends to subsequently seek reimbursement from the Abandonment Trust for the abandonment costs, which would be the subject of a subsequent Application.

NGTL stated that once equivalent land capability is achieved, no further post-abandonment activities are planned. If, however, additional monitoring takes place or future reclamation activities are required, the costs associated with this work are expected to be funded through the abandonment trust except for the costs associated with monitoring of abandoned facilities co-located with operational facilities, which are expected to be funded through normal operations and maintenance expense treatment.

NGTL recognizes that, as set out in the Board's RH-2-2008 proceeding, landowners are not liable for costs of the abandonment of the PRML and landowners will not bear the risk of future abandonment costs and liabilities from this proposed abandonment. NGTL submitted that its Application and the development of its abandonment plan reflected this, as communicated to landowners. NGTL submitted that any future abandonment, remediation and reclamation activities associated with the abandonment required subsequent to achieving equivalent land capability would not be funded from landowners.

NGTL stated that the facilities proposed to be abandoned in this Application were included in the preparation of the Abandonment Cost Estimate (ACE) approved for the NGTL System. It was

NGTL's view that the facilities being abandoned do not represent a material portion of the total system; the Project cost represents approximately one percent of NGTL's total ACE. NGTL stated that as a result, no changes to the ACE or Annual Contribution Amount (ACA) are required outside the NEB's periodic ACE review process.

NGTL was of the view that the removal of certain sections of the pipeline and associated facilities, as identified in the Application, would not have a direct impact on the NGTL System ACE. NGTL submitted that its ACE reflects the cost to abandon the entire NGTL System as a whole, and the Project is generally consistent with the assumptions reflected in the derivation of ACE for the NGTL System.

As noted under Section 3.1.1 Project Cost, NGTL estimated it would cost approximately \$128.1 million to remove the entire pipeline and associated facilities. NGTL stated that the full removal of the pipeline and associated facilities would be a significant impact on the NGTL System ACE, as the assumptions reflected in the NGTL System ACE are consistent with the Board's mandated assumptions, which in turn are guided by a number of principles established in the RH-2-2008 proceeding. NGTL stated that mandating 100 per cent removal in this Application would be inconsistent with NEB Principle 7 from that proceeding, which states:

The removal of all large-diameter abandoned pipe from agricultural land is not a prudent or effective approach for the purpose of establishing preliminary abandonment cost estimates.

NGTL further stated that should the Board's decision in this Application cause NGTL to conclude the Board is departing from Principle 7, it would be necessary to revisit key assumptions reflected in the current ACE. Amending the assumption to 100 per cent removal for all large diameter pipelines would result in a significant increase in the ACE for the NGTL System as a whole and that of all NEB-regulated pipelines, which would translate into a commensurate increase in the ACA, abandonment surcharge, and amounts required to be set aside in abandonment trusts by Canadian pipelines. NGTL further stated it had not computed what the ACE for the NGTL System as a whole would be assuming full pipeline removal, but the quantum of differences in cost would be orders of magnitude greater than the 2016 ACE filing of \$2,535.3 million. It was NGTL's view that this would have substantial detrimental impacts on gas consumers and the competitiveness of the Canadian gas industry relative to provincial and U.S. counterparts not faced with these costs increases, and there would also be an increase in negative environmental impact, since abandonment in place is significantly less disruptive than pipeline removal. NGTL was of the view that such an outcome would be contrary to the Canadian public interest.

### **3.2 Views of Participants**

In final argument, GML 55 and Mountain Métis stated they are not concerned with the cost-effectiveness of monitoring or removing the pipeline, as it is the responsibility of NGTL to remove the pipeline and to follow up with the appropriate measures to mitigate the effects the pipeline has had on the environment.



### **3.3 Views of the Board**

The Board is satisfied that NGTL has provided reasonable and sufficient evidence and demonstrated that it has fully considered the relevant economic and financial impacts of this Project. Although cost effectiveness is not a determining factor when assessing a company's proposed method of abandonment, it is a factor that the Board considers. The Board notes that NGTL's abandonment costs can affect shippers. In this instance, the Board finds that the Project will not have a material impact on future tolls or on the current transportation services offered on the NGTL System. The Board is of the view that the facilities being abandoned do not represent a material portion of the total NGTL system's ACE and finds that no changes to the ACE or ACA are required at this time.

NGTL has stated that funding will be available to provide interim funding for all costs associated with the Project, and that NGTL intends to subsequently seek reimbursement from the Abandonment Trust for the abandonment costs. The Board is of the view that any decision made in regard to this Application does not in any way affect NGTL's application to access its Abandonment Trust for the abandonment costs.

## Chapter 4

# Land Matters

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The Board's Filing Manual sets out the Board's expectations of applicants regarding land matters. Applicants are expected to provide a description of the existing right-of-way (RoW) and facility lands that would be affected by the abandonment and the temporary work space required for a project. Applicants are also expected to provide a description of the land rights to be acquired or any easement to be surrendered.

### *Views of NGTL*

The Project facilities cross approximately 70 km of private freehold land, approximately 189 km of Alberta provincial Crown land and approximately 9 km of land on the Sturgeon Lake Cree Nation (SLCN) Indian Reserve.

NGTL noted that although the RoW of the Peace River Mainline (PRML) pipeline is 266 km long and covers an approximate area of 813 hectares (ha), the actual area of Project disturbance will be much smaller because approximately 257 km of the 266 km of pipeline will be abandoned in place. NGTL stated that Project activities will occur on approximately 52 ha of the area occupied by the PRML that will be abandoned, with excavation confined to approximately 11 ha.

NGTL submitted that all physical abandonment activities associated with the Project will take place within the existing RoW and facilities site boundaries, with the exception of physical abandonment activities that extend beyond the RoW at the Four Mile Creek watercourse, and removal of three rectifiers that are located adjacent to township roads and highways.

NGTL indicated that there will be approximately 82 Project Disturbance Areas (PDA) for the abandonment in place activities plus the area where the pipe will be removed from the SLCN Indian Reserve. NGTL submitted that each PDA comprises the area to be excavated (approximately 10 m x 10 m) and associated workspace, and is on average 30 m x 50 m in area or approximately 0.2 ha. NGTL noted that the exception is the PDA defined for physical abandonment activities at Four Mile Creek, which covers an area of approximately 7.4 ha.

NGTL submitted that an additional PDA is defined for the area within which physical abandonment activities will be undertaken to remove the pipeline where it crosses the SLCN Reserve Lands. This PDA comprises the width of the RoW, including trench and workspace areas, and measures approximately 30 m wide by 9 km long, for a total area of around 28 ha.

NGTL stated that it will use existing land rights for the work associated with the abandonment activities and no easements will be acquired for the Project. NGTL further stated that if temporary workspace is required for the Project, it would acquire the necessary land rights from the landowners and occupants under a work permit.

NGTL submitted that it would not be surrendering easements and that it intends to maintain the registration of those easements in all relevant land registry systems. NGTL recognized that there may be good reasons to retain the easements including ensuring NGTL's ability to access the lands to fulfill all of its legal requirements, and abandonment and post-abandonment obligations. NGTL noted that should it decide to surrender easements in the future, it would consult with all directly affected landowners, occupants and land users.

### *Views of the Board*

The Board notes that the majority of the Project will take on previously disturbed lands within NGTL's existing RoW and no new easements will be required for the Project. The Board finds that NGTL's anticipated land requirements for the Project are acceptable.

The Board also finds that NGTL's decision not to surrender the existing easements is reasonable and justified. This will allow NGTL to access the RoW for future monitoring and remediation work, if required, and provide NGTL the opportunity to continue its relationships with landowners should any future issues and concerns arise. The Board imposes **Condition 21 (*Abandoned Pipeline Monitoring Reports*)** requiring NGTL to provide a land rights summary that includes annual reporting to the Board of the number of easement registrations maintained and surrendered, as well as a summary of its consultation with disposition holders regarding contingency plans, should subsequent land use issues arise following the surrender of the easement.

## Chapter 5

# Public Consultation

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The Board's Filing Manual sets out the Board's expectations of applicants regarding consultation to support a project application. Applicants are expected to undertake an appropriate level of public involvement, commensurate with the setting, nature and magnitude of a project. The Board considers public involvement to be a fundamental component during each phase in the lifecycle of a project (that is, project design, construction, operation and maintenance, and eventual abandonment) to address any potential impacts of that project. This chapter addresses NGTL's public consultation for the Project.

NGTL's consultation with Aboriginal groups for the Project is discussed in Chapter 6.

### 5.1 Overview of NGTL's Consultation with Stakeholders

#### *Views of NGTL*

NGTL stated that the consultation program for the Project was guided by TransCanada's Stakeholder Engagement Commitment Statement and TransCanada's corporate values of responsibility, integrity, innovation and collaboration. NGTL noted that TransCanada's corporate policy with respect to consultation, as provided for in the Stakeholder Engagement Commitment Statement, is to engage stakeholders early and often, to listen, to provide accurate information, and to respond to stakeholder interests in a prompt and consistent manner.

NGTL submitted that it began communicating and engaging with stakeholders potentially affected by the Project in 2011 as part of its Decommissioning Application. Following the withdrawal of the Decommissioning Application from the Board, the consultation program was reinitiated in March 2015 with notification being sent to all stakeholders of the Project advising of NGTL's intent to file an abandonment application for the Project.

NGTL identified and consulted with the following potentially affected stakeholder groups:

- landowners;
- occupants;
- land users (trappers, guide–outfitters, and recreational users);
- industry associations and commercial third parties;
- regional elected officials and staff;
- regional emergency responders;
- provincial and federal departments; and
- First Nations and Métis group<sup>2</sup>.

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<sup>2</sup> NGTL's Aboriginal Engagement Program is discussed in Chapter 6 (Aboriginal Matters)

NGTL indicated that since reinitiating its Stakeholder Engagement Program for the Project in 2015, it used a variety of engagement tools including mail-outs of Project information, face-to-face meetings, telephone calls, establishment of a Project email address, toll-free telephone number and webpage, open houses, and newspaper and radio advertisements.

## **5.2 Consultation Activities with Landowners and Land Users**

### ***Views of NGTL***

NGTL submitted that it engaged with 119 landowners and occupants regarding the Project.

NGTL stated that following initial notification of the Project in March 2015, further consultation was conducted with landowners, occupants and land users to discuss and collect feedback on the design of Project, clarify and address concerns, answer any questions, and, where possible, incorporate feedback into the abandonment plan for the Project. NGTL submitted that discussions were also held involving signage, maintaining easements on titles, Alberta One Call, and NEB jurisdiction over the full life cycle of a pipeline.

NGTL noted that during consultations with the landowners and land users, issues raised were:

- the pipeline being left in place;
- financial liability;
- impacts to future development;
- adequacy of NGTL's consultation;
- current depth of cover;
- unknown effects of leaving the pipeline in the ground, including future exposure and water;
- well contamination; and
- right-of-way maintenance.

NGTL noted that all issues and concerns raised by landowners were resolved prior to filing the Application with the Board with the exception of one landowner. Before Canadian Association of Energy and Pipeline Landowners Associations (CAEPLA) application to participate was filed, no landowner identified themselves as a member of CAEPLA / Peace River Mainline Landowner Committee (PRMLC) or requested NGTL to engage CAEPLA/PRMLC as their representative.

NGTL indicated that since CAEPLA/PRMLC filed their application to participate in the proceedings, NGTL consulted with them with respect to the Project and expressed willingness to participate in an Alternative Dispute Resolution process with CAEPLA/PRMLC parallel to the Board's hearing process.

NGTL stated that landowner consultation activities will continue throughout the regulatory process and during all phases of the Project.

### **5.3 Consultation Activities with Government Stakeholders**

#### ***Views of NGTL***

NGTL stated that since March 2015 it consulted with representatives from five regional governments to provide information on the Project, and to understand and address their questions and concerns. Meetings were held with representatives from the following regional governments:

- Birch Hills County;
- Municipal District of Peace No. 135;
- Municipal District of Greenview No. 16;
- Northern Lights County; and
- Clear Hills County.

In addition, NGTL noted that it made information about the Project available to a broader audience of municipalities by its attendance and participation in the Alberta Association of Municipal Districts and Counties Convention and the Federation of Canadian Municipalities Conferences to collect feedback from interested parties on the proposed process and activities associated with abandonment of lines under NEB jurisdiction.

NGTL submitted that the local government representatives were generally interested in information on:

- the pipeline assets and facilities proposed to be abandoned;
- potential negative socio-economic impacts on their community;
- financial impacts as a result of linear assessment changes;
- work location details for cutting and capping activities;
- project and regulatory timelines;
- future third-party crossing considerations for abandoned pipelines;
- subsidence as a result of pipelines abandoned in place; and
- future land-use planning considerations.

NGTL indicated that all concerns raised by the regional governments have been addressed with the exception of the loss of tax income to the municipalities as an effect of abandoning pipelines.

NGTL indicated that it initiated contact with Indigenous and Northern Affairs Canada (INAC) in September 2015 and was advised that the full removal of the approximate 9 km of pipeline within SLCN Reserve Lands required submission of a Project Description to INAC. As a result, NGTL submitted a PRML Project Description to INAC on 12 August 2016 and completed the Simple Environmental Review on 28 November 2016. On 8 December 2016, NGTL received an email response from INAC stating that, “Based on the information and measures provided in the Simple Environmental Review and supporting Environmental Protection Plan (EPP), the project is not expected to cause significant adverse environmental effects”.

NGTL met with representatives from Alberta Environment and Parks in November and December 2015, and with Environment and Climate Change Canada in July 2016 to provide information on the Project. NGTL indicated that this consultation provided for an opportunity to understand the agencies’ environmental and socio-economic concerns and issues, and mitigate where possible. NGTL incorporated the environmental and socio-economic concerns and issues raised into the scope of its environmental assessment.

### *Views of the Board*

The Board is of the view that NGTL’s design and implementation of Project-specific public consultation activities was appropriate for the scope and scale of the Project, given that NGTL has adequately identified and engaged stakeholders, developed engagement materials, notified stakeholders of the Project, and responded to their input.

The Board notes that NGTL initiated consultation with government stakeholders and landowners early in the process. The Board further notes that NGTL has committed to continue consulting with landowners during all phases of the Project. The Board expects NGTL to continue its efforts to consult and to maintain effective and timely consultation activities with government stakeholders, affected landowners and Aboriginal groups, as appropriate, throughout Physical Abandonment Activities, Reclamation and Monitoring and Abandoned Pipeline Monitoring of the Project. The Board is of the view that an effective and responsive process for responding to issues that may be raised by affected landowners is an important part of the company’s ongoing engagement with landowners. To that end, the Board imposes **Condition 7 (Complaint Tracking)** requiring NGTL to confirm that it has created, and will maintain, up until all pipe is removed or until the Board otherwise directs, records tracking Project-related landowner and occupant complaints and any further actions NGTL has taken, or an explanation why no further action is required.

The Board recognizes the uncertainty some landowners may feel with respect to future impacts as a result of a pipeline abandoned in place. The Board imposes **Condition 16 (*Abandoned Pipeline Monitoring Plan*)** requiring NGTL to develop and implement an Abandoned Pipeline Monitoring Plan to ensure there is effective management and monitoring of the pipelines abandoned in place until all pipe is removed or until the Board otherwise directs.

With respect to issues on impacts to future development, the Board acknowledges NGTL's commitment to manage and respond to crossings and development applications in the same way it currently does with respect to its in-service facilities, namely responding to and engaging with the applicant concerning its crossing application or planning phases of its proposed development, to determine whether or on what terms such crossing application or development can be accommodated. The Board notes that s. 48.1 of the NEB Act would continue to apply after abandonment, requiring anyone seeking to make contact, alter or remove an abandoned pipeline to obtain leave of the Board to do so.



## Chapter 6

# Aboriginal Matters

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### 6.1 Introduction

The Board has considered all of the evidence provided by Aboriginal groups and others including NGTL about the potential impacts of the Project on Aboriginal interests, including rights, NGTL's proposed mitigation of the Project's potential effects, requirements in the regulatory framework and the conditions imposed by the Board in the Order. The Board interprets its responsibilities in a manner consistent with the *Constitution Act, 1982*, including subsection 35(1), which recognizes and affirms the existing Aboriginal and treaty rights of Aboriginal peoples. Further discussion of the Board's role in upholding section 35 of the *Constitution Act, 1982* is available in Section 6.9.6. The Board is of the view that there has been adequate consultation and accommodation for the purpose of the Board's decision on this Project. The Board is also of the view that any potential adverse Project impacts on the interests, including rights, of affected Aboriginal groups are not likely to be significant and can be effectively addressed.

The Board is of the view that NGTL designed and implemented appropriate and effective consultation activities for the Project, and is also of the view that the Board process was appropriate for these circumstances. This chapter includes summaries of evidence provided directly by Aboriginal groups through their participation in the hearing, as well as summaries of NGTL's consultation with affected Aboriginal groups, which noted the concerns and interests, assessment methods and rationales, and any proposed mitigation by Aboriginal groups as recorded by NGTL. The Board notes that identifying and referring to specific passages within the record can lead to other direct and indirect references being overlooked. Therefore, anyone wishing to fully understand the context of the information and evidence provided by Aboriginal groups should familiarize themselves with the entire record of the hearing. This chapter of the Decision should not be considered in isolation from the as a whole. In addition, Appendix III provides a summary of the general and specific concerns and issues raised by Aboriginal groups through this proceeding, as well as summaries of the responses to these concerns provided by the Applicant, responses by the Board (including recommended conditions), and applicable requirements provided through regulation and/or legislation.

## 6.2 NGTL's Consultation with Aboriginal Groups for the Project

### *Views of NGTL*

NGTL stated that the Aboriginal engagement program for the Project is guided by TransCanada's *Aboriginal Relations Policy*. NGTL's Aboriginal engagement program is also guided by TransCanada's corporate values of responsibility, integrity, innovation and collaboration. NGTL noted that the goals of its Aboriginal Engagement Program for the Project were to:

- build and maintain positive long-term relationships with Aboriginal communities and organizations potentially affected by the Project;
- develop and share timely information to allow for informed, effective and meaningful engagement with communities;
- ensure that input from Aboriginal communities and organizations is gathered, understood and considered in Project design and execution, as appropriate;
- respond promptly to commitments and communications with respect to the interests and concerns identified by each community; and
- identify and maximize education, training, employment and contracting opportunities for Aboriginal peoples potentially affected by the Project.

NGTL submitted that the Project is located within Treaty 6 and 8 boundaries, and within the Métis Nation of Alberta – Region 6, however no Métis settlements governed by the Métis Settlements General Council are traversed by the Project. NGTL noted that a portion of the Project crosses the Sturgeon Lake Cree Nation (SLCN) Reserve lands.

NGTL stated that it identified Aboriginal communities and organizations with a potential interest in the Project through a combination of desktop research and NGTL's own operating experience, including NGTL's experience on other past projects in the region, and an established network of contacts with Aboriginal communities and organizations in the Project area. Potential interests were identified through consideration of NGTL's engagement criteria, such as project scope, the nature of the affected lands, and the current use by Aboriginal communities, and then confirmed through communications with Aboriginal community and organization representatives.

NGTL initially identified nine Aboriginal groups and organizations as having a potential interest in the Project and began engaging with these groups in August 2015. Based on input provided by the Board, 14 groups were added to the list of potentially impacted Aboriginal groups. On 10 April 2017, Gunn Métis Local 55 (Lac Ste. Anne Métis) (GML 55) was granted Intervenor status in these proceedings, as requested, and on 17 July 2017, Mountain Métis Nation Association (Mountain Métis) was granted standing in the proceedings as joint participant with GML 55. GML 55 and Mountain Métis were subsequently added to NGTL's list of potentially affected Aboriginal groups. Accordingly, NGTL engaged with the following 25 Aboriginal groups identified as being potentially affected by the Project:

1. Atikameg First Nation
2. Dene Tha' First Nation
3. Duncan's First Nation
4. East Prairie Métis Settlement
5. Enoch First Nation
6. Gunn Métis Local 55 (Lac Ste. Anne Métis)
7. Horse Lake First Nation
8. Kee Tas Kee Now Tribal Council
9. Kelly Lake Cree Nation
10. Kelly Lake First Nation
11. Kelly Lake Métis Settlement
12. Métis Nation of Alberta
13. Métis Nation of Alberta, Region 6
14. Métis Nation of Alberta Local Council #1990 of Grande Prairie
15. Mountain Métis Nation Association
16. North Peace Tribal Council
17. Paddle Prairie Métis Settlement
18. Peavine Métis Settlement
19. Sawridge First Nation
20. Sturgeon Lake Cree Nation
21. Sucker Creek First Nation
22. Swan River First Nation
23. Treaty 8 Tribal Association
24. Western Cree Tribal Council
25. Woodland Cree First Nation

NGTL said its engagement activities with Aboriginal groups for the Project included:

- mail-out of project information packages, including: public notification letter, Project map and abandonment information sheet; NEB brochure *Information for Proposed Pipeline or Power Line Projects That Involve a Hearing*; and TransCanada brochures: *Aboriginal Relations*; *Environment Strategy*; Corporate Social Responsibility; Stakeholder Commitment Statement; *Stakeholder Engagement*; and *Your Safety, Our Integrity*;
- ongoing correspondence and meetings with communities;
- notification that NGTL filed the Application; and
- ongoing discussions with Aboriginal groups regarding economic and business opportunities.

NGTL maintained detailed engagement logs for the 25 identified Aboriginal groups, which were filed with the Application or in subsequent filings, including its response to NEB Information Requests No. 2 and No. 4. NGTL stated that it will continue to share Project information and work to respond to any requests or concerns that are identified, where communities have expressed interest. NGTL committed to incorporate additional input it receives through ongoing engagement into Project design and planning, where practical.

### **6.3 The Board’s Hearing Process and Participation of Aboriginal Groups**

The Board’s hearing process was designed to obtain as much relevant evidence as possible on Aboriginal concerns regarding the Project, the potential impacts on Aboriginal interests (as noted in the Board’s List of Issues), and possible mitigation measures to minimize adverse impacts on Aboriginal interests. The Board was provided with and considered information about concerns related to the Project, and the measures that would be required to address those concerns, as brought forward through consultation undertaken by NGTL and through the participation of potentially affected Aboriginal groups and other participants in the hearing process.

#### **6.3.1 NEB Hearing Order and Hearing Process**

The Board is committed to reaching out to Aboriginal groups early in the hearing process where there is a potential impact on their rights and interests from NEB-regulated projects. The Board’s Enhanced Aboriginal Engagement (EAE) initiative aims to provide proactive contact with Aboriginal groups that may be affected by a proposed project, and to help Aboriginal groups understand the Board’s regulatory process and how to participate in that process. The Board reviews the completeness of the list of potentially affected Aboriginal groups identified in the proponent’s Project Application. The Board then sends letters to each potentially impacted Aboriginal group on the revised list, informing them of the Project as well as the Board’s regulatory role in respect of the Project, and offers to provide further information on the hearing process. Following issuance of these letters, Board staff follow up, respond to questions or conduct information meetings where requested by Aboriginal groups.

The Board carried out its EAE activities for the Project commencing with the receipt of the Project Application on 18 August 2016. On 22 November 2016 the Board sent letters to 23 potentially affected Aboriginal groups and organizations.

The EAE letters discussed the Board's hearing process and Participant Funding Program (PFP). The letters also included a summary of the Project, the notice of public hearing and application to participate in the hearing, contact information on how to obtain further information from the Board, and an offer from NEB staff to attend a community meeting. In response to the letters and the follow-up phone calls, Board staff held two community meetings with the Métis Nation of Alberta and Swan River First Nation on 17 and 27 of January 2017 respectively, to provide information on the Board's process in regard to the Project.

The EAE letters also advised that, with respect to Aboriginal consultation for the Project, the Crown is relying on the NEB process to the extent possible, and the Crown encourages all Aboriginal groups whose established or potential Aboriginal or treaty rights could be affected by the Project to apply to participate in the Board's process.

In addition to the EAE activities, the Board hosted Open House information sessions for the public on 8 and 9 of February 2017 in Grande Prairie and Peace River, AB, respectively, to provide information about the Project and the Board's hearing process.

### **6.3.2 Participant Funding Program**

Independent of the Panel's hearing process, the Board administered a Participant Funding Program (PFP) for the Project, which allocated funding to assist Intervenors with their participation.

The funding opportunity for the Peace River Mainline Abandonment Hearing was announced on 18 October 2016 with a funding envelope of \$500,000. GML 55 applied for funding and were awarded the amount of \$76,791.

### **6.3.3 Participation of Aboriginal Groups**

Aboriginal groups who are concerned with potential Project-related impacts on their interests, including rights, had opportunities to present their views directly to the Board. While the Board required the Applicant to implement a consultation program and undertake an assessment of the Project's potential effects, including its environmental and socio-economic effects, the Board also took steps to facilitate the direct participation of these groups in its proceedings.

Section 55.2 of the NEB Act requires the Board to consider the representations of any person who, in the Board's opinion, is directly affected by the granting or refusing of the application, and permits the Board to consider the representations of any person who, in the Board's opinion, has relevant information or expertise. The Board conducted an Application to Participate (ATP) process between 23 February 2017 and 16 March 2017, which required interested persons or groups to submit applications to participate in the Board's hearing process, describing how they are directed affected by the proposed Project and/or have relevant information or expertise.

GML 55 was granted Intervenor status, as requested. Mountain Métis was later granted Intervenor status as joint participant with GML 55, as requested. Duncan's First Nation was granted Commenter status, as requested. Duncan's First Nation did not participate beyond the filing of its ATP.

On 10 April 2017, the Board issued Hearing Order MH-002-2017 which outlined the process to be followed in the Board's adjudication of NGTL's Application. As described in Section 3.6 and Appendix V of the Hearing Order, the Board planned to have an oral portion of the hearing.

The Board understands that Aboriginal peoples have an oral tradition for sharing information and knowledge from generation to generation and that this information cannot always be shared adequately in writing. All Participants had an opportunity to present oral statements expressing their views on the Project directly to the Board; however, the opportunity to provide oral traditional evidence (OTE) was unique to Aboriginal participants. The Board is of the view that it is valuable to hear OTE that would assist the Board in understanding how the Project may impact Aboriginal communities' interests, including rights.

On 16 May 2017, the Board issued a letter, which extended an invitation to all Aboriginal Intervenors in the proceeding to provide OTE and/or an Oral Statement in-person or remotely. The Board received notice of intent to present an Oral Statement and OTE from GML 55 and Mountain Métis. On 22 August 2017, GML 55 and Mountain Métis jointly presented OTE. The Board heard OTE in Edmonton, Alberta, a location near those interested in the Project.

On 29 September 2017, the Board issued Procedural Update No. 5 indicating that the final oral portion of the hearing would be held in Grande Prairie, Alberta starting on 7 November 2017.

On 23 October 2017 the Board issued draft potential conditions to all Parties in the hearing, attaching some of the conditions that the Board may include in any approvals it may make with respect to the Project, and inviting comments by 2 November 2017. The Board did not receive comments from any of the Aboriginal Groups.

On 3 November 2017, GML 55 and Mountain Métis advised the Board that they have resolved with NGTL issues related to the Project and were withdrawing from further participation in the Peace River Mainline Abandonment and any further intervention in the regulatory proceedings in respect of this Project, subject to the opportunity to provide a final written statement if permitted by the Board. They also advised that neither party would be in attendance on 7 November 2017. Subsequently, in Procedural Update No. 8, the Board decided to relocate the hearing to Calgary, Alberta and cross examine NGTL on 8 November 2017.

To facilitate GML 55 and Mountain Métis' continued participation, the Board granted the groups' requests to adopt their written evidence by filing an affidavit, and file final argument. The Board stated that it would determine the appropriate weight to assign to the written evidence, given that NGTL did not have an opportunity to cross examine the Parties on their evidence as a result of their withdrawal from the oral portion of the hearing. On 1 December 2017, GML 55 and Mountain Métis submitted final argument. As discussed in Chapter 1 of this report, the Board has given weight, albeit minimal weight, to GML 55 and Mountain Métis' written evidence, notwithstanding their withdrawal.

In summary, during the proceeding Aboriginal Intervenors were able to obtain further information about the Project and present their views to the Board in numerous ways. Aboriginal Intervenors could submit written evidence, provide OTE, ask written questions of NGTL and other Parties (Information Requests), respond to any written questions asked of them by the Board and NGTL, conduct oral cross-examination of NGTL, provide oral statements, provide comments on draft conditions and provide final argument. Table 6-1 below summarizes the process steps participated in by GML 55 and Mountain Métis, including the types and sources of information submitted by them during the proceeding and considered by the Board.

**Table 6-1: Written and Oral Submissions by Aboriginal Intervenors by Exhibit Number**

<b>Intervenor Name</b>	<b>Information Requests made (to Applicant or Intervenor)</b>	<b>Written Evidence submitted</b>	<b>OTE provided</b>	<b>Final Argument</b>
GML 55 and Mountain Métis	A83829	A85593	A85603	A88353

For all oral portions of its hearing, the Board provided an audio broadcast, as well as transcripts of its proceedings, so that interested parties who were not in attendance could be aware of what was occurring during the hearing. The Board also offered remote participation in an effort to make the hearing as accessible as possible.

Given the comprehensiveness of the Board’s process, the Board’s technical expertise and its broad remedial powers that are generally not within the purview of other government departments, it was important that concerns related to the Project be brought to the Board’s attention through consultation with the Applicant and participation in the hearing process.

## **6.4 NGTL’s Assessment of Potential Impacts of the Project on Aboriginal Groups**

### **6.4.1 Provincial Crown Land**

NGTL submitted that its understanding of baseline traditional land and resource use (TLRU) conditions was developed from a high level review of publically available sources, results from the Aboriginal engagement program, and past project experience. NGTL further stated that potential effects on TLRU activities commonly understood to be practiced by Aboriginal groups in the region have been reviewed in consideration of the extent and location of Project abandonment activities and the results of linked valued components.

NGTL stated that most physical abandonment activities will occur over the course of one to two weeks and will be undertaken within the existing right-of-way (RoW) and facility site boundaries. NGTL further stated that of the 77 sites where physical abandonment activities are planned, 42 are located on Crown land. Highly localized and temporary access management for TLRU activities at these sites may occur during abandonment activities. NGTL added that

physical abandonment activities at Four Mile Creek will occur over a period of multiple months so access to this area for TLRU activities may be managed for a greater period of time than at other Project sites.

NGTL stated that given the relatively limited and localized disturbance required for removal of existing facilities, it is expected that any effects on current use of land or resources for traditional purposes will be temporary and reversible, and where above ground facilities are removed and the Project Disturbance Areas (PDA) are reclaimed, there is a potential for positive effects, such as an increase in available resources for traditional uses.

NGTL indicated that based on its assessment of the information provided by GML 55 and Mountain Métis through their OTE and written evidence, it identified no findings requiring mitigation measures beyond those provided in the Environmental and Socio-Economic Assessment (ESA) and the Project-specific Environmental Protection Plan (EPP). NGTL committed to working with traditional land users, as appropriate, to ensure safe access through the area while work is underway, and access management will be removed once abandonment is complete. NGTL further committed to provide Aboriginal groups with the proposed physical abandonment schedule and maps.

NGTL stated that if TLRU sites are identified during Project abandonment activities, the Traditional Land Use Sites Discovery Contingency Plan will be implemented. NGTL committed to remain available to engage with the identified Aboriginal communities and organizations about the Project, if any issues or concerns arise during all phases of the Project.

#### **6.4.2 Sturgeon Lake Cree Nation Reserve Lands**

NGTL stated that SLCN is in support of the proposed plan to remove approximately 9 km of the PRML that passes through the SLCN Reserve Lands No. 154 and 154a, including the pipeline removal at Woodpecker Creek.

NGTL noted that the decision to remove the pipe from the SLCN Reserve was based on a number of factors. NGTL submitted that these factors included obligations established by the Government of Canada in the federal permit issued for the RoW on the SLCN Reserve, engagement with SLCN, and consideration of the unique status of reserve land, which limits the amount of land available for future development.

NGTL submitted that SLCN participated in biophysical surveys and conducted a site assessment for the Project. NGTL further submitted that it conducted an open house for the Project on the SLCN Reserve where residents had an opportunity to review maps showing the PRML pipeline and discuss the Project with Project team members. Through these activities, NGTL indicated that the RoW is used by SLCN for hunting, plant gathering and trapping and SLCN members use the RoW as a trail in some areas. NGTL stated that along most of the RoW on SLCN Reserve lands, vegetation has regrown and provides habitat for wildlife.

NGTL submitted that hunting, plant gathering, trapping and travel by SLCN in the Project area on SLCN Reserve Lands have the potential to be affected during pipeline removal, which is anticipated to last three months. NGTL noted that pipe removal will involve similar activities to



typical pipeline construction, including: surveying, vegetation clearing, soil salvage and stockpiling, trenching, pipe removal, backfilling, and clean-up and reclamation. NGTL indicated that this activity may affect access to the land and temporarily reduce the abundance of wildlife for harvesting due to wildlife movement restrictions and sensory disturbance associated with the Project. NGTL stated that these effects would be temporary and reversible once abandonment is complete and reclamation activities will encourage re-establishment of vegetation and wildlife habitat, resulting eventually in the RoW becoming suitable again for harvesting activities. NGTL further stated that SLCN has indicated there are no adverse effects to SLCN's sites of interest as a result of the proposed Project and there were no concerns raised by SLCN members in relation to the Project.

NGTL committed that pipeline removal and reclamation activities on SLCN Reserve Lands will be undertaken alongside continued engagement with the SLCN. As part of the clean-up and reclamation for the Project, NGTL further committed that the pipeline removal sites will be re-contoured and reclaimed in accordance with the Reclamation Plan for the proposed Peace River Mainline Abandonment Project SLCN Reserve, which will be developed with SLCN.

## **6.5 Issues and Concerns Raised by GML 55 and Mountain Métis**

GML 55 and Mountain Métis provided information through their OTE and written evidence submissions expressing concerns regarding the Project. In their letter dated 3 November 2017, GML 55 and Mountain Métis advised the Board that they have resolved with NGTL issues related to the Project. In their letter dated 7 November 2017, they indicated that they place general importance on all of the draft potential conditions the Board proposed for the Project, and specific importance on specific conditions, now numbered Condition 8 (*Aboriginal Engagement Reports*), Condition 9 (*Plan for Aboriginal Participation in Monitoring of Physical Abandonment Activities*), Condition 11 (*Reclamation and Reclamation Monitoring Plan*) and Condition 16 (*Abandoned Pipeline Monitoring Plan*) regarding their specific involvement with the Proponent.

In their final argument, GML 55 and Mountain Métis clarified that they withdrew from their participation in the hearing as a result of receiving the Draft Potential Conditions, understanding that the conditions would hold NGTL accountable if abandonment in place were to be approved by the NEB. GML 55 and Mountain Métis stated that these conditions must be met to adequately meet the minimum standard of checks and balances necessary, if and only if the abandonment in place is approved. However, they also reiterated concerns raised in their written submissions and OTE and stated that they have significant connections to these lands, which they rely heavily on physically, culturally and generationally, and the only appropriate action to reclamation and to allow for restoration of the integrity and health of the environment and the safety of the public is to remove the pipeline from the ground.

A summary of GML 55 and Mountain Métis' concerns expressed regarding the Project are provided below. A summary of GML 55 and Mountain Métis' concerns regarding the environment, including potential effects of abandonment in place, and reclamation methodology and monitoring measures, are provided in Chapter 7, Environment and Socio-Economic Matters.

### **6.5.1 NGTL's Consultation with Aboriginal Groups**

GML 55 and Mountain Métis stated that NGTL did not consult at the rights-bearing community level from the onset of the Project and NGTL's engagement was insufficient compared to consultation and engagement with the other 23 Aboriginal groups potentially affected by the Project. They noted that although NGTL undertook consultation with Métis peoples involved with the Métis Nation of Alberta and Métis Nation of Alberta – Region 6, GML 55 and Mountain Métis members were excluded from this process and were not provided with any information about the Project.

### **6.5.2 Capacity Funding and Timing Constraints**

GML 55 and Mountain Métis stated that NGTL's engagement exclusion meant that significant information was not available in the same capacity to their members, and therefore meant that they did not have the same amount of time and details to fully consider what the implications of this pipeline and any further projects associated, including abandonment, might mean for their community. They submitted that they not only lost opportunities to collect information through interviews in the same capacity as those conducted many months ahead of NGTL's filing an application with the NEB, but there have been deaths and changes in health conditions of Elders in the community. GML 55 and Mountain Métis noted that this gap of time one to two years was a significant time deficiency for any research that should have been conducted.

GML 55 stated that on two occasions they requested a commitment from NGTL to support work that would enable NGTL to understand potential Project-related impacts but both requests were denied. GML 55 and Mountain Métis explained that because there has been no consultation by the proponent with the Mountain Métis, a portion of the NEB's PFP was used to carry out a Traditional Land Use (TLU) study. In GML 55's case, their own funding was used to compile a desktop TLU study.

### **6.5.3 Project Monitoring by Aboriginal Groups**

GML 55 and Mountain Métis stated that its community members and Elders expressed an interest in participating in abandonment and post-abandonment monitoring work. They indicated that NGTL should develop its monitoring program for vegetation in consultation with local Aboriginal land users, that Aboriginal monitors be included in monitoring post-abandonment impacts to wildlife, and that Aboriginal Environmental Inspectors oversee abandonment activities.

## **6.6 Impacts to Traditional Land Use**

### **6.6.1 Pipeline Removal**

GML 55 and Mountain Métis stated that their community members practice traditional land activities in the Project area, including hunting, harvesting, fishing, trapping and ceremonial practices. They indicated concern that the physical abandonment activities would cause negative

impacts to wildlife habitat due to soil contamination and mixing, displace ungulate species along the RoW, and destroy traditional medicines within the Project footprint.

### **6.6.2 Abandonment In Place**

GML 55 and Mountain Métis stated that they oppose abandonment in place as being the most appropriate method of protection. GML 55 and Mountain Métis expressed concerns that abandoning the pipeline in place will exacerbate the pre-existing damage to members' hunting, gathering, harvesting, fishing and other traditional activities which are critical to their traditional lifestyles. They further expressed concern that the cumulative impact of industrial developments will be exacerbated by abandoning a pipeline in the area. They explained that leaving the pipeline in the ground is of concern to both communities and that if the pipeline is removed, the earth will eventually be able to heal itself in the future, whereas the potential impacts of leaving the pipeline are sufficient to cause significant concern.

A summary of NGTL's reply and the views of the Board on these matters is provided in Chapter 7, Environment and Socio-Economic Matters.

## **6.7 Social and Cultural Well-Being**

In their OTE, GML 55 and Mountain Métis expressed concern with respect to the potential impacts to community well-being including the transmission of knowledge between generations related to use of the land, and changes to the use and understanding of its unique Cree language due to changes in the harvesting practices based on the health of the landscape.

## **6.8 NGTL's Reply to Issues and Concerns Raised by GML 55 and Mountain Métis**

### **6.8.1 NGTL's Consultation with Aboriginal Groups**

NGTL acknowledged that neither GML 55 nor Mountain Métis were initially identified as being affected by the Project and explained that its research and experience with GML 55 and Mountain Métis on other recent NGTL projects indicated that the Project was not within either group's traditional territory. NGTL stated that it collaborated with the Métis Nation of Alberta and the Métis Nation of Alberta – Region 6 to identify the potentially affected Métis communities in proximity to the proposed Project and neither GML 55 nor Mountain Métis were identified as being potentially affected or as having a potential interest in the Project prior to filing the Application.

NGTL stated that it engaged with GML 55 and Mountain Métis primarily through the regulatory process, and believes that these engagement activities have provided sufficient opportunities for GML 55 and Mountain Métis to gain understanding of the Project and communicate possible issues or concerns to NGTL. NGTL further stated that since receiving GML 55 and Mountain Métis' ATP in the hearing process, NGTL has pursued discussions with both groups to better understand the boundaries of their traditional territory.

NGTL stated that it met with GML 55 on 8 September 2017 to discuss GML 55's territory, the engagement process, as well as other projects. NGTL indicated that GML 55 noted that their traditional territory map is continually being updated and was unable to provide a current map showing the overlap of their traditional territory with the Project. NGTL noted that both NGTL and GML 55 confirmed interest in working together to determine an agreed upon understanding of how GML 55 will be engaged on NGTL projects and to maintain a positive relationship going forward.

NGTL noted that on 11 October 2017 NGTL and Mountain Métis discussed a territory map provided by Mountain Métis to better understand the area of interest identified by Mountain Métis. NGTL stated that it explained its process of working with the Métis Nation of Alberta to identify potentially affected Métis Regions and Locals to be engaged for a project. NGTL committed to continue to work towards a better understanding of how Mountain Métis will be engaged on NGTL projects in the future.

### **6.8.2 Capacity Funding and Timing Constraints**

NGTL stated that given the relatively limited and localized disturbance required for removal of existing facilities, it is expected that any effects on current use of land or resources for traditional purposes will be temporary and reversible, and where above ground facilities are removed and the PDAs are reclaimed, there is a potential for positive effects, such as an increase in available resources for traditional uses. NGTL further stated that based on its research and experience with GML 55 on other recent NGTL projects it was not aware of any evidence of specific GML 55 current TLU sites or activities in the Project area. As a result, NGTL was of the view there is limited potential for Project-related effects on traditional uses by GML 55.

### **6.8.3 Project Monitoring by Aboriginal Groups**

NGTL submitted that, upon request, it will provide Aboriginal groups with a copy of NGTL's reclamation monitoring methodology, which is based on NGTL's post-construction monitoring methodology. NGTL committed to incorporate feedback received into the methodology as appropriate. In addition, NGTL committed to provide copies of the results of its reclamation monitoring program for the Project to Aboriginal groups, upon request. NGTL stated that Aboriginal groups will have an opportunity to provide feedback post-abandonment through ongoing engagement with Regional Liaisons and NGTL's Public Awareness Program. NGTL noted that it will continue to respond to any Aboriginal group concerns post-abandonment, and address potential issues on a case-by-case basis.

### **6.8.4 Impacts to Traditional Land and Resource Use**

In its Reply Evidence, NGTL stated that GML 55 and Mountain Métis' provided information about the communities' traditional land and resource use through their OTE and written evidence in the public hearing process. NGTL further stated that it reviewed and considered this evidence and based on its assessment concluded that no findings requiring mitigation measures beyond those provided in the ESA and the Project-specific EPP have been identified.

NGTL submitted that it is unlikely that effects of abandonment in place of the PRML pipeline could affect TLRU.

### **6.8.5 Social and Cultural Well-Being**

NGTL stated that it reviewed and considered the evidence provided by GML 55 and Mountain Métis with respect to the potential impacts to community well-being including the transmission of knowledge between generations related to use of the land. It further stated that based on its assessment, no findings requiring mitigation measures beyond those provided in the ESA and the Project-specific EPP have been identified. NGTL committed to continue to document concerns expressed regarding potential impacts to community well-being as they are made available, and through its Aboriginal Engagement Program, will seek to understand and address these concerns.

## **6.9 Views of the Board**

### **6.9.1 NGTL's Consultation with Aboriginal Groups**

In addition to providing technical information addressing Project-related impacts on, among other things, fisheries, wildlife, vegetation, and heritage resources, NGTL was required to make all reasonable efforts to consult with potentially affected Aboriginal groups and to provide information about those consultations to the Board. This included evidence on the nature of the interests potentially affected, the concerns that were raised and the manner and degree to which those concerns have been addressed. NGTL was expected to report to the Board on all concerns that were expressed to it by Aboriginal groups, even if it was unable or unwilling to address those concerns. Therefore, even if an Aboriginal group chose not to participate in the subsequent hearing process, any concerns could be brought to the attention of the Board through the applicant's evidence.

This early consultation was guided by the Board's Filing Manual Requirements. The requirements reflect the fact that an applicant is often in the best position to respond to the concerns of Aboriginal groups about a project before an application is filed and while a project is still in the early stages of development. The Board expects an applicant to design and implement its consultation activities with regard to the nature and magnitude of a project's potential impacts both from early in the design phase and into the Abandoned Pipeline Monitoring phase of the Project. Where there is a greater risk of more serious impacts on Aboriginal interests including rights (which would, in part, depend on the nature of that interest), the Board has greater expectations in terms of the applicant's consultation with the potentially impacted Aboriginal group. In contrast, where there is a remote possibility of an impact on Aboriginal interests, or the impacts are minor in nature, the applicant's consultation will generally not be expected to be as extensive.

A company's early consultation with Aboriginal groups is a critical part of the development of a proposed project, and a key matter for consideration within the regulatory review process. Timely, accessible and inclusive consultation facilitates the effective exchange of information, and provides opportunities for the company to learn about the concerns of potentially affected Aboriginal groups, to discuss how those concerns can be addressed through project design and

operational considerations, and to develop and discuss measures to reduce and mitigate the effects a project may have on the interests of Aboriginal groups. Timely and effective consultation can help establish productive relationships that can carry on throughout the life of the project. It also informs the Board of the concerns Aboriginal groups may have about a project's impacts.

In assessing the consultation undertaken by NGTL with Aboriginal groups, the Board evaluated the design and implementation of NGTL's consultation activities. The Board reviewed the company's activities to engage Aboriginal groups and to learn about their concerns and interests, as well as the concerns and views expressed by Aboriginal groups. It also considered how Aboriginal groups responded to opportunities for consultation and how NGTL sought to understand and address the concerns of potentially affected groups. The Board considered how this input influenced the Project's proposed design and operation.

NGTL began consulting with Aboriginal groups it identified as being potentially impacted by the Project in August 2015, and commenced consultation activities with additional groups identified by the Board in December 2016.

The Board notes NGTL provided Project information to all potentially-impacted Aboriginal groups, which included information about the project design, environmental, social and economic effects, including potential economic development opportunities such as contracting and employment. The Board is of the view that potentially affected Aboriginal groups were appropriately identified, given the information available at the time, and provided information about the Project.

Having assessed all of the evidence, the Board is of the view that NGTL has designed and implemented appropriate and effective consultation activities that meet the requirements and expectations set out in the Board's Filing Manual. Further, the Board finds that with NGTL's commitments and the Board's **Condition 8 (*Aboriginal Engagement Reports*)**, **Condition 9 (*Plan for Aboriginal Participation in Monitoring of Physical Abandonment Activities*)**, **Condition 11 (*Reclamation and Reclamation Monitoring Plan*)** and **Condition 16 (*Abandoned Pipeline Monitoring Plan*)**, NGTL will continue to consult with Aboriginal groups to learn more about their interests and concerns, and to address issues that they may raise throughout the Physical Abandonment Activities, Reclamation Monitoring and Abandoned Pipeline Monitoring stages.

## **6.9.2 Capacity Funding and Timing Constraints**

The Board notes that the NEB Filing Manual requires companies to describe how lands and resources in the study area are currently used by Aboriginal persons or groups for traditional purposes, including the spatial and temporal extent of use and how a project could impact this use. Companies are also required to describe the measures that would be taken to mitigate a project's impacts on the current use of lands and resources for traditional purposes by Aboriginal peoples. However, the NEB Filing Manual does not direct companies with respect to any specific methods of data collection and analysis, such as a TLU study. The Board has broad expectations of companies to engage with Aboriginal communities regarding the potential impacts of a project, including impacts respecting their ability to carry out traditional activities.

Consultation needs to occur early in the planning stages of a project and continue throughout the lifecycle of a project. The Board views consultation as an iterative and ongoing process of discussion and dialogue. Information about a project is necessarily refined as project planning progresses, including in response to information provided by Aboriginal groups through consultation. As the regulator of a project throughout its lifecycle, the Board also has a number of processes and tools at its disposal to execute its oversight of a project, including ensuring compliance with any conditions imposed by the Board and requirements that form part of the regulatory framework.

The Board acknowledges that GML 55 and Mountain Métis were not initially identified as being affected by the Project. The Board notes that when determining which Aboriginal groups may be potentially affected by a Project it uses publically available traditional territory information, none of which indicated that the Project was not within either group's traditional territory. Regarding NGTL's consultation with GML 55 and Mountain Métis, the Board notes that since receiving GML 55 and Mountain Métis' Application to Participate in the hearing process, NGTL met with both groups to better understand the boundaries of their traditional territory and determine a mutual understanding of how each group would like to be engaged on NGTL projects going forward. The Board regards proponents' relationships with Aboriginal groups as a valuable mechanism to gather traditional knowledge, and to identify site-specific and general concerns about projects.

With respect to NGTL's consultation with GML 55 and Mountain Métis, the Board finds that NGTL met the Board's expectations, including those set out in the Board's Filing Manual. The Board notes that GML 55 and Mountain Métis were provided the opportunity to make their views and concerns about the Project, including what effects it might have on their potential or established interests, known to both NGTL and the Board.

The Board is appreciative of GML 55 and Mountain Métis' participation in the Peace River Mainline Abandonment hearing. The Board notes that by sharing their local, traditional, and cultural knowledge during OTE and written submissions they provided important context and information.

The Board notes NGTL's commitment to work with Aboriginal groups, including GML 55, Mountain Métis and SLCN, to address Project-related concerns and finalize measures to address the Project's effects. The Board expects companies to continue to learn about the concerns that groups may have about a project, and to discuss ways to address those concerns to the extent possible. The Board also encourages Aboriginal groups with an interest in the Project to continue to engage with NGTL.

### **6.9.3 Project Monitoring by Aboriginal Groups**

The Board notes the value and unique perspective that Aboriginal groups can provide in determining mitigation measure effectiveness, partly based on their traditional knowledge. Therefore, the Board imposes **Condition 9 (*Plan for Aboriginal Participation in Monitoring of Physical Abandonment Activities*)** requiring NGTL to file an Aboriginal Monitoring Plan during the Physical Abandonment Activities of the Project. The Board also imposes **Condition 11 (*Reclamation and Reclamation Monitoring Plan*)** and **Condition 16 (*Abandoned Pipeline*)**

**Monitoring Plan)** requiring NGTL to provide a description and justification for how it has incorporated the results of its consultation with relevant Aboriginal groups, including any recommendations from those consulted, into its development of the Reclamation and Reclamation Monitoring Plan and Abandoned Pipeline Monitoring Plan. Further discussion regarding the Reclamation Monitoring and Abandoned Pipeline Monitoring plans are provided in Chapter 7, Environment and Socio-Economic Matters.

NGTL's final design of its abandonment plan is, in the Board's view, an iterative process. Should the Project proceed, NGTL would be required to continue its consultation with potentially affected Aboriginal groups, and to finalize the development of its plans and measures to reduce and mitigate the potential effects and to protect the environment and the resources that are of importance to and utilized by Aboriginal groups. As noted above, the Board recommends a number of conditions requiring NGTL to report to the Board on its consultation with Aboriginal groups.

#### **6.9.4 Impacts to Traditional Land Use from Pipeline Removal**

In assessing potential impacts on Aboriginal interests, the Board considered all of the evidence provided, attributing the appropriate weight as appropriate, further to the procedural ruling described above. The Board assessed how NGTL identified and evaluated the potential impacts on the interests, including the rights, of Aboriginal groups, the concerns raised by Aboriginal groups, and the measures NGTL has proposed to minimize or eliminate the Project's potential impacts on the interests of Aboriginal groups.

Through the assessment process, Aboriginal groups had the opportunity to make known to NGTL and the Board their views and concerns about the Project, including what effects it might have on their potential or established interests. GML 55 and Mountain Métis expressed their views and concerns about how the Project might affect their Aboriginal and treaty rights relating to hunting, trapping, fishing, harvesting of plant resources for sustenance and medicines, and the maintenance of cultural practices and livelihoods within their traditional territories. The Board acknowledges the importance that Aboriginal groups place on being able to exercise their Aboriginal and treaty rights, and continue their traditional activities, uses and practices within the entire area of their traditional territories, including access to resources and areas and sites of cultural importance and significance.

NGTL outlined its approach for assessing the potential impacts on the rights and interests of Aboriginal groups. Its approach relied on an assessment of effects on biophysical and human environments. NGTL's assessment also incorporated information obtained by collection of Traditional Ecological Knowledge within SLCN Reserve Lands and from a high level review of publically available sources, results from the Aboriginal engagement program, and past project experience.

The Board notes that NGTL also reviewed and responded to information provided through the public hearing process, including GML 55 and Mountain Métis' OTE, GML 55's TLU Desktop Study and Mountain Métis' Traditional Knowledge and Use Study. The Board notes that GML 55 and Mountain Métis placed importance on the Board's draft potential conditions,



which were considerably similar to the conditions imposed in the attached order, and in fact withdrew from the proceedings after reviewing the draft potential conditions.

The Board considered the evidence provided by NGTL, GML 55 and Mountain Métis about the nature and extent of the activities, uses, and practices that are carried out by Aboriginal groups in the Project area. The Board acknowledges the concerns raised by GML 55 and Mountain Métis that their traditional harvesting (hunting, fishing and plant harvesting for foods and medicines) has been disrupted by industrial development in the region and that abandonment in place of the pipeline will exacerbate the pre-existing damage to these activities. GML 55 and Mountain Métis Elders and members provided context through their OTE. The Board considered the potential impacts on those activities, uses and practices. The Board also considered all the measures committed to by NGTL to minimize such impacts.

As outlined in this Chapter, as well as Chapter 7 of this Decision, NGTL has described its specific and broad mitigation measures that would be implemented to address potential effects on biophysical elements, including fish and fish habitat, wildlife, vegetation, and water quality and quantity, as well as measures to address specifically the potential effects on traditional use and socio-economic components, including cultural heritage resources. NGTL submitted that given the relatively limited and localized disturbance required for removal of existing facilities, it is expected that any effects on current use of land or resources for traditional purposes will be temporary and reversible in nature.

The Board has assessed the information provided above, as well as that provided in this Decision as a whole, and finds that NGTL’s proposed mitigation will result in limited potential environment effects and impacts on the use of lands and resources for traditional purposes.

Viewing all of these reasons together, and as the Board has concluded within other chapters of this Decision, the Board is satisfied that with NGTL’s commitments and proposed mitigation measures, and the Board’s conditions, the effects on the interests of potentially affected Aboriginal groups can be effectively minimized. The Board notes that the Project will occur predominantly on previously disturbed land within NGTL’s existing RoW and that there will be temporary and localized interruptions to the access and use of the Project RoW during Physical Abandonment Activities. Subsequent to Physical Abandonment Activities, short-term and localized interruptions may occur for reclamation, monitoring and remedial activities. As shown in the table below, the Board finds that effects of the Project on traditional land and resource use will therefore be short-term to medium term in duration and reversible. Given all of the above, in the Board’s view, the potential adverse effects of the Project on the current use of lands and resources for traditional purposes by Aboriginal persons are not likely to be significant.

<b>Evaluation of Significance of Residual Effects</b>	<b>Abandonment Method</b>	<b>Temporal Extent</b>	<b>Reversibility</b>	<b>Geographical Extent</b>	<b>Magnitude</b>
	Removal	Short- to medium-term	Reversible	Local	Low to moderate
<b>Adverse Effect</b>					
Not likely to cause significant adverse environmental effect					

### 6.9.5 Social and Cultural Well-Being

The Board acknowledges GML 55 and Mountain Métis' concerns regarding impacts to its community wellbeing with respect to the transmission of knowledge between generations, and changes to the use and understanding of its Indigenous language due to changes in traditional land and resource use activities and associated resources. The Board is of the view that the concerns raised by the GML 55 and Mountain Métis can be mitigated through the use of standard mitigation presented in NGTL's Application, including its EPP. The Board notes that with **Condition 8 (Aboriginal Engagement Reports)** NGTL will continue to consult with Aboriginal groups to learn more about their interests and concerns, and to address issues that they may raise throughout the lifecycle of the Project.

### 6.9.6 Subsection 35(1), Constitution Act, 1982

The Government of Canada has indicated that it will rely on the Board's process to the extent possible to discharge the Crown's duty to consult. In particular, the EAE letters sent on 22 November 2017 to the 23 potentially affected Aboriginal groups advised that, with respect to Aboriginal consultation for the Project, the Crown is relying on the NEB process to the extent possible. The Crown encouraged all Aboriginal groups whose established or potential Aboriginal or treaty rights could be affected by the Project to apply to participate in the Board's process. In *Clyde River (Hamlet) v. Petroleum Geo-Services Inc.*, 2017 SCC 40, and *Chippewas of the Thames First Nation v. Enbridge Pipelines Inc.*, 2017 SCC 41, the Supreme Court of Canada acknowledged that the Board has the procedural powers to implement consultation and the remedial powers to impose and enforce accommodation measures as well as the requisite technical expertise. The Supreme Court also acknowledged the Crown's ability to rely on the Board's regulatory assessment process to fulfill its duty to consult. The Board is the final decision-maker in relation to the application for leave to abandon the Peace River Mainline pursuant to subsection 74(1)(d) of the NEB Act.

Administrative tribunals play an essential role in the execution of the federal or provincial constitutional powers. Through their legislative mandates, they are charged with performing duties and exercising the powers that fall within the executive branch of government. Administrative tribunals such as the Board must perform those duties and exercise those powers, not only in accordance with their legislative mandates, but also in accordance with section 35 of the *Constitution Act*, 1982 and other applicable laws.

The NEB Act provides the Board with broad powers and expansive remedial authority to deal with the impacts of federally-regulated pipeline projects. The Board is the federal statutory body that has the most direct involvement in the assessment of applications to construct and operate interprovincial and international pipelines. The Board also has the technical expertise and the regulatory experience to understand a project, the likelihood of effects and the measures that can be implemented to minimize effects. In addition, the Board has the authority to elicit commitments from the proponent, impose conditions on an approval and ensure ongoing regulatory oversight of a project and a proponent's compliance. The Board also has been given the statutory mandate to impose and enforce mitigation measures to reduce negative project effects and hold a proponent to the commitments made in the Board's project assessment process to enhance benefits.

The framework within which the Board operates and decisions under the NEB Act are made, which includes the requirement that a project assessment process be conducted in a procedurally fair manner, can provide a practical, effective and efficient way within which an Aboriginal group can request and receive meaningful assurances from the proponent or the Board about project-related effects on Aboriginal interests, including rights. Hearing directly and indirectly about an Aboriginal group's concerns about project-related impacts on its interests allows the Board to impose measures to mitigate the impacts and balance, as appropriate, any residual effects with the other societal interests at play when assessing a project. As a result, decisions on pipeline projects can be made in a constitutionally-appropriate manner consistent with the honour of the Crown.

It should be understood that the Board's consideration of what is required in terms of consultation with Aboriginal groups is a fluid process as more information is obtained and assessed in the Board's proceeding. There are several points in a Board proceeding where the existence and extent of an Aboriginal interest and the potential impact on that interest will be considered with a view to determining the procedural opportunities that must be provided and the substantive outcomes that are warranted. For example, such factors may be considered when:

- the proponent determines who may be impacted by its proposed project;
- the Board decides who to send notices to;
- the Board considers the type of Board process that should be employed;
- the Board decides who should be allowed to participate in the proceeding and to what extent;
- the Board assesses the level of consultation expected of the proponent and any others who may have authority to deal with an issue;
- the Board considers the amount of information required from the proponent regarding potential impacts and proposed mitigation measures;
- the Board considers the amount of information required from Aboriginal participants;
- the Board determines what conditions would need to be imposed; and
- the Board determines whether the authorization should be issued.

The Board's process is designed to be thorough and accessible to Aboriginal groups so that they may make their concerns known to the Board and have those concerns addressed as appropriate. In addition to the mandated one-on-one consultation that is to occur between an applicant and potentially impacted Aboriginal groups (described in Section 6.2), it should be understood that the Board's hearing process itself (described in Section 6.3), including these reasons for decision, is part of the overall consultative process.

In this Application, while much of the early consultation was performed by NGTL, the Board's process acted as a necessary and important check on that consultation and gave Aboriginal groups an additional avenue to explain their concerns about the Project and have those concerns considered by the Board. The Board is of the view that the Board process was appropriate in these circumstances.

The Board has considered the information submitted regarding the nature of potentially affected Aboriginal groups' interests in the Project area, including information on constitutionally protected Aboriginal and treaty rights. The Board has also considered the anticipated effects of the Project on those interests and the concerns expressed by Aboriginal groups, as discussed in this chapter and this Decision, in this regard. In light of the nature of the interests and the anticipated effects, the Board has evaluated the consultation undertaken with respect to this Project, including the mandated consultation performed by NGTL and the consultation undertaken through the Board's project assessment process. The Board has also considered the mitigation measures proposed to address the various concerns and potential effects. Having assessed all of the evidence, the Board is of the view that there has been adequate consultation and accommodation for the purpose of the Board's decision on this Project. The Board is also of the view that any potential adverse Project impacts on the interests, including rights, of affected Aboriginal groups are not likely to be significant and can be effectively addressed.

As a result of the above, considering all of the findings in this Decision, the Board is of the view that the requirements of section 35 of the *Constitution Act*, 1982 have been met, such that an approval of this Project is in keeping with the honour of the Crown.

## Chapter 7

# Environment and Socio-Economic Matters

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The Board considers environmental protection as part of its broader mandate under the NEB Act. When making its decision, the Board is responsible for assessing the environmental and socio-economic effects of the Project throughout the life of the Project. This chapter represents the NEB's environmental assessment (EA).

The EA includes consideration of potential socio-economic effects that are caused by changes to the environment. Other socio-economic effects arising directly from the Project itself are discussed in Chapter 4, Land Matters, Chapter 5, Public Consultation, and Chapter 8, Infrastructure, Employment and Economy. Matters related to Aboriginal peoples are discussed in Chapter 6, Aboriginal Matters.

### 7.1 The Canadian Environmental Assessment Act 2012 Context

The Project is not subject to the requirement of an environmental assessment under the *Canadian Environmental Assessment Act 2012* (CEAA), as it is not a designated project under that Act. However, in conducting its assessment of the Project, the Board considered subsection 67(a) of CEAA 2012, since the Project is carried out on federal lands. In particular, NGTL proposed to abandon by removal of approximately 9 km of the Peace River Mainline Pipeline (PRML) within Sturgeon Lake Cree Nation's (SLCN) Reserve Land. The Board has concluded that, pursuant to subsection 67(a) of CEAA 2012, carrying out this Project on these federal lands is not likely to cause significant adverse environmental effects.

### 7.2 The NEB's EA Methodology

In assessing the environmental and socio-economic effects of the Project, the NEB used an issue-based approach as described in the NEB's Filing Manual for applicants.

The NEB has conducted separate effects assessments for the abandonment by pipeline removal method (Section 7.6) and the abandonment in place method (Section 7.7) for the proposed Project. Assessment of the abandonment by pipeline removal method (Section 7.6) also includes assessment of any physical activities required to prepare the remaining pipeline for abandonment in place (e.g., pipe isolation, pipe segmentation) and remedial actions that may be required in the future to address residual effects of the pipeline remaining in place. Section 7.7 focuses on the residual effects of the pipe remaining in place.

The decision to separate the discussion of the two abandonment methods in this manner is due to the similarity in physical activities required for pipeline removal, preparation for abandonment in place and any future required remediation. In addition, the differences in interactions between the environment and the Project activities, and the predicted effects, for pipe removal and abandonment in place were also considered in the decision to separate the two abandonment methods. The Project components (Section 7.4) and environmental setting (Section 7.5) for the proposed Project are described for the Project as a whole, with any specific information for either lands where the pipe will be removed or abandoned in place clearly identified.

The environmental issues and concerns raised by Participants in the hearing are outlined in Section 7.3, and were considered by the Board when conducting its EA.

Each effects assessment begins with a list of Project-environment interactions that are expected to occur based on the proposed Project components and environmental setting descriptions provided in Sections 7.4 and 7.5 respectively. Any resulting potential adverse effects from these interactions are also provided. If there were no expected Project-environment interactions or interactions resulting in neutral effects, then no further examination was deemed necessary.

The NEB assessed the potential adverse environmental and socio-economic effects, as well as the adequacy of NGTL's proposed environmental protection strategies and mitigation measures for each of the abandonment methods (Sections 7.6 and 7.7). Section 7.6.2.1 discusses the extent to which standard mitigation is relied on to mitigate potential adverse effects. In Sections 7.6.2.3, 7.6.2.4 and 7.7.2, the NEB provides detailed analysis for issues that are of public concern or of environmental consequence. For each issue considered in detail, views of the Board are provided and the Board assesses whether further mitigation is recommended by way of condition on any potential project authorization, to ensure any potential environmental and socio-economic effects would not be significant. Where there are any residual effects remaining after proposed mitigation, cumulative effects are considered in the following Section 7.8. The NEB's conclusion on significance is provided in Section 7.9.

### 7.3 Environmental Issues of Public Concern

The NEB received submissions from Participants that raised particular concerns related to environmental issues.

**Table 7-1: Environmental Issues Raised by Participants**

Participant	Environmental Issue(s) Raised
GML 55 & Mountain Métis	<ul style="list-style-type: none"> <li>● Appropriateness of abandonment method</li> <li>● Contamination (soil &amp; water)</li> <li>● Ground subsidence</li> <li>● Soils (handling, compaction &amp; rutting)</li> <li>● Air emissions</li> <li>● Reclamation &amp; Reclamation Monitoring</li> <li>● Effects on wildlife habitat (reclamation)</li> <li>● Rare Plants (surveys)</li> <li>● Effects to traditional land and resource use</li> <li>● Cumulative effects on wildlife, vegetation and waterways</li> </ul>

## 7.4 Project Details

Chapter 1 of this Decision provides a general description of the Project. The following table provides details on Project components and activities relevant to the EA.

**Table 7-2: Project Components and/or Activities**

<b>Project Components and/or Activities</b>
<ul style="list-style-type: none"><li>• The PRML NPS 20 right-of-way (RoW) is 266 km in length and 30 m wide. Approximately 9 km will be abandoned by removing the PRML pipeline, and the remaining 257 km of the PRML pipeline will be abandoned in place.</li><li>• The entire PRML pipeline will be purged of any existing product in the pipeline and then cleaned with mechanical cleaning pigs propelled with compressed nitrogen or air prior to physical abandonment activities for pipeline removal or abandonment in place preparations.</li><li>• NGTL has identified 83 Project Disturbance Areas (PDAs), at which physical disturbance activities are anticipated. Activities at the PDAs include removal of the pipeline and above and below ground facilities, as well as preparing the remaining pipeline to be abandoned in place.</li><li>• All activities will occur within the existing PRML NPS 20 RoW, with the exception of the Four Mile Creek crossing which extends beyond the RoW and the removal of three rectifiers that are located adjacent to township roads and highways outside the RoW.</li><li>• A Phase II Environmental Site Assessment (testing and analysis) will be conducted at the PDAs and pipeline removal site, where required by the results of the Phase I Environmental Site Assessment, at the same time as initial excavations of the sites occur.</li><li>• Physical Abandonment Activities are planned to start during winter/spring 2018 through to summer 2022. Reclamation monitoring of the entire RoW will be conducted until the land reaches a state of equivalent land use. Monitoring of the pipeline abandoned in place for hazards and issues will continue until the pipeline is removed.</li></ul>



## Project Components and/or Activities

### *Abandonment by Removal Method*

Removal of:

- approximately 9 km of pipe on the Sturgeon Lake Cree Nation (SLCN) Reserve Lands, including removal of pipe from Woodpecker Creek;
- approximately 100 m of pipeline, an embankment and two culverts at Four Mile Creek;
- exposed pipeline at an Unnamed Tributary to the Little Smoky River;
- above and below ground facilities along the RoW including block valves, scraper traps, sales taps and side valves and a dry well;
- facilities at the Valleyview compressor station including valves, scraper traps, cables, buildings and foundations;
- facilities at the Trout River sales meter station including piping, pressure monitoring equipment, instrument building, communication equipment and tower; and
- nine cathodic protection facilities from PRML NPS 20, and where the RoW is shared with the operating NPS 30 PRML loop, an additional nine cathodic protection facilities will be disconnected from the PRML NPS 20 pipeline.

The main physical activities associated with the removal of pipeline and facilities include:

- surveying (line of sight clearing, flagging and staking of RoW, workspace, excavation boundaries, utilities and sensitive features);
- clearing of vegetation, topsoil stripping and stockpiling;
- excavation, pipe cutting, capping and pipe or facility removal;
- backfilling of soils and roaching of trench, additional fill will be brought in as required, and compacted with subsoil prior to backfilling top soils;
- contamination testing of removed pipe or facility and disposal; and
- clean up and reclamation of the PDAs.

The PRML pipeline will be isolated from all operating pipelines by removal of associated side valves and sales taps. The operating pipelines will be isolated using welded pressure containing caps or blind flanges, and the PRML will be sealed using non-pressure containing caps or plates.

### **Project Components and/or Activities**

The PRML NPS 20 RoW crosses 79 watercourses, 76 where the pipeline will be abandoned in place, and three where the pipeline will be removed (Woodpecker Creek, Four Mile Creek, and an Unnamed Tributary to Little Smoky River).

The pipeline removal at Four Mile Creek includes the removal of an embankment across the watercourse and removal of two perched watercourses. The removal is planned to be conducted when the watercourse is dry or has minimal flow. If there is flow, an isolation technique will be used. The following activities will be conducted to complete pipeline, embankment and culvert removal:

- pre-construction site preparation (surveying, line of sight clearing, flagging and staking of work areas, existing pipeline, utilities and sensitive habitats);
- constructing access to, and across the watercourse as well as to the soil disposal area (original borrow pit footprint);
- installing erosion and sediment control measures;
- isolating the work site and providing a mechanism to maintain flow (e.g., dam and pump), if present;
- cutting and plating the pipeline mid-slope on both sides of watercourse and removing approximately 100 m of pipe;
- removal of culverts, embankment, and disposal of fill at original borrow pit location;
- culvert disposal at approved location;
- reclamation of the borrow pit site;
- restoration of watercourse slope and bed; revegetation of the valley walls and floodplain; and
- contamination testing on the removed sections of pipe.

## **Project Components and/or Activities**

The pipeline removal at Woodpecker Creek will be completed using a trenchless method with no instream works. The following activities will be conducted to complete the pipeline removal:

- exposure of pipeline through bell hole excavations on either side of creek;
- welding a pull head or end cap onto the ends of the section of pipe to be removed from under the watercourse;
- exertion of tensile or compression forces on the pipe using vibration or hammering effect to free the pipe from the soils; and
- removal of pipe by pulling or pushing the pipe to one side of the watercourse then cut into sections and removed for disposal.

The contingency crossing method for Woodpecker Creek should the trenchless crossing not succeed, is via an open cut method. The activities would be similar to the activities described for the pipe removal at the Unnamed Tributary to Little Smoky River below.

The pipeline removal at the Unnamed Tributary to Little Smoky River will be conducted during winter conditions when the watercourse is frozen, or has limited flow, using an open cut/isolation technique. The following activities will be conducted to complete the pipeline removal:

- constructing access to the site along the RoW from the existing third-party access road;
- excavation of 5 to 10 m of pipe on either side of the watercourse to ensure remaining pipe abandoned in place has appropriate soil cover;
- cutting and removal of exposed pipe section, and installation of plates on the end of the pipes remaining in place;
- backfilling of the excavation;
- restoration of the watercourse bed and banks; and
- testing and disposal of the removed pipe section.

### ***Abandonment In Place Method***

The Project has three sections of pipeline that will be abandoned in place:

- approximately 257 km of PRML NPS 20 pipeline from Meikle River Compressor Station to Valleyview Compressor Station;
- approximately 2 km of Watino Lateral NPS 4 pipeline from Watino Meter Station to Watino Side valve; and
- approximately 0.8 km of Hotchkiss Lateral NPS 4 pipeline from Meikle River Compressor Station to Hotchkiss North Lateral Side Valve.

### **Project Components and/or Activities**

The pipeline under five highway crossings and 11 public and private road crossings will be filled with concrete, filcrete or other material and have the ends plated, separating it from the remainder of the pipeline. The following activities will be conducted to complete the plating and filling of the pipeline under roadways:

- surveying (line of sight clearing, flagging of workspace, excavation boundaries, utilities and sensitive features);
- clearing of vegetation, topsoil stripping and stockpiling;
- excavation of pipe on either side of road;
- welding of plates and valves for the concrete or other filling;
- filling of pipe under roadway with concrete or other material;
- backfilling of soils and roaching of trench, additional fill will be brought in as required, and compacted with subsoil prior to backfilling top soils;
- contamination testing of removed pipe or facility and disposal; and
- clean up and reclamation of the PDAs.

The pipeline will be segmented into 32 sections. The segments will be formed by the cutting and plating of the pipeline at block valve removal sites, pipeline removal sites, and specific road crossing sites that will be plated and filled.

Monitoring of the RoW for issues with vegetation growth, subsidence and conduit effects will be conducted through aerial patrols where the RoW is shared, reclamation monitoring activities and through feedback from stakeholders and Aboriginal Groups.

## **7.5 Environmental Setting**

The following environmental setting applies to the entire proposed Project, unless otherwise indicated. NGTL identified the following three spatial boundaries for use in describing and assessing potential Project effects:

1. Project Disturbance Area (PDA) – defined as the anticipated area of physical disturbance associated with the Project’s physical abandonment activities. Each PDA includes the area of excavation (approximately 10 m by 10 m) and associated workspace for vehicle and equipment movement, soil storage, etc. The average size of the PDAs are approximately 30 m by 50 m, however there are exceptions based on the activities that are required to be done at each particular location. For example, the PDA on SLCN Reserve Lands where the pipeline is to be removed is the width of the RoW (30 m) and 9 km in length.

2. Local Assessment Area (LAA) – defined as the area in which both project-related environmental effects can be predicted or measured with a level of confidence that allows for assessment; and where there is a reasonable expectation that those potential effects in the LAA will be a concern. The LAA encompasses the PDAs.
3. Regional Assessment Area (RAA) – defined as the area that establishes the context for determining significance of Project specific effects. It is also the area within which potential cumulative effects are assessed. The RAA encompasses both the LAA and the PDAs.

#### Land, Human Occupancy and Resource Use

- The proposed Project is located approximately 34 km west of Peace River between the Meikle River and the Valleyview compressor stations, spanning two municipal districts (Municipal District of Greenview and Municipal District of Peace) and three counties in northwestern Alberta (Birch Hills County, County of Northern Lights, and Clear Hills County).
- Approximately 70 km of the proposed Project is located on private land, 189 km is on Crown Lands and approximately 9 km on the SLCN Reserve Lands which are considered federal lands.
- The RoW traverses a combination of cultivated and pasture lands, as well as forest areas. On SLCN Reserve lands, the closest residence is approximately 135 m from the RoW.
- Eight communities are within 15 km of the Project, including the town of Valleyview, the villages of Tangent and Berwyn, the hamlets of Brownvale, Eaglesham, Watino, and Whitelaw, and the community of Calais.
- The Project is located within Treaty 6 and 8 boundaries, and within the Métis Nation of Alberta – Region 6. A portion of the Project crosses SLCN Reserve lands. No Métis settlements governed by the Métis Settlements General Council are traversed by the Project.
- The Project traverses six Wildlife Management Units which accommodate big game and game bird hunting, and two Fur Management Zones used for trapping.
- The PRML RoW crosses the Peace River Wildland Provincial Park in W-02-80-25-W5M between KP117.09 and KP118.85, however, no physical abandonment activities are planned within the Park.
- Industry in the Project area includes oil and gas development, electricity utilities, aggregate development, domestic and industrial waste facilities, agriculture and forestry.
- There are numerous roads within 15 km of the Project, including highways, township and range roads. The Project intersects Highways 2, 43, 49, 676 and 685.

### Soil and Soil Productivity

- PDAs are dominated by soils of the Luvisolic, Solozenetic, and Gleysolic orders.
- The majority of the soil series within the PDAs have a low wind erosion risk.
- The water erosion risk rating ranges from low to moderate based on the typical slope value being less than 5%.
- Topsoil thickness in the PDAs is typically thin with an average thickness of 14.3 cm.
- Soil contamination has been documented or is suspected within the PRML RoW, specifically at block valves and scraper traps, as well as at the Valleyview and Meikle River Compressor Stations.

### Vegetation

- Within the RAA, the Project crosses the Lower Boreal Highlands, Dry Mixedwood, Central Mixedwood and the Peace River Parkland Natural Subregions of Alberta.
- There are no plant species at risk or designated critical habitat for plant species within 50 km of the LAA.
- No historic occurrences of plant species or ecological communities of management concern were identified within 2 km of the proposed PDAs, nor were any incidentally observed during field surveys.
- Upland areas are dominantly vegetated by cultivated crops, and planted non-native grass species for cattle pasture, however approximately 10 PDAs are located within areas that overlap native upland vegetation communities.

#### *Within the SLCN Reserve Lands*

- Approximately 7.7 ha is native upland vegetation cover of broadleaf forest, coniferous forest and grasslands. Areas with human disturbance cover approximately 14.5 ha, including crop, pastures, bare ground, roads, seismic lines and pipeline RoW.

### Wetlands

- There are 23 PDAs that overlap three types of wetlands including shrubby swamp, mixedwood wooded swamp and shrubby fen. Twelve PDAs overlap with shrubby swamp wetlands, nine PDAs overlap with mixedwood wooded swamp and two PDAs overlap with shrubby fens, for a total area of 1.8 ha.

#### *Within the SLCN Reserve Lands*

- Approximately 5.9 ha of the SLCN PDA overlaps four types of wetlands including deciduous swamp, mixedwood wooded swamp, shrubby swamp and wooded bog.

## Wildlife and Wildlife Habitat

- Three PDAs are located within a Key Wildlife Diversity Zone associated with the Peace River and Smoky River, eight PDAs are located within Special Access Zones, nine PDAs are within the Chinchaga Caribou Range, nine PDAs are located within sharp tailed grouse survey area and 19 PDAs are located within a secondary grizzly bear zone.
- Historical records indicated observations of one species at risk, the western toad (*Anaxyrus boreas*) and nine wildlife species of management concern in the LAAs. The wildlife species of management concern are the trumpeter swan (*Cygnus buccinator*), northern harrier (*Circus cyaneus*), American kestrel (*Falco sparverius*), sandhill crane (*Grus canadensis*), great gray owl (*Strix nebulosi*), barn swallow (*Hirundo rustica*), beaver (*Castor canadensis*), grizzly bear (*Ursus arctos*) and moose (*Alces americana*).
- A western toad survey identified western toad presence at six survey sites, and confirmed five breeding wetlands within the LAAs.
- Incidental wildlife observations during other field surveys identified a second species at risk, the common nighthawk (*Chordeiles minor*) and 10 additional species of management concern in the LAAs. These 10 species were green-winged teal (*Anas crecca*), great blue heron (*Ardea herodias*), osprey (*Pandion haliaetus*), sora (*Porzana carolina*), barred owl (*Strix varia*), Western wood-peewee (*Contopus sordidulus*), least flycatcher (*Empidonax minimus*), common yellowthroat (*Geothlypis trichas*), moose (*Alces americanus*), and beaver (*Castor canadensis*).

### *Within the SLCN Reserve Lands*

- Habitat consists of 7.7 ha of broadleaf, coniferous forest and grasslands habitat, and 5.9 ha of wetland communities.

## Fish and Fish Habitat

- The pipe will be removed at the following three watercourse crossings:
  - Four Mile Creek provides poor habitat for spawning, rearing, overwintering and migration of fish. Lake chub (*Couesuis plumbeus*) and pearl dace (*Margariscus margarita*) are historically known to inhabit the watercourse, however no fish were observed during the field assessment. At the crossing location, there are two culverts which are blocked on the upstream side and perched on the downstream side, creating a barrier to fish passage. Four Mile Creek is a Class D watercourse with no restricted activity period.
  - Woodpecker Creek is a series of beaver impoundments which provides poor spawning habitat for gravel spawning species, moderate rearing habitat and moderate to poor overwintering habitat due to low flows and potential low oxygen levels. Woodpecker Creek is a Class C watercourse with a restricted activity period of April 16<sup>th</sup> to July 15<sup>th</sup>.

- Unnamed Tributary to Little Smoky River is a Class D watercourse with no restricted activity period.
- There are no historical records or observations of fish species at risk or fish species of management concern in the LAAs.

### Groundwater

- No springs were identified within the LAAs.
- High yield aquifer areas were located at 10 PDAs (1, 73, 74, 80, 83, 84, 85, 86, 87 and 92) and five areas of artesian flow were identified at PDAs 1, 67a, 68, 69 and 70. Four of the artesian flow areas were identified within low yield aquifers, while PDA 1 had both artesian flow and a high yield aquifer.
- Nineteen shallow registered water wells were identified within 500 m from the centre of PDAs, but greater than 100 m from the pipeline (PDA #9, 10, 11, 12, 13, 45, 46, 67a, 68, 69, 70, 73, 74, 75, 92, 103 and 103a). These wells are used for domestic, stock and other unknown uses. The depths range from 4.9 m to 30.5 m below ground surface. No shallow registered municipal water wells were identified within the LAAs.

### Acoustic Environment

- The majority of PDAs are located in rural settings where the sounds of nature are expected to dominate, subject as well to noise from nearby industrial activity and highways.

### Heritage Resources

- Physical abandonment activities will occur on previously disturbed lands, and no previously recorded archaeological, paleontological, or traditional use sites were identified within the PDAs.

### Traditional Land and Resource Use

- NGTL stated that, through past project experience and Aboriginal engagement conducted for the Project, Aboriginal people engage in traditional land and resource use activities and practices on Crown land throughout the region and that hunting, trapping, fishing, plant gathering, use of trails and travel ways, habitation areas, and cultural and spiritual sites are likely to take place in proximity to the Project. Some portions of the RoW may be used for travel by Aboriginal people.
- GML 55 submitted that the Project intersects in whole or in part with an area that GML 55 has identified as traditional territory and that the pipeline RoW is within an area that its members use for traditional purposes such as hunting, gathering, camping, fishing and trapping.
- Mountain Métis submitted that the Project is located within its traditional territory and the exercise of Aboriginal harvesting rights have occurred within the vicinity identified



by NGTL as the Project area, however no significant sites exist within the proposed project disturbance boundary.

- The Project directly intersects SLCN Reserves 154 and 154a where the Project RoW is used by SLCN for hunting, plant gathering and trapping and SLCN members use the RoW as a trail in some areas.

#### Navigation and Navigation Safety

- The PRML NPS 20 RoW crosses navigable waterways, however no physical abandonment activities will be undertaken in or near navigable waterways.

## **7.6 Environmental Effects Analysis of Pipeline Removal**

### **7.6.1 Interactions and Potential Adverse Environmental Effects of Pipeline Removal**

Table 7-3, below, identifies the expected interactions between the Project and the environment, and the potential adverse environmental effects resulting from those interactions. The table identifies interactions and environmental effects based on activities for pipeline removal. These activities are also the same for activities used to prepare the pipeline to be abandoned in place (e.g., valve removal and pipe segmentation), and any remedial activities that may be required should something happen to the pipe abandoned in place in the future (e.g., pipe exposure, ground subsidence). Therefore, the interactions and environmental effects for the activities associated with preparing the pipeline to be abandoned in place, and potential future remedial work are represented within this table.

**Table 7-3: Project-Environment Interactions at Locations with Pipeline and Facilities to be Abandoned by Removal**

	<b>Environmental Element</b>	<b>Description of Interaction (or Why No Interaction is Expected)</b>	<b>Potential Adverse Environmental Effect</b>	<b>Mitigation Discussed in:</b>
Bio-Physical	Physical Environment	<p>Grading and recontouring of site specific sites (e.g., Four Mile Creek borrow pit, Valleyview compressor station).</p> <p>No above ground facilities to remain after abandonment that could be affected by any weather events.</p>	<ul style="list-style-type: none"> <li>▪ Alteration of local topography.</li> <li>▪ Change in localized drainage characteristics.</li> </ul>	Section 7.6.2.1
	Soil and Soil Productivity	<p>Surveying, soil handling during soil stripping, trenching, pipe or facilities removal, backfilling, clean-up and reclamation activities at PDA locations resulting in:</p> <ul style="list-style-type: none"> <li>▪ admixing, compaction and rutting of soils;</li> <li>▪ loss of soil and topsoil;</li> <li>▪ soil contamination from spills during physical abandonment activities; and</li> <li>▪ disturbance and remobilization of historical contamination.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Localized change in soil productivity.</li> <li>▪ Trench subsidence post pipeline removal.</li> </ul>	Section 7.6.2.1, 7.6.2.3
	Vegetation, including Species at Risk	<p>Clearing of vegetation, excavation, backfilling, topsoil replacement and reclamation activities at PDA locations.</p>	<ul style="list-style-type: none"> <li>▪ Temporary and localized reduction in native upland vegetation at PDA sites.</li> <li>▪ Revegetation and long term ingrowth of adjacent natural vegetation (positive effect).</li> </ul>	Section 7.6.2.1

	<b>Environmental Element</b>	<b>Description of Interaction (or Why No Interaction is Expected)</b>	<b>Potential Adverse Environmental Effect</b>	<b>Mitigation Discussed in:</b>
	Water Quality and Quantity	<p>Vegetation clearing, soil stripping, trenching, dewatering, pipe removal, backfilling, and clean-up and reclamation activities at PDA locations including watercourses.</p> <p>Disturbance and remobilization of existing contamination.</p>	<ul style="list-style-type: none"> <li>▪ Change in groundwater quantity in areas of artesian flow or high yield aquifers.</li> <li>▪ Change in local groundwater quality at sites requiring removal of buried facilities.</li> <li>▪ Change in surface water quality, quantity and flow at Four Mile Creek due to removal of embankment and perched culverts.</li> </ul>	Section 7.6.2.1
	Aquatic Species and Habitat	<p>Pipe removal through an open cut method at the Unnamed Tributary to Little Smoky River including vegetation clearing, soil stripping, trenching, pipe removal, backfilling, and bank restoration. May be applicable at Woodpecker Creek if the contingency crossing method (open cut) is required.</p> <p>Access construction, removal of pipe, embankment and perched culvert at Four Mile Creek watercourse crossing.</p>	<ul style="list-style-type: none"> <li>▪ Temporary increase in downstream sediment load.</li> <li>▪ Loss or alteration of riparian vegetation.</li> <li>▪ Restoration of watercourse flow and fish passage at Four Mile Creek (positive effect).</li> </ul>	Section 7.6.2.1
	Wetlands	<p>Vegetation clearing and soil stripping, trenching, pipe removal, above ground facility removal backfilling, grading clean-up and reclamation.</p>	<ul style="list-style-type: none"> <li>▪ Temporary alteration of wetland function.</li> <li>▪ Potential permanent return of wetland function in PDAs where removal of above ground facilities occurs (positive effect).</li> </ul>	Section 7.6.2.1

	<b>Environmental Element</b>	<b>Description of Interaction (or Why No Interaction is Expected)</b>	<b>Potential Adverse Environmental Effect</b>	<b>Mitigation Discussed in:</b>
	Wildlife and Wildlife Habitat, including Species at Risk	Vegetation clearing and soil stripping, trenching, pipe and above ground facilities removal, backfilling, and clean-up and reclamation activities at PDA locations.  Removal of embankment at Four Mile Creek.	<ul style="list-style-type: none"> <li>▪ Localized and temporary change in habitat effectiveness due to sensory disturbance.</li> <li>▪ Temporary change in wildlife movement.</li> <li>▪ Potential for minor incremental improvement in wildlife habitat (positive effect).</li> </ul>	Section 7.6.2.1 7.6.2.4
	Atmospheric Environment	Purging/venting pipeline.  Operation of equipment and vehicles during physical abandonment activities.	<ul style="list-style-type: none"> <li>▪ Temporary increase in local concentrations of CACs.</li> <li>▪ Contribution to provincial and national GHG emissions.</li> </ul>	Section 7.6.2.1
	Acoustic Environment	Noise from operation of equipment and vehicles during physical abandonment activities.	<ul style="list-style-type: none"> <li>▪ Temporary increase in noise levels for nearby human and wildlife receptors.</li> </ul>	Section 7.6.2.1
Socio-Economic	Human Occupancy/Resource Use (including Fisheries)	Surveying, vegetation clearing and soil stripping, trenching, pipe removal, backfilling, and clean-up and reclamation.  Operation of equipment and vehicles.	<ul style="list-style-type: none"> <li>▪ Temporary and localized: <ul style="list-style-type: none"> <li>▪ disruption of agricultural activities;</li> <li>▪ disruption of hunting and trapping activities;</li> <li>▪ change in access; and</li> <li>▪ disturbance to nearby residents.</li> </ul> </li> <li>▪ Potential permanent increase in land and resources where removal of above ground facilities occurs (positive effect).</li> </ul>	Section 7.6.2.1

	<b>Environmental Element</b>	<b>Description of Interaction (or Why No Interaction is Expected)</b>	<b>Potential Adverse Environmental Effect</b>	<b>Mitigation Discussed in:</b>
	Heritage Resources	Surveying, vegetation clearing and soil stripping, trenching, pipe removal, backfilling, and clean-up and reclamation.	<ul style="list-style-type: none"> <li>▪ Disturbance to, or loss of, previously undiscovered heritage sites.</li> </ul>	Section 7.6.2.1
	Current Traditional Land and Resource Use	Surveying, vegetation clearing and soil stripping, trenching, pipe removal, backfilling, and clean-up and reclamation.	<ul style="list-style-type: none"> <li>▪ Temporary and localized: <ul style="list-style-type: none"> <li>▪ disturbance to use of trails and travel ways;</li> <li>▪ alteration of plant gathering sites;</li> <li>▪ disturbance of hunting and trapping activities; and</li> <li>▪ disruption of gathering places and sacred sites.</li> </ul> </li> <li>▪ Potential permanent increase in land and resources where removal of above ground facilities occurs (positive effect).</li> </ul>	Chapter 6
	Navigation and Navigation Safety	The portion of the Project to be abandoned by removal does not cross or affect any navigable waters.	<ul style="list-style-type: none"> <li>▪ N/A</li> </ul>	N/A
	Social and Cultural Well-being	<p>A small workforce is expected to use the services of local communities over a short period.</p> <p>No interactions expected to result from changes to the environment.</p>	<ul style="list-style-type: none"> <li>▪ N/A</li> </ul>	See Chapter 6 for direct effects
	Human Health/Aesthetics	Noise from physical abandonment activities.	<ul style="list-style-type: none"> <li>▪ Disturbance to local residents from short term, temporary changes to the acoustic environment.</li> </ul>	Section 7.6.2.1

	<b>Environmental Element</b>	<b>Description of Interaction (or Why No Interaction is Expected)</b>	<b>Potential Adverse Environmental Effect</b>	<b>Mitigation Discussed in:</b>
Other	Accidents/Malfunctions	Hazardous material spill. Fire. Vehicle accident. Damage to existing pipelines or utilities in shared RoWs.	<ul style="list-style-type: none"> <li>▪ Contamination of soils, vegetation, wetlands, surface and groundwater quality, fish and fish habitat, wildlife habitat.</li> <li>▪ Alteration of air quality, vegetation, wildlife habitat, resource use, access to traditional land and resource use, human health and safety, and residential property loss or damage due to fires.</li> <li>▪ Injury or mortality of people and wildlife.</li> <li>▪ Spills or releases and temporary loss of use of damaged infrastructure within shared RoW until repairs are completed.</li> </ul>	Section 7.6.2.1
	Effects of the Environment on the Project	Extreme weather events or wildfires.	<ul style="list-style-type: none"> <li>▪ Damage to infrastructure.</li> <li>▪ Effects on Project schedule.</li> <li>▪ Loss or damage to mitigation materials (e.g, soil tackifiers).</li> <li>▪ Worker safety.</li> </ul>	Section 7.6.2.1

## **7.6.2 Mitigation of Potential Adverse Environmental Effects of Pipeline and Facilities Removal**

In its application, NGTL has identified standard mitigation to mitigate the potential adverse environmental effects of pipeline and facilities removal identified in Table 7-3. For details on all of NGTL's proposed mitigation, refer to the Application and supporting documentation including NGTL's Environmental Protection Plan (EPP).

A detailed analysis on historical soil contamination is provided in Section 7.6.2.3 as there is some uncertainty around the outcome of NGTL's proposed mitigation and whether additional mitigation may be necessary.

### **7.6.2.1 Standard Mitigation**

Standard mitigation refers to a specification or practice that has been developed by industry, or prescribed by a government authority, that has been previously employed successfully and is now considered sufficiently common or routine that it is integrated into the company's management systems and meets the expectations of the NEB.

Among the mitigation strategies to avoid or minimize the effects of the Project, NGTL is relying in part on utilizing existing access to each of the PDAs, and scheduling the physical abandonment activities to avoid sensitive and restricted access periods for wildlife, wildlife habitat and watercourses.

#### ***Views of NGTL***

Within its Application, NGTL included its ESA, EPP and Environmental Alignment Sheets that provided recommendations and mitigation measures which NGTL committed to adhere to. To ensure mitigation measures are followed, NGTL committed to having qualified Environmental Inspector(s) onsite and to develop an environmental training program for Project personnel.

NGTL has proposed standard mitigation to avoid or minimize potential adverse environmental effects on the soils, vegetation, wetlands, wildlife and wildlife habitat, species at risk and species of special status, and on the atmospheric and acoustic environments. In addition, NGTL has included management and contingency plans in its EPP that will be implemented as required. This includes management plans for chemicals and waste, traffic control, hydrovac slurry handling, breeding bird and nest management, bear-human conflict and abandonment waste. Contingency plans include plans for spills, adverse weather, flood and excessive flow, wet soils, fire suppression, soil handling, soil erosion, and discovery contingency plans for plant and ecological communities of concern, wildlife species of concern, heritage resources, and traditional land use sites.

#### ***Scheduling Removal Activities to Avoid Sensitive and Restricted Activity Periods***

NGTL has committed to working outside of the identified sensitive and restricted activity periods for migratory birds, raptors, species at risk and species of management concern where possible. NGTL has also stated that it will avoid sensitive periods in habitats for sensitive

wildlife including secondary grizzly zones, sharp tailed grouse survey area, Key Wildlife Biodiversity Zone and the Chinchaga caribou range. Where avoidance of these sensitive or restricted activity periods are not possible, NGTL has committed to conducting pre-abandonment surveys, setting out buffer zones and consulting with the appropriate regulatory authority where required.

#### *Access to PDAs*

NGTL stated that all physical abandonment activities associated with the Project will take place within the existing RoW and facilities site boundaries, with the exception of the pipe removal at Four Mile Creek crossing which extends beyond the RoW and three rectifiers located outside of the RoW adjacent to township roads and highways. NGTL plans to use existing access including roads, trails, utility RoWs and the PRML RoW. NGTL stated that temporary vehicle crossings may be required at watercourses and it would follow the Alberta Environment and Parks Codes of Practice, and Fisheries and Oceans Canada's Measures to Avoid Causing Harm to Fish and Fish Habitat.

#### *Standard mitigation related to Aquatic Resources*

To mitigate the effects of the proposed Project on aquatic resources, including water quality and quantity as well as fish and fish habitat, NGTL has proposed to complete the pipe removal at Woodpecker Creek using a trenchless crossing technique, with a contingency removal plan for an open cut method during frozen conditions should the trenchless technique be unsuccessful. The pipe removal at Four Mile Creek and the Unnamed Tributary to Little Smoky River will be conducted using an open cut method during winter conditions when the watercourse is frozen or has limited flow.

NGTL committed to follow provincial Codes of Practice, and applicable Department of Fisheries and Oceans Canada's Measures to Avoid Causing Harm to Fish and Fish Habitat for each of the watercourse pipe removals.

#### *Reclamation including Monitoring and Reporting*

NGTL identified that the reclamation of the PDA sites will include replacement of the salvaged topsoil or duff, and will be either seeded or allowed to revegetate naturally based on site conditions and consultation with the land owner or land administrator. NGTL indicated that areas prone to erosion will be seeded with an approved cover crop and a native seed mix.

NGTL stated that natural recovery will be utilized for all sections of the NPS 20 PRML RoW that are to be abandoned in place, and it does not intend to seed or plant seedlings in these areas. NGTL is of the view that seeding or planting would involve re-disturbing areas of the RoW that have been undergoing active succession for several decades since last disturbed during construction of the pipeline.

NGTL stated it would implement a reclamation monitoring program at the completion of the physical abandonment activities to assess the success of the environmental protection measures used, document opportunities for improvement and review the success of re-establishing the RoW and associated facilities to equivalent land capability. NGTL indicated the reclamation



monitoring program would include measurable parameters that would be used to compare to representative undisturbed control areas to measure reclamation success, and where deficiencies are noted, corrective actions would be developed and implemented. NGTL committed to conduct both site specific monitoring at the PDAs, as well as monitoring of the entire RoW until equivalent land capability is reached as part of the reclamation monitoring plan.

### *Views of Participants*

GML 55 and Mountain Métis stated that the abandonment project within their traditional territory poses a number of potential risks to the community and their culture. GML 55 and Mountain Métis indicated they were concerned with increased levels of air emissions, as well as impacts to wildlife habitat due to soil admixing and contamination during the physical abandonment activities.

Mountain Métis indicated they were concerned about the effects of physical abandonment activities on vegetation, including the introduction of invasive or noxious weeds to the Project area. As well, they had concerns for wildlife and wildlife habitat including the displacement of wildlife from the RoW.

Mountain Métis recommended mitigation including scheduling physical abandonment activities during late fall and winter to minimize the disturbance to native vegetation, and follow proper soil salvage techniques to maintain the seed bed layer within the soil for reclamation purposes.

### *Views of the Board*

As discussed in Chapter 1, the Board has given some, but minimal weight to the written evidence of GML 55 and Mountain Métis as a result of their withdrawal from the oral portion of the hearing. The Board has given full weight to the OTE provided.

Given the similarities in physical work activities, the Board is of the view that the standard mitigation implemented for the construction of pipeline projects is both relevant and applicable to the removal activities for pipelines and facilities during abandonment.

The Board notes that GML 55 and Mountain Métis stated they placed importance on the draft potential conditions floated by the Board for the Project, and the conditions were, in part, the reason for their withdrawal from the process. The Board is of the view that the environmental concerns raised by GML 55 and Mountain Métis can be mitigated through the use of standard mitigation presented in NGTL's Application, including its EPP. To ensure that all standard and site specific mitigation measures will be implemented according to their intent, the Board imposes **Condition 12 (Updated Environmental Protection Plan)** requiring NGTL to file and implement an updated project specific EPP that includes descriptions of all mitigation and monitoring commitments made by NGTL in its application or as otherwise agreed to during questioning or in its related submissions. The updated EPP shall also include an updated comprehensive Contaminated Soils Contingency Plan that includes a notification plan in the event contamination is found during Physical Abandonment Activities, as well as confirmation that signage will be posted on the RoW in areas of high and moderate risk and where contamination has been discovered.

The Board acknowledges that NGTL commented on the draft potential condition stating that the information required in **Condition 12 (Updated Environmental Protection Plan)** was already provided in the EPP and therefore would be redundant. The Board notes that the information was spread over several different sections of the EPP. The Board is of the view that an EPP is meant to document project specific environmental commitments, procedures and mitigation measures for employees and contractors to implement in the field and that it should be user friendly to ensure that it will be used. The Board is concerned with the risk of personnel having to search through several sections to find all necessary information on a contingency plan and that this creates a risk of information being missed. The Board also recognizes that there may be mitigations and procedures that may merit being repeated elsewhere for other reasons. The Board is of the view that as a field document an EPP needs to strike the right balance and mix of having information consolidated in easily referenced sections and some details being repeated throughout for personnel for whom other sections may not be relevant.

The Board acknowledges that the PRML pipeline has been deactivated and maintained at a low pressure to operate the cathodic protection system on the PRML pipeline. To understand the volumes that will be vented during the purging of the PRML pipeline and laterals, the Board imposes **Condition 18 (Air Emission Reporting)** requiring NGTL to provide the volumes of natural gas and CO<sub>2</sub>e released during each venting event. In addition, where pull down compressors are used, Condition 18 requires NGTL to provide the pressure of natural gas at the start and end of the pull down time, as well as the total volume of natural gas not vented, but rather conserved.

The Board is of the view that with the mitigation measures committed to by NGTL and the Board conditions, and given the generally localized and temporary nature of Project activities, the removal of the project facilities is unlikely to result in significant adverse environmental effects on most environmental elements. Those elements that require additional mitigation are described in the following sections.

#### **7.6.2.2 Detailed Analysis of Key Environmental Issues of Pipeline Removal**

This subsection provides a more detailed analysis of historical soil contamination, and of restoration within the Chinchaga caribou range, both of which require additional mitigation by way of Board conditions. Although the PRML pipeline will be abandoned in place within the Chinchaga caribou range, the activities associated with the vegetation restoration may occur within the identified PDAs or result in ground disturbing activities similar to pipeline or facilities removal. Therefore, the Board has assessed this issue within this pipeline removal section.

Table 7-4 specifies the definitions for criteria used in evaluating the significance of residual effects.

**Table 7-4: Criteria, Ratings and Definitions Used in Evaluating the Likelihood of Significant Effects**

<b>Criteria</b>	<b>Rating</b>	<b>Definition</b>
All criteria	Uncertain	When no other criteria rating descriptor is applicable due to either lack of information or inability to predict.
Temporal Extent	Short-term	An effect, either resulting from a single project interaction or from infrequent multiple ones, whose total duration is usually relatively short-term and limited to or less than the duration of Physical Abandonment Activities, or one that usually recovers immediately after completion of physical abandonment activities. An effect usually lasting in the order of weeks or months.
	Medium-term	An effect, either resulting from a single or infrequent project interaction or from multiple project interactions each of short duration and whose total duration may not be long-term but for which the resulting effect may last in the order of months or years.
	Long-term	An effect, either resulting from a single project interaction of long lasting effect; or from multiple project interactions each of short duration but whose total results in a long lasting effect; or from continuous interaction throughout the life of the project. An effect usually lasting in the order of years or decades.
Reversibility	Reversible	An effect expected to, at a minimum, return to conditions present when the interaction occurred and would not persist for decades or generations.
	Permanent	An effect that would persist in the order of decades or generations. Some social or cultural effects that persist beyond a single generation may become permanent.

Criteria	Rating	Definition
Geographic Extent	Project Disturbance Area (PDA)	Effect would be limited to the area directly disturbed by the physical disturbance associated with Project physical abandonment activities. Each PDA includes the area of excavation and associated workspace for vehicle and equipment movement, soil storage, etc.
	Local Assessment Area (LAA)	Effect would generally be limited to the area in which both project-related environmental effects can be predicted or measured with a level of confidence that allows for assessment; and where there is a reasonable expectation that those potential effects in the LAA will be a concern. The LAA encompasses the PDAs. This area varies relative to the receptor being considered.
	Regional Assessment Area (RAA)	Effect would be recognized in the area that establishes the context for determining significance of Project specific effects. It is also the area within which potential cumulative effects are assessed. The RAA encompasses both the LAA and the PDAs. This area also varies relative to the receptor being considered.
Magnitude	Low	Effect is negligible, if any; restricted to a few individuals/species or only slightly affects the resource or parties involved; and would impact quality of life for some, but individuals commonly adapt or become habituated, and the effect is widely accepted by society.
	Moderate	Effect would impact many individuals/species or noticeably affect the resource or parties involved; is detectable but below environmental, regulatory or social standards or tolerance; and would impact quality of life but the effect is normally accepted by society.
	High	Effect would affect numerous individuals or affect the resource or parties involved in a substantial manner; is beyond environmental, regulatory or social standards or tolerance; and would impact quality of life, result in lasting stress and is generally not accepted by society.

Criteria	Rating	Definition
Evaluation of Significance	Likely to be significant	Effects that are either: (1) of high magnitude; or (2) long-term, permanent, and of regional extent.
	Not likely to be significant	Any adverse effect that does not meet the above criteria for “significant”.

### 7.6.2.3 Historical Soil Contamination

#### *Views of NGTL*

NGTL conducted both Phase I and Phase II Environmental Site Assessments along the PRML pipeline in 2010 and 2011 respectively, as well as at the Valleyview Compressor Station in 2007, 2010 and 2012. NGTL indicated that findings from the assessments confirmed the presence, or indicated the suspected presence of contaminants at block valves and scraper traps along the RoW and at the Valleyview Compressor Station. These are facilities that will be abandoned by removal.

NGTL committed to update its Phase I Environmental Site Assessment to include any environmental concerns that may have manifested since the report completion in 2010, as well as additional Project components that were not in the scope of the 2010 Phase I Environmental Site Assessment.

NGTL committed to conducting a further Phase II Environmental Site Assessment along the length of the PRML pipeline after it has been cleaned and purged. The timing of the Phase II Environmental Site Assessment is such that it reduces the risks associated with the intrusive sampling near the PRML pipeline in an active state. NGTL stated that when known or unknown contaminated sites are encountered, the extent of the contamination will be determined, and the site will be remediated according to its Abandonment Waste Management Plan and Contaminated Soils Contingency Plan to current federal and provincial environmental criteria. NGTL committed to submit a Notification of Contamination pursuant to the NEB Remediation Process Guide for any results that exceed current applicable federal or provincial environmental criteria.

#### *Views of the Board*

The Board notes that NGTL has committed to following the NEB *Remediation Process Guide* where soil contamination is found. The Board will continue to have regulatory oversight of the abandoned PRML pipeline to ensure that any historical contamination issues are addressed, whether they are currently known, identified during the Physical Abandonment Activities or discovered during Abandoned Pipeline Monitoring. The Board also notes that it has the authority to order further remedial work if it is not satisfied that a site has been adequately remediated.

The Board acknowledges that NGTL committed to update its Phase I Environmental Site Assessment report prior to commencing Physical Abandonment Activities, however notes that no specific timeframe has been identified for the filing other than prior to the start of Physical Abandonment Activities. To ensure this is completed and is done on a timely basis the Board imposes **Condition 6 (Phase I Environmental Site Assessment)** requiring NGTL to file an updated Phase I Environmental Assessment within 60 days after issuance of the Abandonment Order.

The Board further acknowledges that NGTL has committed to conducting a Phase II Environmental Site Assessment after the pipeline has been purged and cleaned, and at the same time as the subsequent Physical Abandonment Activities. Accordingly, the Board imposes **Condition 10 (Phase II Environmental Site Assessment Plan)** requiring NGTL to file a Phase II Environmental Site Assessment Plan.

The Board is of the view that with appropriate assessment and remediation, the residual effects from historical contamination would be reversible in the short to medium term, limited to the PDA or LAA and be low in magnitude. Therefore the residual effects are not likely to be significant.

#### **7.6.2.4 Restoration in Chinchaga Caribou Range**

##### ***Views of NGTL***

NGTL proposed to abandon the PRML pipeline in place within the section of RoW that traverses the Chinchaga caribou range. NGTL stated that this portion of the Project is located within a shared RoW with an operating NGTL pipeline and that vegetation maintenance activities will continue to be conducted by NGTL along the east side of the RoW, where the operating pipeline is located. NGTL noted that during consultation activities, Environment and Climate Change Canada (ECCC) indicated that the project area within the Chinchaga caribou range is not considered to be critical habitat for caribou as it is within the existing NPS 20 PRML RoW.

In 2016 NGTL conducted a vegetation assessment within the Chinchaga caribou range. The assessment surveyed 56 plots and found that, with exception of a few sites, the species composition in vegetation plots indicate that vegetation is generally consistent with the surrounding vegetation types, with most growth occurring along the west edge of the RoW where the NPS 20 pipeline is located. Based on the extent of vegetation regeneration the survey indicated that the RoW is approximately 20 years towards a conventional state of succession. However, in response to Board information requests, NGTL also indicated that the current woody vegetation growth on the RoW within the Chinchaga caribou range is up to 30 years old. Further, NGTL stated that the density of regrowth observed on the PRML exceeds many planting guidelines used for reclamation planning or caribou habitat restoration.

NGTL also stated that the 2016 assessment identified the linear features that intersected the PRML RoW and characterized the vegetation growth, line of site and human and wildlife (predator/ungulate) use. Twenty seven non-road intersecting linear features were characterized in the field. The reported line of sight varied from less than 20 m up to 100 m. Human use of the non-road intersecting linear features was recorded at 11 sites, predator use (black bear, gray

wolf) was recorded at two sites and ungulate use was recorded at nine sites. Signs of use by both predators and ungulates was recorded at an additional six sites.

NGTL stated that natural recovery will be utilized for all sections of the NPS 20 PRML RoW that are to be abandoned in place, and it does not intend to seed or plant seedlings in these areas. NGTL is of the view that seeding or planting would involve re-disturbing areas of the RoW that have been undergoing active succession for several decades since last disturbed during construction of the pipeline.

NGTL stated that it does not plan to install restoration measures to impede access to the RoW within the Chinchaga caribou range as it parallels an operating pipeline in a shared RoW, making any measures ineffective. Further, NGTL stated that field observations from the vegetation assessment indicated that the majority of the linear features within the caribou range that intersected the RoW had substantial vegetation regrowth resulting in a reduced line of sight along the RoW and intersecting linear features. NGTL noted that the regrowth would likely inhibit vehicle use and the linear features did not show evidence of motorized access, negating the need for potential access control measures.

NGTL is of the view that based on the results from 2016 vegetation assessment, the PRML RoW within the Chinchaga caribou range, with the exception of the nine proposed PDA locations, has reached equivalent land capability. Further, NGTL stated that it would conduct an assessment to confirm this assertion as part of its abandonment activities.

### ***Views of the Board***

With regards to whether the RoW is considered critical habitat for caribou, the Board notes that an operating pipeline RoW may not constitute ‘existing habitat’ as defined in the 2012 Recovery Strategy since it may be considered a ‘permanent alteration’ and may not possess all the necessary habitat characteristics required to carry out life processes necessary for survival and recovery (e.g., biophysical attributes) for boreal caribou. However, the definitions in the Recovery Strategy also include ‘the potential to possess the biophysical attributes’ (emphasis added). In the case of this abandonment Project in which NGTL contends that the RoW will return to equivalent land capability within the Chinchaga caribou range, the Board is of the view that the RoW would have the potential to possess the biophysical attributes for boreal caribou. The Board therefore finds that the RoW to be abandoned within the Chinchaga caribou range constitutes potential critical habitat.

Furthermore, the Recovery Strategy repeatedly notes the need for restoration efforts, including on pipelines, to reduce disturbance levels and return ranges to self-sustaining levels. Consequently, insofar as the area includes critical habitat for caribou the Board finds that abandonment in a caribou range may warrant more active restoration measures than simply passive natural regeneration where there may be delay or uncertainty in the apparent succession path.

The Board notes that the pipeline has been in operation for approximately 50 years and that NGTL has conducted minimal clearing along the PRML RoW, and could not confirm when the last operational clearing event occurred within the Chinchaga caribou range. The Board

further notes the inconsistencies in NGTL's characterization of the state of succession on the RoW within the Chinchaga caribou range, with no clear explanation, as well as the absence of a clear successional path at some sites notwithstanding the considerable time lapsed. Lastly, the Board notes that some intersecting linear features located on the western side of the RoW may continue to provide access for humans and other predators.

These uncertainties and issues at some sites lead the Board to impose **Condition 14** (*Chinchaga Caribou Range Vegetation Restoration Plan*) requiring NGTL to file a plan to apply active restoration techniques to further the relative succession of vegetation regeneration and enhance caribou habitat attributes, where possible, along the Project RoW within the Chinchaga caribou range. The plan must include a detailed methodology to identify locations for active vegetation restoration and access control measures, as well as the restoration methods available for use on the sites. The plan will also specify criteria that will be used during monitoring to evaluate the effectiveness of site restoration measures.

The Board is of the view that with appropriate restoration activities on the RoW, the effects of abandonment in the Chinchaga caribou range are likely to be positive.

## **7.7 Environmental Effects Analysis of Pipe Abandoned in Place**

### **7.7.1 Interactions and Potential Adverse Environmental Effects of Pipe Abandoned in Place**

As outlined in Table 7-2, most of the Project entails the abandonment in place of the PRML NPS 20 pipeline. In contrast to the removal of pipeline facilities which entails an active physical undertaking that interacts with and affects the existing surrounding environment, abandonment in place is largely about leaving the existing environment, including the pipeline, as is. This absence or lack of any proposed physical undertaking means that there is not necessarily any immediate or apparent interaction with the surrounding environment. Moreover, as time passes potential future interactions and their potential effects become more uncertain. Nonetheless, over time the main environmental interactions that may arise include ground subsidence, the pipe acting as a conduit, and exposure of the pipe. Section 7.7.2 discusses both the potential effects and mitigation for each of these interactions.

### **7.7.2 Mitigation of Potential Adverse Environmental Effects of Pipe Abandoned In Place**

#### **7.7.2.1 Ground Subsidence**

##### *Views of NGTL*

NGTL plans to remove cathodic protection from the sections of pipe to be abandoned in place and as a result, pitting corrosion of the pipe may occur. Over time, this could result in ground subsidence from soil infilling of the pipe through the corrosion pits, or from soil falling into the pipe in the event of a pipe collapse. NGTL indicated that corrosion of the pipe would not occur uniformly and could take decades to occur. Therefore NGTL does not expect ground subsidence



from infilling of the pipe or structural failure of the pipe to occur for hundreds to thousands of years.

NGTL indicated that ground subsidence has the potential to cause minor changes in soil capability, which may in turn affect agricultural operations at a highly localized scale, as well as affect surface water quantity and wetland distribution by altering flow direction and/or cause linear ponding. NGTL stated that if ground subsidence occurs at road or railway crossings, infrastructure and services could be affected. However, through mitigation such as the addition of clean fill or topsoil, NGTL stated it is unlikely that ground subsidence would have a measurable effect on soil capability or agricultural land use. In addition, NGTL expects subsidence to be localized in nature and occur over a long time frame, making it unlikely that future ground subsidence would have a measurable effect on surface water patterns or wetland distributions.

NGTL's assessment predicted that the potential residual effects of ground subsidence on soil capability, vegetation, wetlands, wildlife and wildlife habitat, aquatic resources, human occupancy and resource use and infrastructure and services would be adverse, low in magnitude, and localized in extent.

#### **7.7.2.2 Abandoned In Place Pipe Acting as a Conduit**

##### ***Views of NGTL***

NGTL stated corrosion of the pipeline could occur over time, creating small perforations within the pipe that could allow surface water or shallow groundwater to enter the pipe. This could result in the pipe acting as a conduit that transports water and/or any residual contaminants within the pipe to a downgradient point of exit such as a surface water feature.

NGTL's environmental assessment noted that by acting as a preferred water conduit, the abandoned pipe could potentially interact with water quantity, wetlands and associated wildlife habitat, soil capability and land use such as agriculture. NGTL identified that the movement of water within the pipe could potentially result in a reduction in water recharge for surface water bodies and deeper groundwater resources including any associated water wells. Flooding and erosion could potentially occur at lower elevations where the water would exit the pipe. Any residual contaminants remaining in the abandoned pipe and transported in conduits could affect water quality, soil capability, and vegetation use when the contaminants exit the pipe.

NGTL stated that to mitigate the conduit effects, the pipe will be cleaned and pigged, then segmented into 32 sections based on the topography of the RoW in relation to wetlands and watercourses. The cleaning and segmentation is expected to prevent the movement of residual contamination and water through a conduit beyond a local scale.

NGTL stated that should a water conduit form, residual effects are predicted to be adverse, and depending on where it occurs, low to moderate in magnitude. NGTL indicated the extent of the conduit is expected to be localized but the duration would be dependent on when it was discovered and whether active mitigation was required.

NGTL also identified that conduits could transport potential contaminants from the breakdown of pipe coatings and that it will inspect the pipe at each of the excavation sites for potential contamination from the pipe coatings.

NGTL's assessment predicted there would be no residual effects on water quality, soil capability, land use and vegetation as a result of potential movement of residual contamination through conduits as the pipe transported natural gas and was cleaned and pigged prior to it being segmented. NGTL further predicted that as the PRML carried natural gas, and will be cleaned and pigged during abandonment, it is assumed that the abandoned in place pipeline will not contain residual contaminants that pose a risk to human health. NGTL stated that any contamination discovered during excavation at sites will be remediated.

### **7.7.2.3 Pipeline Exposure**

#### ***Views of NGTL***

NGTL stated that pipe exposure may occur in watercourses due to scouring, slope failure or lateral movement of channels and in wetlands due to ineffective buoyancy control mechanisms after depressurization. NGTL also indicated that pipe exposure may also occur due to soil erosion reducing the depth of cover over the pipeline and due to frost heave in areas where the top 120 cm of soil freezes during the winter.

NGTL indicated that a pipe exposure in a watercourse could affect surface water quality, navigation and navigation safety, and downstream fish and fish habitat through potential changes in local hydrology and the associated sediment transport. However, NGTL indicated that the likelihood of such an event is low and the potential locations of occurrence are unknown. NGTL predicted the residual effects to be adverse, low to medium in magnitude and may extend beyond the LAA into the RAA.

NGTL stated that pipe exposure in a wetland could affect water quality and disturb wetlands and any wetland dependent wildlife due to any type of pipe recovery activities. The PRML pipeline was designed to have negative buoyancy when empty and has already been largely depressurized. Any existing buoyancy control mechanisms will remain in place on the abandoned pipe. As a result, NGTL expects little change in buoyancy from pipeline purging activities. In the event that a pipe exposure does occur, NGTL predicted the residual effects to be localized, adverse and low in magnitude.

NGTL stated that pipe exposure due to frost heave or soil erosion would affect soil capability, and human occupancy and resource use such as agriculture. NGTL indicated that it is unlikely the frost heave or soil exposure will result in pipe exposure as the PRML pipeline was buried to approximately 1 metre in depth and has no known depth of cover issues. Any predicted effects would be adverse, low in magnitude and uncertain in duration.

#### ***Views of Participants***

GML 55 and Mountain Métis stated they had concerns with the PRML pipeline remaining in place due to long term ecological and environmental issues. These issues include the eventual

corrosion and collapse of the pipe, the pipe acting as a channel for water or other substances, pipe exposure, buoyancy in wetlands and reduced depth of cover over the pipe. Mountain Métis also indicated that since the pipeline has had a number of leaks and ruptures due to corrosion since it has been put into service, they are concerned that further incidents may occur if the pipe is abandoned in place.

The GML 55 indicated they were concerned with the proposed reclamation and monitoring plan for the Project. GML 55 stated that they are concerned that active reclamation is only planned for the areas where the pipe and facilities are to be removed, and not for the remainder of the areas where the pipe would be abandoned in place. GML 55 is of the view that in this scenario, only the areas of removal will be subject to current remediation and reclamation regulations and best practices. GML 55 indicated that reclamation and monitoring efforts should be applied to the entire RoW to ensure it returns to a level that is capable of sustaining traditional resources and resource uses.

### ***Reply of NGTL***

NGTL stated that corrosion of the pipe is expected to occur over a long period of time, possibly thousands of years and would occur in localized areas. NGTL expects that the pipe will gradually fill with soil as corrosion occurs, and surface impacts will be mitigated through soil development and vegetation growth. NGTL indicated that the natural topography of the area and the segmentation of the pipe abandoned in place would minimize the potential for the abandoned pipeline to act as a conduit for water beyond a local scale. In the event that a future issue(s) arise with the pipe abandoned in place, NGTL stated it would address the issue at that time and conduct any additional reclamation that may be required.

NGTL stated that its monitoring plan would include reclamation monitoring of the RoW until equivalent land capability has been achieved, and then no further monitoring would be conducted with the exception of sections where the abandoned in place pipeline is located within a shared RoW with an active NGTL pipeline.

### ***Views of the Board***

As discussed in Chapter 1, the Board has given some, but minimal weight to the written evidence of GML 55 and Mountain Métis as a result of their withdrawal from the oral portion of the hearing. The Board has given full weight to the oral traditional evidence provided.

The Board acknowledges the concerns of GML 55 and Mountain Métis regarding the potential effects of abandoning a pipe in place. The Board notes that the mitigation measures identified for the pipeline to be abandoned in place have been largely untested by the pipeline industry and there is therefore limited knowledge of the long-term effects of leaving a large diameter pipeline in place. The Board notes that NGTL has committed to inspect the pipe at each of the excavation sites for potential contamination from the pipe coating. The Board expects that these results will be included in the report for the Phase II Environmental Site Assessment that is required in **Condition 10 (Phase II Environmental Site Assessment Plan)**.

With respect to reclamation and monitoring, the Board notes GML 55's view that reclamation efforts should be applied to the entire RoW. However, the Board notes the evidence presented regarding the apparent state of natural regeneration occurring along the RoW and does not see a case for requiring active reclamation along the entire length of the RoW. The Board notes that NGTL's reclamation monitoring is to occur at all PDAs and along the remaining portion of the RoW until equivalent land capability has been achieved. The Board imposes **Condition 11 (*Reclamation and Reclamation Monitoring Plan*)** requiring NGTL to file a Reclamation and Reclamation Monitoring Plan that provides a description of the reclamation measures to be applied as well as identifies the criteria and thresholds that will be used to determine that the RoW has reached equivalent land capability, including rationale. **Condition 11 (*Reclamation and Reclamation Monitoring Plan*)** further requires NGTL to provide a description and schedule for the monitoring activities, as well as a description of and justification as to how NGTL has incorporated the results of its consultation and any recommendations of SLCN, GML 55 and Mountain Métis. The Board also imposes **Condition 20 (*Reclamation Monitoring Reports*)** which requires NGTL to monitor and report on the status of reclamation. Should consultation or monitoring reveal areas along the RoW, including where the pipe has been abandoned in place, that show noticeable delay in natural regeneration, the Board expects NGTL to implement appropriate remedial reclamation measures.

The Board further notes that NGTL's monitoring plan included reclamation monitoring of the RoW until equivalent land capability has been achieved, and then no further monitoring would be conducted with the exception of sections where the pipeline abandoned in place is located within a shared RoW with an active NGTL pipeline. The Board is of the view that the RoW reaching equivalent land capability does not eliminate the potential for future issues with pipe exposure, pipe conduit and contamination effects, or ground subsidence issues. Therefore the Board expects that NGTL will continue to monitor the PRML pipe abandoned in place to confirm the effectiveness of the mitigation measures in avoiding or reducing environmental effects.

Accordingly, the Board imposes **Condition 16 (*Abandoned Pipeline Monitoring Plan*)** which requires NGTL to file, for approval, an Abandoned Pipeline Monitoring Plan that includes identification of hazards (e.g., pipe exposure, ground subsidence), evaluation for associated risks, development of controls, and communication of identified hazards and control with all relevant stakeholders. The Board also expects this plan to describe the methods for, including the frequency of, monitoring, and that the plan should demonstrate how the methods will be effective in identifying any issues arising over time. **Condition 16 (*Abandoned Pipeline Monitoring Plan*)** further requires NGTL to incorporate the results of consultation with potentially affected stakeholders, including GML 55 and Mountain Métis, into its abandoned pipeline monitoring plan.

Further, the Board imposes **Condition 21 (*Abandoned Pipeline Monitoring Reports*)** requiring NGTL to submit an annual report on the monitoring activities undertaken, any issues or hazards identified and the associated activities conducted to mitigate and remediate hazards, and reclaim the affected area. **Condition 21** also requires that NGTL conduct an annual review and provide a description of the performance of the Abandoned Pipeline Monitoring Plan (**Condition 16**).

With the implementation of continued monitoring and reporting, as required by **Conditions 15 (Physical Abandonment Activity Progress Reports)** and **20 (Reclamation Monitoring Report)**, and NGTL's commitment to address any future issues and reclamation requirements, the Board is of the view that residual effects, once identified, would be of low to moderate magnitude, limited to the LAA, reversible and would have a short to moderate temporal extent. For residual effects that remain undetected below ground, the Board is of the view that the duration of any effect may be permanent, but would likely be low in magnitude and limited to the LAA. The Board is of the view that the potential residual effects associated with the abandonment in place of the PRML pipeline are not likely to be significant.

## **7.8 Cumulative Effects**

The assessment of cumulative effects considers the impact of the residual effects associated with the Project in combination with residual effects from other projects and activities that have been or will be carried out, within relevant temporal and spatial boundaries, and environmental context.

### ***Views of NGTL***

In its application, NGTL identified a number of developments as contributing to regional cumulative effects. In addition to the original construction of the PRML, there are agricultural operations, forestry operations, residential and urban developments, roads and highways, other existing linear disturbances, and resource extraction activities, including numerous oil and gas facilities. NGTL indicated that the majority of the planned projects will occur in areas that have been previously disturbed.

With the exception of effects on caribou, NGTL predicted the cumulative effects for the Project to not be significant. NGTL acknowledged there are already significant effects on the Chinchaga caribou herd, however indicated that the project will not contribute to further direct habitat loss, but may have a minor contribution to short-term sensory disturbance within the Chinchaga range. For abandonment activities associated with the removal of project facilities, there will likely be some residual effects that may interact with effects from other ongoing projects. However, these are most likely to be short term in duration, localized in the spatial extent of their overlap, or relatively low in magnitude.

NGTL further identified that there are challenges with predicting cumulative effects for leaving the pipeline in-place and the residual effects that may occur as the timing and location of these events is uncertain.

### ***Views of Participants***

GML 55 and Mountain Métis stated they were concerned that the cumulative impact of industrial developments will be exacerbated by abandoning a pipeline in the area.

## *Views of the Board*

The Board finds it important to bear in mind that unlike an assessment for construction of new facilities, the Project is an abandonment project: the facilities already exist and are in place, within the current environment context.

With respect to residual effects of activities associated with the removal of facilities, the Board finds that while these may temporarily cumulate with effects from other nearby construction activities at the time of conducting Physical Abandonment Activities, the Project is not likely to have any meaningful adverse effects beyond those already existing from the current pipeline and RoW.

With respect to the majority of the Project to be abandoned in place, the Board recognizes that this renders the original effect of constructing the pipeline to be a permanent contribution to cumulative effects on the subsurface and infrastructure landscape. The Board acknowledges the concerns expressed by GML 55 and Mountain Métis that the cumulative impact of industrial developments will be exacerbated by abandoning a pipeline in the area.

The main longer lasting interaction that may cumulate over time with interactions and effects from other projects and activities is the abandonment in place of the remaining segments of pipeline to be cleaned, cut, capped and left in the ground. However, further to the discussion of interactions, effects and mitigation in Section 7.7, it is uncertain over time what potential future effects of abandonment in place will interact with other developments or activities, what may warrant mitigative action, and where and when it may occur.

The Board notes the uncertainties around the occurrence of potential residual and cumulative effects from abandonment in place. These uncertainties make it challenging to prescribe specific mitigative actions at this time. Instead, the Board finds that because of uncertainty, along with the permanent contribution to cumulative effects, it is important to ensure that abandonment include appropriate monitoring of remedial actions and adaptive management to address future issues that may arise. It is with this in mind that the Board imposes conditions for an Abandoned Pipeline Monitoring Program (**Condition 16, *Abandoned Pipeline Monitoring Plan***) and reporting by NGTL of the monitoring results to the Board (**Condition 21, *Abandoned Pipeline Monitoring Reports***). The Board reminds NGTL that in fulfilling these conditions it expects that monitoring results and remedial actions must be transparent to potentially affected parties, and consultation must continue.

Where monitoring identifies challenges in recovery for any particular valued component, the Board expects NGTL to apply sufficient additional adaptive management measures to fully address any residual effects. If the results of the ***Reclamation and Reclamation Monitoring Plan (Condition 20)*** or ***Abandoned Pipeline Monitoring Plan and Reporting (Conditions 16 and 21)*** indicate that the Project's residual effects are not fully addressed, the Board may require NGTL to conduct more frequent monitoring, longer term monitoring, or impose further mitigation.

Lastly, the Board notes that as a regulated abandonment project, the entire RoW, as well as PDA sites, to be reclaimed will likely provide potential for positive environmental benefits. The Board is of the view that the Project provides opportunities to incrementally reduce landscape cumulative effects, such as the restoration of watercourse flow and fish passage at Four Mile Creek and the regrowth of natural vegetation along the RoW, including restoration of sites in caribou habitat among others.

## **7.9 EA Conclusion**

The Board has conducted an environmental assessment of the Project and is of the view that overall, with the implementation of NGTL's environmental protection procedures and mitigation, and the Boards imposed conditions, the Project is not likely to cause significant adverse effects.

In addition, as the Project is partially located on federal lands (on SLCN Reserve Lands where the pipeline will be removed), in its assessment the Board considered subsection 67(a) of CEAA 2012. The Board has concluded that, pursuant to subsection 67(a) of CEAA 2012, carrying out this Project on these federal lands is not likely to cause significant adverse environmental effects.

## Chapter 8

# Infrastructure, Employment and Economy

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The Board's Filing Manual sets out the Board's expectations of applicants regarding direct socio-economic impacts caused by the existence of the Project. Applicants are expected to identify and consider the impacts a project may have on infrastructure, services, employment and economy. Applicants are also expected to provide mitigation of negative impacts and the consideration of positive benefits of the project.

Potential socio-economic effects that are caused by changes to the environment are included in Chapter 6, Aboriginal Matters and Chapter 7, Environment and Socio-Economic Matters. Other economic effects are addressed in Chapter 3, Economic and Financial Matters. Direct socio-economic effects caused by the existence of the Project itself are discussed below.

### 8.1 Infrastructure and Services

#### *Views of NGTL*

NGTL stated that Project effects on infrastructure and services may be driven by Project activities, traffic and workforce temporarily increasing demand on accommodation, community services and transportation.

NGTL's Environment and Socio-Economic Assessment concluded that there would be no significant socio-economic effect on infrastructure and services during abandonment of the Project and the Project is not expected to affect the quality or sustainability of infrastructure and services in the Project area.

#### *Accommodations*

NGTL stated that the number of workers required for the Project is estimated at 40 to 70. NGTL submitted the temporary workforce housing will be provided in existing local accommodations and no temporary camps are planned to be constructed as part of the Project.

NGTL noted that given the Project's proximity to the City of Grande Prairie, it is possible that many Project-related workers will already reside within daily commuting distance of the Project and not require temporary accommodation. NGTL stated that any worker working outside of commuting distance of their home community will be housed in commercial accommodations such as hotels and motels in Valleyview, Peace River, Manning, Fairview and Grande Prairie.

NGTL submitted that there is ample capacity to accommodate Project-related mobile workers and the residual effect on accommodation is predicted to be positive as it provides business opportunities and increased revenue for local suppliers.



### *Community Services*

NGTL stated that Project activities could temporarily increase demands on local health, emergency, and policing services because of onsite activities and the presence of mobile workers in the area.

NGTL concluded that the Project-related residual effects on community services in the Project area is expected to be low taking into consideration the temporary nature of Physical Abandonment Activities, the capacity of infrastructure and service providers in the Project area as compared to the relatively small size of the Project workforce, and the Project mitigation and management measures to be implemented. NGTL committed to communicate with local communities and service providers with respect to the Project to provide appropriate communications, understanding, and cooperation where required.

### *Transportation*

NGTL submitted that Project activities will generate traffic across the Project area, specifically daily morning and evening movements linked to workforce commuting between the work site and worker accommodations, and deliveries of materials and supplies to the worksite. NGTL stated that Project-related traffic will be comprised of trucks delivering materials and supplies, over-dimensional loads of equipment and trailers, and multi-passenger and personal vehicles.

NGTL estimated Project-related traffic in the order of 80 to 100 one-way daily trips during peak activity with the majority of Project-related traffic expected to come from either Grande Prairie or Peace River as these are the main service centers in the Project area. NGTL notes that the Project's peak daily traffic effect represents less than 1% of average daily movements experienced around the major service centers.

NGTL concluded that with the application of mitigation and management measures, Project-related demands on the road network are predicted to not be significant.

### *Views of the Board*

The Board recognizes the possibility of increased traffic and demand on local accommodation and community services during the Physical Abandonment Activities of the Project. However, considering that these impacts would be temporary and low in magnitude, the Board finds them acceptable.

The Board notes NGTL's ongoing consultation with local governments, communities and service providers. The Board is of the view that the measures planned by NGTL would adequately address the potential impacts of the Project on community infrastructure and services.

## 8.2 Employment and Economy

### *Views of NGTL*

NGTL submitted that the total expenditure budget for the Project is estimated to be approximately \$29.7 million, including expenditures for wages and salaries paid to workers, professional engineering and inspection services, and the direct purchase of goods and services. NGTL stated that no new permanent part-time or full-time jobs will be directly created by the Project, however the nature of the work will present temporary work opportunities for area contractors.

NGTL noted that municipal tax payments related to the PRML have been ongoing for quite some time, however these tax payments will cease with the completion of abandonment activities. NGTL estimated that in 2015 they amounted to approximately \$1,157,000 and were paid in varying amounts to Clear Hills County, the County of Northern Lights, the Municipal District of Peace, Birch Hills County and the Municipal District of Greenview, accounting for between 0.3% and 6.7% of the total municipal tax collected for each municipality. NGTL stated that the loss of Project-related tax revenue in some municipalities is expected to be offset by tax revenues related to other planned projects in the Project area, should they move into construction or operations phases. NGTL further stated that changes in tax revenue sources over time are an ongoing planning consideration for all municipalities.

NGTL stated that current federal and provincial tax payments are related to the broader NGTL system and not to the specific Project components identified in this application. NGTL further stated that by maintaining the transportation of natural gas previously shipped via the PRML proposed to be abandoned, it anticipates that the effect to federal and provincial tax payments from abandonment will be minimal.

NGTL indicated that several Aboriginal groups expressed interest in potential contracting and employment opportunities relating to the Project.

NGTL committed to providing contracting and employment opportunities to qualified Aboriginal and local businesses. NGTL stated that it will follow its existing practice of encouraging local and Aboriginal content based on its Aboriginal Contracting and Employment program that aligns with TransCanada's Aboriginal Relations Policy. NGTL submitted that employment would be managed through a prime contractor and would occur closer to abandonment, however it committed to supporting local communities on this Project by providing contracting and employment opportunities on all NGTL projects to qualified Aboriginal and local businesses. NGTL explained it identified potential contracting and employment opportunities with the affected Aboriginal communities, and is beginning to assess contractor qualifications, capability, and readiness. NGTL noted that it will attempt to match the Aboriginal communities' and organizations' businesses with subcontracting and employment opportunities by facilitating discussions between each community or organization and the contractor. NGTL committed to provide timely communication of competitive employment, contracting and subcontracting opportunities for Aboriginal and local businesses for the Project. It stated that the prospective prime/general contractor(s) will have a contractual obligation to provide a plan and report on results of Aboriginal and Local employment and subcontracted spend.

### ***Views of Participants***

In its written evidence, Mountain Métis requested to be advised and engaged should future employment and contracting opportunities exist for the Project.

### ***Views of the Board***

The Board is of the view that the Project would temporarily benefit local, regional and provincial economies. The Board notes that the economic benefits are predominantly restricted to the Physical Abandonment Activities phase of the Project through both direct and indirect business opportunities and fees for permits. The Board further notes NGTL's commitment to provide opportunities for the employment of local and Aboriginal workers through its Aboriginal Contracting and Employment program. Given the small size of the workforce required for the Project, the Board is of the view that this is acceptable.

The Board acknowledges the concern of local governments with respect to the cessation of taxes on PRML assets resulting in an overall assessment loss for the counties. The Board agrees with NGTL that changes in tax revenue sources over time are an ongoing planning consideration for all municipalities; however the Board expects NGTL to provide reasonable notification to all potentially affected municipalities giving them adequate time to make the appropriate adjustments.

## Appendix I – List of Issues

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The Board has identified, but is not obliged to limit itself to, the following issues for consideration in the hearing with respect to the proposed Peace River Mainline Abandonment (Project).

1. The rationale for the Project.
2. Potential economic and financial impacts of the Project.
3. Potential environment and socio-economic effects of the Project, including any cumulative environmental effects that are likely to result from the Project, including those required to be considered by the National Energy Board's *Filing Manual*.
4. The appropriateness of the land requirements for the Project.
5. Potential impacts of the Project on Aboriginal interests.
6. Potential impacts of the Project on landowners and land use.
7. Contingency planning for product release, accidents or malfunctions, during abandonment activities of the Project.
8. The suitability of the abandonment plan for the Project, including the appropriateness of the method of abandonment.
9. Safety and security during abandonment and post-abandonment activities of the Project, including emergency response planning and third-party damage prevention.
10. The suitability of post-abandonment activities.
11. The terms and conditions to be included in any approval the Board may issue.

Note that compensation is outside the scope of the Board's jurisdiction and is therefore not included in the List of Issues for this hearing.

## Appendix II – Rulings and Procedural Updates

Date	Filing ID	Description
10 April 2017	A82532	<b>Ruling No. 1</b> – The Board established the List of Parties (includes NGTL and Intervenor), and the List of Commenters for the MH-002-2017 proceeding.
8 June 2017	A84293	<p><b>Ruling No. 2</b> – The Board granted late Intervenor standing to Centra Gas Manitoba Inc. (Centra).</p> <p><b>Procedural Update No. 1</b> – The Board granted Centra an extension to submit IRs and respond to IRs. The Board also announced its intention to hold a Community Meeting in August 2017.</p>
28 June 2017	A84678	<b>Procedural Update 2</b> – The Board provided information regarding the oral hearing to present Oral Traditional Evidence and Oral Statements on 17 August 2017.
17 July 2017	A84995	<p><b>Ruling No. 3</b> – The Board granted the Mountain Métis Nation Association of Alberta (Mountain Métis) status as joint-Intervenor with the Gunn Métis Local 55 (Lac. Ste. Anne Métis) (GML 55).</p> <p><b>Procedural Update No. 3</b> – The Board provided a revised timetable for the event dates that are scheduled to follow the Community Meeting.</p>
8 August 2017	A85363	<b>Procedural Update No. 4</b> – The Board granted the Intervenor’s request to change the date for Oral Traditional Evidence and oral statements. Also provided Guidance for the presentation of Oral Traditional Evidence.
29 September 2017	A86380	<b>Procedural Update No. 5</b> – The Board provided the date and location for the oral cross examination portion of the MH-002-2017 proceeding, notified Parties that final argument would be written, and requested Parties to identify their witness panels.

<b>5 October 2017</b>	A86608	<b>Ruling No. 4</b> – The Board granted a motion from GML 55 and Mountain Métis to file portions of their written evidence confidentially under subsection 16.1(a) of the <i>National Energy Board Act</i> (NEB Act).
<b>6 October 2017</b>	A86668	<b>Procedural Update No. 6</b> – The Board revised the deadline for NGTL to file reply evidence to 30 October 2017 in light of the Board’s issuance of IR No. 5 to NGTL.
<b>23 October 2017</b>	A87126	<b>Procedural Update No. 7</b> – The Board provided the date, time, location, order of appearances and general guidance related to the oral cross examination portion of the hearing.
<b>3 November 2017</b>	A87563	<b>Procedural Update No. 8</b> – The Board relocated the oral cross examination portion of the hearing to Calgary, Alberta on 8 November 2017 in light of the Intervenors’ withdrawals.
<b>8 November 2017</b>	A87657	<b>Ruling No. 5</b> – The Board orally granted GML 55 and Mountain Métis’ request to adopt their evidence by affidavit by 4:00 pm on 8 November 2017 and file written final argument.
<b>8 November 2017</b>	A87657	<b>Ruling No. 6</b> – The Board orally granted NGTL’s request to file Appendix 3.1 and 3.2 of its reply evidence confidentially under section 16.1 of the NEB Act.
<b>17 November 2017</b>	A87927	<b>Procedural Update No. 9</b> – The Board identified the deadlines for final argument for NGTL (24 November 2017), the Intervenors (1 December 2017), and the deadline for Final Reply Argument for NGTL (6 December 2017).



## Appendix III – Summary of Aboriginal concerns, and Applicant and NEB responses

This appendix provides a summary of the general and specific concerns and issues raised by Aboriginal groups through this proceeding, as well as summaries of the responses to these concerns provided by the applicant, responses by the Board (including recommended conditions), and applicable requirements provided through regulation and/or legislation. The issues and concerns include those raised directly by Aboriginal groups through their participation in the hearing, as well as summaries of Aboriginal concerns and interests as recorded by the applicant in its evidence. Table 6-1 in the Report refers to the written and oral submissions by Aboriginal Intervenors who participated in the hearing. The Board notes that identifying and referring to issues and concerns as contained within the record (as provided in this appendix) may have resulted in some issues being categorized in a summary manner. Some direct and indirect references within the record of the hearing may therefore not be exhaustively listed in the issues below. Anyone wishing to fully understand the context of the information and evidence provided by Aboriginal groups, as well as the applicable responses to these concerns by the applicant, should therefore familiarize themselves with the entire record of the hearing. Where there is an inconsistency with this Summary and the Decision, the Decision will prevail.

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
<b>Abandonment Plan</b>				
Appropriateness of abandonment plan proposed by the Proponent	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>NGTL stated that it considered a variety of factors in determining the appropriate plan for abandonment including regard for safety, environmental protection and cost-effectiveness.</li> </ul>	<ul style="list-style-type: none"> <li>The Board is satisfied that NGTL's abandonment plan is based upon sound assumptions and the expected risks are reasonable based upon existing industry knowledge.</li> <li>The Board imposes <b>Condition 16 (Abandoned Pipeline Monitoring Plan)</b> which requires NGTL to file, for approval, an abandoned pipeline monitoring plan, a systematic,</li> </ul>	2.4 (Chapter 2 Engineering Matters)



Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
		<ul style="list-style-type: none"> <li>NGTL further stated that based on the evidence it provided, abandonment-in-place is the most appropriate method of abandonment in the present circumstances.</li> </ul>	<p>explicit, comprehensive and proactive Abandoned Pipeline Monitoring Plan applicable to all areas of the Project where the pipeline is abandoned in place that includes identification of hazards (e.g., pipe exposure, ground subsidence), evaluation for associated risks, development of controls, and communication of identified hazards and control with all relevant stakeholders. <b>Condition 16</b> further requires NGTL to incorporate the results of consultation with potentially affected stakeholders, including GML 55 and Mountain Métis, into its abandoned pipeline monitoring plan.</p>	
<b>Consultation by the Proponent</b>				
Lack of meaningful or inclusive consultation by NGTL throughout the various phases of the Project	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>NGTL acknowledged that neither GML 55 nor Mountain Métis was initially identified as being affected by the Project and explained that its research and experience with GML 55 and Mountain Métis on other recent NGTL projects indicated that the Project was not within either group's traditional territory.</li> </ul>	<ul style="list-style-type: none"> <li>The Board is of the view that potentially affected Aboriginal groups were appropriately identified, given the information available at the time, and provided information about the Project.</li> <li>The Board is also of the view that NGTL's design and implementation of its Project-specific Aboriginal engagement activities are appropriate for the scope and scale of the Project.</li> </ul>	6.9.1 (Chapter 6 Aboriginal Matters)

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
		<ul style="list-style-type: none"> <li>• NGTL stated that since receiving GML 55 and Mountain Métis’ application to participate in the hearing process, it has pursued discussions with both groups to provide sufficient opportunities for GML 55 and Mountain Métis to gain understanding of the Project, communicate possible issues or concerns and to provide NGTL a better understand the boundaries of their traditional territory.</li> <li>• NGTL committed to provide Aboriginal groups with specific future opportunities to provide input on mitigation measures and monitoring plans.</li> </ul>	<ul style="list-style-type: none"> <li>• The Board finds that with NGTL’s commitments and the Board’s <b>Condition 8 (Aboriginal Engagement Reports), Condition 9 (Plan for Aboriginal Participation in Monitoring of Physical Abandonment Activities), Condition 11 (Reclamation Plan and Reclamation Monitoring Plan)</b> and <b>Condition 16 (Abandoned Pipeline Monitoring Plan)</b>, NGTL will continue to consult with Aboriginal groups to learn more about their interests and concerns, and to address issues that they may raise throughout the lifecycle of the Project.</li> </ul>	
Adequacy of opportunities provided to Aboriginal groups for monitoring/follow-up during the Project’s abandonment and post-abandonment phases	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>• NGTL committed to provide Aboriginal groups with specific future opportunities to provide input on mitigation measures and monitoring plans.</li> </ul>	<ul style="list-style-type: none"> <li>• The Board notes the value and unique perspective that Aboriginal groups can provide in determining mitigation measure effectiveness, partly based on their traditional knowledge.</li> <li>• The Board imposes <b>Condition 9 (Plan for Aboriginal Participation in Monitoring of Physical Abandonment Activities)</b> requiring NGTL to develop an Aboriginal Monitoring Plan during the physical abandonment activities of the Project.</li> <li>• The Board further imposes <b>Condition 11 (Reclamation Plan and</b></li> </ul>	6.9.3 (Chapter 6 Aboriginal Matters)

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
			<p><i>Reclamation Monitoring Plan</i>) and <b>Condition 16 (Abandoned Pipeline Monitoring Plan)</b>, requiring NGTL to consult with Aboriginal groups and report how it incorporated the results of its consultation on its development of reclamation and abandoned pipeline monitoring plans, respectively.</p>	
Lack of capacity support provided by NGTL to gather TEK/TLU information	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>• NGTL stated that the Project is an abandonment and it will not be entering into agreements with communities given the relatively limited and localized disturbance required for removal of existing facilities.</li> <li>• NGTL reviewed and responded to information provided through the public hearing process, including GML 55 and Mountain Métis’ oral traditional evidence, GML 55’s TLU Desktop Study and Mountain Métis’ Traditional Knowledge and Use Study.</li> </ul>	<ul style="list-style-type: none"> <li>• The Board is of the view that NGTL’s design and implementation of its Project-specific Aboriginal engagement activities, including those involving GML 55 and Mountain Métis, are appropriate for the scope and scale of the Project.</li> <li>• The Board finds that with NGTL’s commitments and the Board’s <b>Condition 8 (Aboriginal Engagement Reports), Condition 9 (Plan for Aboriginal Participation in Monitoring of Physical Abandonment Activities), Condition 11 (Reclamation Plan and Reclamation Monitoring Plan) and Condition 16 (Abandoned Pipeline Monitoring Plan)</b>, will continue to consult with Aboriginal groups to learn more about their interests and concerns, and to address issues that they may raise throughout the lifecycle of the Project.</li> </ul>	6.9.2 (Chapter 6 Aboriginal Matters)

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
<b>Consultation by Government(s)</b>				
Adequacy of consultation by government	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>The Government of Canada has indicated that it will rely on the Board's process to the extent possible to discharge the Crown's duty to consult.</li> <li>Considering all of the findings in this Decision, the Board is of the view that the requirements of section 35 of the <i>Constitution Act</i>, 1982 have been met, such that an approval of this Project is in keeping with the honour of the Crown.</li> <li>The Board administered its Participant Funding Program for this Project, which provides financial assistance to support participation of Aboriginal and other affected groups.</li> </ul>	6.2 and 6.9.6 (Chapter 6 Aboriginal Matters)
<b>Effects on Asserted and Established Treaty and Aboriginal Rights</b>				
Impact on specific right, or asserted or established Aboriginal or Treaty right	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>NGTL stated that since receiving GML 55 and Mountain Métis' application to participate in the hearing process, it has pursued discussions with both groups to provide sufficient opportunities for GML 55 and Mountain Métis to gain understanding of the Project, communicate possible issues or concerns and to provide</li> </ul>	<ul style="list-style-type: none"> <li>The Board has considered the information submitted regarding the nature of potentially affected Aboriginal groups' interests in the Project area, including information on constitutionally protected Aboriginal and treaty rights. The Board has also considered the anticipated effects of the Project on those interests and the concerns expressed by Aboriginal</li> </ul>	6.9.4 (Chapter 6 Aboriginal Matters)

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
		<p>NGTL a better understand the boundaries of their traditional territory.</p> <ul style="list-style-type: none"> <li>• NGTL committed to provide Aboriginal groups with specific future opportunities to provide input on mitigation measures and monitoring plans.</li> </ul>	<p>groups. The Board is of the view that there has been adequate consultation and accommodation for the purpose of the Board’s decision on this Project.</p> <ul style="list-style-type: none"> <li>• The Board is of the view that the concerns raised by the GML 55 and Mountain Métis can be mitigated through the use of standard mitigation presented in NGTL’s Application, including its Environmental Protection Plan (EPP).</li> <li>• The Board finds that with NGTL’s commitments and the Board’s <b>Condition 8 (Aboriginal Engagement Reports), Condition 9 (Plan for Aboriginal Participation in Monitoring of Physical Abandonment Activities), Condition 11 (Reclamation Plan and Reclamation Monitoring Plan) and Condition 16 (Abandoned Pipeline Monitoring Plan)</b>, NGTL will continue to consult with Aboriginal groups to learn more about their interests and concerns, and to address issues that they may raise throughout the lifecycle of the Project.</li> </ul>	

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
<b>Effects on Aboriginal Culture and Institutions</b>				
Project impacts on social and cultural wellbeing, including transmission of knowledge between generations, and changes to the use and understanding of the Indigenous language of an Aboriginal group and its members, due to changes/reductions in traditional land and resource use (TLRU) activities and/or changes to associated resources	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>• NGTL will implement a suite of mitigation measures outlined in its Environment and Socio-Economic Assessment (ESA), as well as its EPP.</li> <li>• NGTL committed to continue to document concerns expressed regarding potential impacts to community well-being including the transmission of knowledge between generations as it is made available and through its Aboriginal Engagement Program, will continue to seek understand and address these concerns.</li> </ul>	<ul style="list-style-type: none"> <li>• The Board is of the view that the concerns raised by the GML 55 and Mountain Métis can be mitigated through the use of standard mitigation presented in NGTL’s Application, including its EPP.</li> <li>• The Board finds that with NGTL’s commitments and the Board’s <b>Condition 8 (Aboriginal Engagement Reports)</b>, NGTL will continue to consult with Aboriginal groups in order to learn more about their interests and concerns, and to address issues that they may raise throughout the lifecycle of the Project.</li> </ul>	6.9.5 (Chapter 6 Aboriginal Matters)
<b>Effects on the current uses of lands and resources for traditional purposes</b>				
Temporary or permanent effects on the current use of lands and resources for traditional purposes, including hunting, fishing, trapping, harvesting, travelways, gathering sites, cultural or spiritual sites, and traditional trade or commerce activities	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>• NGTL stated that it is unlikely that effects of abandonment in place of the PRML pipeline could affect TLRU.</li> <li>• NGTL further submitted that given the relatively limited and localized disturbance required for removal of existing facilities, it is expected that any effects on current use of land or resources</li> </ul>	<ul style="list-style-type: none"> <li>• The Board is of the view that the potential adverse effects of the Project on the current use of lands and resources for traditional purposes by Aboriginal persons are not likely to be significant.</li> <li>• The Board finds that with NGTL’s commitments and the Board’s <b>Condition 8 (Aboriginal Engagement Reports), Condition 9</b></li> </ul>	6.9.4 (Chapter 6 Aboriginal Matters)

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
		<p>for traditional purposes will be temporary and reversible, and where above ground facilities are removed and the PDAs are reclaimed, there is a potential for positive effects, such as an increase in available resources for traditional uses.</p>	<p><i>(Plan for Aboriginal Participation in Monitoring of Physical Abandonment Activities), Condition 11 (Reclamation Plan and Reclamation Monitoring Plan) and Condition 16 (Abandoned Pipeline Monitoring Plan),</i> NGTL will continue to consult with Aboriginal groups to learn more about their interests and concerns, and to address issues that they may raise throughout the lifecycle of the Project.</p>	
<p>Cumulative effects on the current use of lands and resources for traditional purposes.</p>	<p>GML 55 Mountain Métis</p>	<ul style="list-style-type: none"> <li>• NGTL stated that the Project will not increase the industrial footprint on the landscape and will therefore not alter the amount of Crown land available for TLU activities. Where above-ground facilities are removed and vegetation is allowed to re-grow, there is a potential for positive effects, such as an increase in available resources for traditional uses.</li> </ul>	<ul style="list-style-type: none"> <li>• With respect to residual effects of activities associated with the removal of facilities, the Board finds that while these may temporarily cumulate with effects from other nearby construction activities at the time of physical abandonment activities, the Project is not likely to have any meaningful adverse effects beyond those already existing from the current pipeline and ROW.</li> <li>• The Board notes that as a regulated abandonment project, the entire RoW, as well as PDA sites, to be reclaimed will likely provide potential for positive environmental benefits. The Board is of the view that the Project provides opportunities to incrementally reduce landscape cumulative effects, such as the</li> </ul>	<p>6.9.4 (Chapter 6 Aboriginal Matters) 7.8 (Chapter 7 Environment and Socio-Economic Matters)</p>

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
			<p>restoration of watercourse flow and fish passage at Four Mile Creek and the regrowth of natural vegetation along the RoW.</p> <ul style="list-style-type: none"> <li>The Board notes that where above ground facilities are removed and the PDAs are reclaimed, there is a potential for positive effects such as the increase in available land and resources for traditional uses where removal of above ground facilities occurs.</li> </ul>	
<b>Effects on Health of Aboriginal people</b>				
<p>Project impacts on contamination or perceptions of contamination of country foods, contamination of drinking water and diet (reduction in consumption of country foods)</p>	<p>GML 55 Mountain Métis</p>	<ul style="list-style-type: none"> <li>NGTL will implement a suite of mitigation measures outlined in its ESA, as well as its EPP.</li> <li>NGTL committed to delineating areas of contamination, removing and disposing of any contamination at an approved facility. The contaminated soils would be replaced with suitable fill material.</li> <li>NGTL stated that corrosion of the pipeline is expected to occur slowly and over many years and the risk for effects related to potential contaminants in the pipe to be low.</li> </ul>	<ul style="list-style-type: none"> <li>The Board is of the view that the concerns raised by the GML 55 and Mountain Métis can be mitigated through the use of standard mitigation presented in NGTL’s Application, including its EPP. The Board has imposed <b>Condition 12 (Updated Environmental Protection Plan)</b> requiring NGTL to file an updated EPP that incorporates all mitigation and monitoring commitments made by NGTL during the hearing process.</li> <li>The Board acknowledges that NGTL will conduct Phase I and II Environmental Site Assessments for the PRML to determine any areas of historical contamination, and has committed to filing a Notice of</li> </ul>	<p>2.5 (Chapter 2 Engineering Matters) 7.6.2.1, 7.6.2.3 and 7.7.2 (Chapter 7 Environment and Socio-Economic Matters)</p>



Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
		<ul style="list-style-type: none"> <li>NGTL committed that in the unlikely event of contamination from the pipe becoming an issues, NGTL will be available to respond to issues on a case by case basis.</li> </ul>	<p>Contamination with the Board and to following the NEB <i>Remediation Process Guide</i> where soil contamination is found. The Board will continue to have regulatory oversight of the abandoned PRML pipeline to ensure that any historical contamination issues are addressed. The Board has the authority to order further remedial work if it is not satisfied that a site has been adequately remediated.</p> <ul style="list-style-type: none"> <li>The Board is satisfied that pipeline coating chemicals will not have an effect on the environment. The Board is of the view that NGTL has provided sufficient evidence to demonstrate that movement of potential contaminants from pipe coatings is unlikely to occur.</li> <li>The Board imposes <b>Condition 16 (Abandoned Pipeline Monitoring Plan)</b> which requires NGTL to file, for approval, an abandoned pipeline monitoring plan that includes identification of hazards (e.g., pipe exposure, ground subsidence), evaluation for associated risks, development of controls, and communication of identified hazards and control with all relevant stakeholders. <b>Condition 16</b> further requires NGTL to incorporate the</li> </ul>	

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
			results of consultation with potentially affected stakeholders, including GML 55 and Mountain Métis, into its abandoned pipeline monitoring plan.	
<b>Employment and Economy</b>				
Adequacy of the Proponent's proposals for temporary or permanent employment opportunities for Aboriginal individuals, communities and businesses	Sturgeon Lake Cree Nation Mountain Métis Sucker Creek First Nation	<ul style="list-style-type: none"> <li>• NGTL stated that it will follow its existing practice of encouraging local and Aboriginal content based on its Aboriginal Contracting and Employment program that aligns with TransCanada's Aboriginal Relations Policy.</li> <li>• NGTL committed to attempt to match the Aboriginal communities' and organizations' businesses with subcontracting and employment opportunities by facilitating discussions between each community or organization and the contractor.</li> <li>• NGTL further committed to providing timely communication of competitive employment, contracting and subcontracting opportunities for Aboriginal and Local businesses for the Project.</li> </ul>	<ul style="list-style-type: none"> <li>• The Board notes that NGTL has an Aboriginal Contracting and Employment program which aims to provide economic benefits from its projects and operations for Aboriginal communities.</li> <li>• The Board further notes that NGTL committed to provide potential economic development opportunities, including contracting and employment, to all potentially impacted Aboriginal groups.</li> </ul>	8.2 (Chapter 8 Infrastructure, Employment and Economy)

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
<b>Environmental Effects</b>				
Effects on soil and soil productivity, including historic spills	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>• NGTL committed to follow the mitigation measures in its EPP to address soil and soil productivity concerns including site preparation, materials handling and reclamation measures.</li> <li>• NGTL committed to delineating areas of contamination, removing and disposing of any contamination at an approved facility. The contaminated soils would be replaced with suitable fill material.</li> </ul>	<ul style="list-style-type: none"> <li>• The Board is of the view that the environmental concerns raised by the GML 55 and Mountain Métis can be mitigated through the use of standard mitigation presented in NGTL's Application, including its EPP. The Board has imposed <b>Condition 12 (Updated Environmental Protection Plan)</b> to file an updated EPP that incorporates all mitigation and monitoring commitments made by NGTL during the hearing process and requires that the Soils Contingency Plan within the EPP be revised to include a list of the applicable regulations, a specific notification plan in the event contamination is found, as well as a commitment to place signage at known and suspect areas of contamination along the RoW.</li> <li>• The Board acknowledges that NGTL will conduct Phase I and II Environmental Site Assessments for the PRML to determine any areas of historical contamination, and has</li> </ul>	7.6.2.1 and 7.6.2.3 (Chapter 7 Environment and Socio-Economic Matters)

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
			<p>committed to filing a Notice of Contamination with the Board and to following the NEB <i>Remediation Process Guide</i> where soil contamination is found. The Board will continue to have regulatory oversight of the abandoned PRML pipeline to ensure that any historical contamination issues are addressed. The Board has the authority to order further remedial work if it is not satisfied that a site has been adequately remediated.</p>	
<p>Effects on vegetation and wetlands, including introduction of noxious weeds</p>	<p>GML 55 Mountain Métis</p>	<ul style="list-style-type: none"> <li>• NGTL committed to following the standard industry practices and site specific mitigation for vegetation, wetlands and noxious weeds provided in the EPP.</li> <li>• NGTL stated that the physical abandonment activities would occur within the existing RoW and site boundaries.</li> <li>• NGTL stated it would avoid working within wetlands to the extent possible.</li> </ul>	<ul style="list-style-type: none"> <li>• The Board is of the view that the environmental concerns raised by the GML 55 and Mountain Métis can be mitigated through the use of standard mitigation presented in NGTL's Application, including its EPP. The Board has imposed <b>Condition 12 (Updated Environmental Protection Plan)</b> to file an updated EPP that incorporates all mitigation and monitoring commitments made by NGTL during the hearing process.</li> <li>• The Board notes that the EPP contains specific mitigation to prevent introduction of noxious weeds and a contingency plan for the discovery of rare plants.</li> </ul>	<p>7.6.2.1 (Chapter 7 Environment and Socio-Economic Matters)</p>

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
Effects on aquatic resources including fish and fish habitat	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>• NGTL has committed to conducting pipe removal via trenchless crossing method with no instream works. The contingency removal plan consists of an open cut method during winter conditions, avoiding work during the restricted activity period.</li> <li>• NGTL has committed to conducting the instream pipe removal activities for Four Mile Creek and the Unnamed Tributary to Little Smoky River when the watercourses are dry or have minimal flow.</li> <li>• NGTL committed to following the mitigation measures and best management practices in the EPP for mitigating erosion and potential spill concerns.</li> </ul>	<ul style="list-style-type: none"> <li>• The Board is of the view that the environmental concerns raised by the GML 55 and Mountain Métis can be mitigated through the use of standard mitigation presented in NGTL's Application, including its EPP. The Board has imposed <b>Condition 12 (Updated Environmental Protection Plan)</b> to file an updated EPP that incorporates all mitigation and monitoring commitments made by NGTL during the hearing process.</li> </ul>	7.6.2.1 (Chapter 7 Environment and Socio-Economic Matters)
Ground water resources, including adequacy of the Proponent's conclusion(s) on effects (including significance)	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>• NGTL indicated that in most cases the wells are located greater than 100 m from the PRML pipeline. In addition, the surficial geology shows that the pipeline sits above an impervious clay layer located above the water well aquifer.</li> <li>• NGTL has committed to dewatering only when required, and will keep it to short periods</li> </ul>	<ul style="list-style-type: none"> <li>• The Board is of the view that the environmental concerns raised by the GML 55 and Mountain Métis can be mitigated through the use of standard mitigation presented in NGTL's Application, including its EPP. The Board has imposed <b>Condition 12 (Updated Environmental Protection Plan)</b> to file an updated EPP that incorporates all mitigation and</li> </ul>	7.6.2.1 (Chapter 7 Environment and Socio-Economic Matters)

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
		<p>of time, and NGTL will develop specific mitigation in the event that artesian conditions or springs and groundwater are encountered.</p> <ul style="list-style-type: none"> <li>• NGTL committed to having spill prevention, containment and clean-up materials on any vehicles equipped with box mounted fuel tanks. Where these vehicles are located near waterbodies and watercourses the spill materials will be suitable for both land and water.</li> </ul>	<p>monitoring commitments made by NGTL during the hearing process.</p>	
Effects on wildlife and wildlife habitat	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>• NGTL committed to working outside of the identified sensitive and restricted activity periods for migratory birds, raptors, species at risk and species of management concern where possible.</li> <li>• NGTL has also committed to avoid sensitive periods in habitats for sensitive wildlife including secondary grizzly zones, sharp tailed grouse survey area, Key Wildlife Biodiversity Zone and the Chinchaga caribou range.</li> <li>• NGTL committed to conducting pre-abandonment surveys, setting out buffer zones and</li> </ul>	<ul style="list-style-type: none"> <li>• The Board is of the view that the environmental concerns raised by the GML 55 and Mountain Métis can be mitigated through the use of standard mitigation presented in NGTL's Application, including its EPP. The Board has imposed <b>Condition 12 (Updated Environmental Protection Plan)</b> to file an updated EPP that incorporates all mitigation and monitoring commitments made by NGTL during the hearing process.</li> <li>• The Board imposes <b>Condition 14 (Chinchaga Caribou Range Vegetation Restoration Plan)</b> requiring NGTL to file a restoration plan for the RoW within the Chinchaga caribou range.</li> </ul>	7.6.2.1 and 7.6.2.4 (Chapter 7 Environment and Socio-Economic Matters)

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
		<p>consulting with the appropriate regulatory authority where required should avoidance of these sensitive or restricted activity periods not be possible.</p> <ul style="list-style-type: none"> <li>• NGTL has committed to conduct reclamation for all PDAs and reclamation monitoring for the entire RoW until it reaches equivalent land capability.</li> <li>• NGTL committed to restore habitat within the Chinchaga caribou range using measures appropriate to the site type and surrounding vegetation.</li> </ul>	<ul style="list-style-type: none"> <li>• The Board imposes <b>Condition 11 (Reclamation Plan and Reclamation Monitoring Plan) and Condition 20 (Condition Compliance by an Accountable Officer)</b>. <b>Condition 11</b> requires NGTL to file a Reclamation Plan and Reclamation Monitoring Plan that provides a description of the reclamation measures to be applied as well as identifies the criteria and thresholds that will be used to determine that the RoW has reached equivalent land capability. <b>Condition 20</b> requires that NGTL report to the Board on the status of reclamation progression.</li> <li>• The Board expects that NGTL will implement appropriate remedial reclamation measures should consultation or monitoring reveal areas along any part of the RoW that show a noticeable delay in natural regeneration.</li> </ul>	
Effects on Air Emissions	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>• NGTL has committed to standard mitigation for physical activities in its EPP around vehicle idling, multi-passenger vehicle use and using well maintained equipment.</li> <li>• NGTL stated that the Project's contribution to CAC emission releases are considered to be</li> </ul>	<ul style="list-style-type: none"> <li>• The Board is of the view that the environmental concerns raised by the GML 55 and Mountain Métis can be mitigated through the use of standard mitigation presented in NGTL's Application, including its EPP. The Board has imposed <b>Condition 12 (Updated Environmental Protection Plan)</b> to file an updated EPP that</li> </ul>	7.6.2.1 (Chapter 7 Environment and Socio-Economic Matters)

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
		<p>low. The Project contributes less than 0.01 % of Alberta total reported5 emissions for NOX, SO2 and CO and less than 0.3% of reported TSP, PM10 and PM2.5 emissions.</p> <ul style="list-style-type: none"> <li>• NGTL stated that the Project’s contribution to GHG releases are considered to be low and the calculated emissions represent 0.0009% of the 2014 provincial total GHG emissions for Alberta, and 0.0003% of the 2014 national total GHG emissions.</li> </ul>	<p>incorporates all mitigation and monitoring commitments made by NGTL during the hearing process.</p> <ul style="list-style-type: none"> <li>• The Board imposes <b>Condition 18 (Air Emission Reporting)</b> requiring NGTL to provide the volumes of natural gas and CO<sub>2</sub>e released during the purging of the pipeline.</li> </ul>	
Pipe corrosion from pipe abandoned in place	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>• NGTL stated that any ground subsidence would likely be gradual over time and limited in depth. Road crossings with less than 2.5 m of cover will be mitigated by plating and filling the pipe segment under the road using concrete, filcrete or other suitable material. In cultivated areas, it is expected that normal cultivation activities would correct the subsidence, if not then additional fill or topsoil could be added to the areas.</li> </ul>	<ul style="list-style-type: none"> <li>• The Board imposes <b>Condition 16 (Abandoned Pipeline Monitoring Plan)</b> which requires NGTL to file, for approval, an abandoned pipeline monitoring plan that includes identification of hazards (e.g., pipe exposure, ground subsidence), evaluation for associated risks, development of controls, and communication of identified hazards and control with all relevant stakeholders. The Board also expects this plan to describe the methods for, including the frequency of, monitoring, and that the plan should demonstrate how the methods will be effective in identifying any issues arising over time. <b>Condition 16</b> further requires NGTL to incorporate</li> </ul>	7.7.2 (Chapter 7 Environment and Socio-Economic Matters)



Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
			<p>the results of consultation with potentially affected stakeholders, including GML 55 and Mountain Métis Nation Association, into its abandoned pipeline monitoring plan.</p>	
<p>Pipe abandoned in place acting as conduit</p>	<p>GML 55 Mountain Métis</p>	<ul style="list-style-type: none"> <li>• NGTL stated that the pipe will be cleaned and pigged, then segmented into 32 sections based on the topography of the RoW in relation to wetlands and watercourses and the following activities: <ul style="list-style-type: none"> <li>○ isolation and removal of two side valves;</li> <li>○ removal of pipeline at three watercourses;</li> <li>○ removal of approximately 9 km of pipeline on the SLCN Reserve Lands;</li> <li>○ removal of above ground facilities;</li> <li>○ plating and filling five highway crossings and 11 public and private road crossings.</li> </ul> </li> <li>• As the PRML carried natural gas, and will be cleaned and pigged during abandonment, it is assumed that the abandoned in place pipeline will not contain</li> </ul>	<ul style="list-style-type: none"> <li>• The Board imposes <b>Condition 16 (Abandoned Pipeline Monitoring Plan)</b> which requires NGTL to file, for approval, a post abandonment monitoring plan that includes identification of hazards (e.g., pipe exposure, ground subsidence), evaluation for associated risks, development of controls, and communication of identified hazards and control with all relevant stakeholders. The Board also expects this plan to describe the methods for, including the frequency of, monitoring, and that the plan should demonstrate how the methods will be effective in identifying any issues arising over time. <b>Condition 16</b> further requires NGTL to incorporate the results of consultation with potentially affected stakeholders, including GML 55 and Mountain Métis Nation Association, into its abandoned pipeline monitoring plan.</li> </ul>	<p>7.7.2 (Chapter 7 Environment and Socio-Economic Matters)</p>

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
		residual contaminants that pose a risk to the environment or to human health.		
Pipe exposure, (including buoyancy in wetlands, reduced depth of cover and frost heave)	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>• NGTL stated the PRML pipeline was designed to have negative buoyancy when empty and has already been largely depressurized. Any existing buoyancy control mechanisms will remain in place on the abandoned pipe. As a result, NGTL expects little change in buoyancy from pipeline purging activities.</li> <li>• Terrestrial pipe exposure due to soil erosion or frost heave is unlikely as the pipeline was typically buried to approximately 1 m in depth during installation, and has no known depth of cover concerns.</li> <li>• If issues associated with the abandoned-in-place pipeline are identified in the future, NGTL will work with stakeholders and the NEB, as needed, to appropriately respond to those issues.</li> </ul>	<ul style="list-style-type: none"> <li>• The Board imposes <b>Condition 16 (Abandoned Pipeline Monitoring Plan)</b> which requires NGTL to file, for approval, an abandoned pipeline monitoring plan that includes identification of hazards (e.g., pipe exposure, ground subsidence), evaluation for associated risks, development of controls, and communication of identified hazards and control with all relevant stakeholders. The Board also expects this plan to describe the methods for, including the frequency of, monitoring, and that the plan should demonstrate how the methods will be effective in identifying any issues arising over time. <b>Condition 16</b> further requires NGTL to incorporate the results of consultation with potentially affected stakeholders, including GML 55 and Mountain Métis Nation Association, into its abandoned pipeline monitoring plan.</li> </ul>	7.7.2 (Chapter 7 Environment and Socio-Economic Matters)

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
<b>ESA Methodology</b>				
Adequacy of Environmental and Socio-economic Assessment (ESA) methodology and incorporation of traditional knowledge and Indigenous concerns	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>In NEB IR 1.1, the Board required NGTL to provide an assessment of project effects on the current and reasonably foreseeable future use of lands and resources for traditional purposes by Aboriginal people. NGTL stated that given the relatively limited and localized disturbance required for removal of existing facilities, it is expected that any effects on current use of land or resources for traditional purposes will be temporary and reversible, and where above ground facilities are removed and the PDAs are reclaimed, there is a potential for positive effects, such as an increase in available resources for traditional uses.</li> </ul>	<ul style="list-style-type: none"> <li>The Board's Filing Manual provides guidance to proponents on what should be included in the ESA with respect to TLRU.</li> <li>With the submission of its response to NEB IR 1.1, the Board is of the view that NGTL has met the requirements of the Filing Manual for the assessment of project effects on the current and reasonably foreseeable future use of lands and resources for traditional purposes by Aboriginal people.</li> </ul>	6.9.5 (Chapter 6 Aboriginal Matters)
<b>Follow-up and Monitoring</b>				
Adequacy of the Proponent's proposed plans/programs, including reclamation activities and monitoring until equivalent land capability is achieved (timing, extent, scope,	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>NGTL stated that its monitoring plan would include reclamation monitoring of the RoW until equivalent land capability has been achieved, and then no further monitoring would be conducted with the exception of</li> </ul>	<ul style="list-style-type: none"> <li>The Board notes the evidence presented regarding the apparent state of natural regeneration occurring along the RoW and does not see a case for requiring active reclamation along the entire length of the RoW. The Board notes that NGTL's</li> </ul>	7.6.2.1 (Chapter 7 Environment and Socio-Economic Matters)

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
methods, adaptive management)		<p>sections where the abandoned in place pipeline is located within a shared RoW with an active NGTL pipeline.</p> <ul style="list-style-type: none"> <li>• NGTL’s reclamation monitoring of the PDA’s will include a visual inspection, with more detailed assessments completed where potential issues with landscape, vegetation or soils are observed.</li> <li>• NGTL stated that where reclamation monitoring indicates mitigation measures are not performing as intended, an adaptive management approach will be implemented to achieve reclamation success.</li> </ul>	<p>reclamation monitoring is to occur at all PDAs and along the remaining portion of the RoW until equivalent land capability has been achieved. The Board is of the view that the RoW reaching equivalent land capability does not eliminate the potential for future issues with pipe exposure, pipe conduit and contamination effects, or ground subsidence issues. Therefore the Board expects that NGTL will continue to monitor the PRML pipe abandoned in place to confirm the effectiveness of the mitigation measures in avoiding or reducing environmental effect.</p> <ul style="list-style-type: none"> <li>• The Board finds that with NGTL’s commitments and the Board’s <b>Condition 8 (Aboriginal Engagement Reports)</b>, <b>Condition 9 (Plan for Aboriginal Participation in Monitoring of Physical Abandonment Activities)</b>, <b>Condition 11 (Reclamation Plan and Reclamation Monitoring Plan)</b> and <b>Condition 16 (Abandoned Pipeline Monitoring Plan)</b>, NGTL will continue to consult with Aboriginal groups to learn more about their interests and concerns, and to address issues that they may raise throughout the lifecycle of the Project.</li> </ul>	

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
<b>Engineering and safety</b>				
Potential of chemicals coating on the pipelines affecting the environment	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>NGTL ESA Section 15.3.2.1 NGTL states “potential contaminants derived from breakdown of pipe coatings following abandonment (such as polyaromatic hydrocarbons [PAHs]) have a low solubility in water, sorb to soil carbon and can be broken down over time by soil microorganisms (NOVA Chemicals 2015). As a result, movement of contaminants leached from pipe coatings is unlikely to occur in association with water flow in conduits.”</li> </ul>	<ul style="list-style-type: none"> <li>The Board is satisfied that pipeline coating chemicals will not have an effect on the environment. The Board is of the view that NGTL has provided sufficient evidence to demonstrate that movement of potential contaminants from pipe coatings is unlikely to occur.</li> </ul>	2.5 (Chapter 2 Engineering Matters)
<b>Emergency Response</b>				
Adequacy of the proponent’s emergency planning and incident notification measures	GML 55 Mountain Métis	<ul style="list-style-type: none"> <li>NGTL stated that the Project will be carried out in accordance with the Canadian Standards Association (CSA) Z662-15, <i>Oil and Gas Pipeline Systems</i>, the OPR, and the NEB Act.</li> <li>The careful planning of the Project and the implementation of proven and effective mitigation measures such as the Project-specific EPP and</li> </ul>	<ul style="list-style-type: none"> <li>The Board recognizes that public safety is paramount throughout the lifecycle of any project.</li> <li>The Board is of the view that the measures proposed by NGTL to address safety and to address emergency preparedness and response are appropriate.</li> </ul>	2.6 (Chapter 2 Engineering Matters)

Concern	Group(s)	Company response	NEB response (including recommended conditions, and applicable regulatory and legislative requirements)	Concordance (in Report)
		<p>NGTL's Emergency Response Plan will limit the potential for effects resulting from accidents, malfunctions, and unplanned events to occur, and will enable NGTL to quickly deal with resultant effects should any use unlikely event occur.</p>		