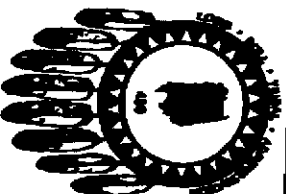


LOUIS BULL TRIBAL ADMINISTRATION

PHONES: 780-585-3967
780-585-3960
780-585-3978
FAX: 780-585-5709



BOX 130
HOBEMA, ALBERTA
T0C 1N0

Your file:
Our file:

MAIL ROOM
SALLE DE COURIER
2016 AUG -8 P 14:41
REC/CINE

FAX

To: Shere Jung-Secretary From: Louis Bull Tribe
Norman Saddleback

Fax: 403-292-5503 Pages: 31

Phone: 1-800-899-1265 Date: Aug 8, 2016

Re: _____ Cc: _____

☒ Urgent ☒ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

Comments:

As per our discussions. Today's air
phase date to submit as Louis
Bull Tribe - the cover letter is
currently under review + will be
submitted after final approval. The 1987's
Regulation Manual Meeting. Thank you
JF.

This message is intended only for the above mentioned individual and may contain information that is privileged and confidential. If you have received this fax in error, please contact the above number.

SENT BY:

Shere Jung

MAIL ROOM
SALLE DE COURIER
2016 AUG -8 P 4:41
NEB/CNE

National Energy
Board



Office national
de l'énergie

Energy East Project and Asset Transfer Application to Participate

Step 1 – I am applying as:

A Group

Select which one best describes your Group:

- ☒ **My group is an organization that will represent its own interests.**
- ☐ **My group is a collection of individuals with common interests. If so, you MUST list the first and last names of the individual(s) you represent for this ATP Form to be considered and you must check the box below.**
- ☐ **I have permission to identify and speak on behalf of the people listed below.**

Name (s): _____

(You may attach additional pieces of paper if required).

NOTE: Individual persons you are representing as part of a Group with a common interest do not have to complete a separate ATP form.

The following describes the categories under which you may apply. If you want to apply as an individual or authorized representative, please contact the National Energy Board (NEB or Board) and request a form for that category.

An **Individual** is one person or landowner who may or may not have a lawyer or person speaking on their behalf and who will represent their own personal interests. Apply as an Individual if you plan to bring forward issues regarding personal impacts or property-specific issues, and you are not represented by a Group. Use the **Individual ATP Form** if you have a lawyer or representative but are filling in the ATP Form yourself. If your lawyer or representative is filling in a form for you, you do not need to complete a separate ATP Form.

An **Authorized Representative on Behalf of an Individual** is someone who speaks or submits documents on behalf of an individual. This may be a lawyer or other person. An Authorized Representative will present the views and personal interests of the Individual they are representing.

A Group is:

- an organization with its own interests (for example, a company, NGO, special interest group, Aboriginal group, government agency), or
- a collaboration of two or more people that represents the common interests of those people.

The Group will have a Main Contact Person(s) and may also have an Authorized Representative such as a lawyer. The Main Contact Person will usually fill out the ATP Form on the Group's behalf and will respond to questions in the hearing on behalf of the Group if participation is granted. A Group representing an Individual should select the ATP Form for **Authorized Representative on Behalf of an Individual**.

Since participating in an NEB hearing can require considerable time and resources, we encourage people with similar interests or views to apply to participate as a Group.

Step 2 – Hearing Information

The Energy East Project is defined as an approximate 4,500 km pipeline system designed to transport crude oil from receipt points in Alberta and Saskatchewan to delivery points in Quebec and New Brunswick. The proposed Project would include:

- The acquisition of natural gas facilities by Energy East Pipeline Ltd. from TransCanada PipeLines Limited and the conversion of those facilities to oil service;
- New pipeline construction in Alberta, Saskatchewan, Manitoba, Eastern Ontario, Québec and New Brunswick to line up with the converted pipe;
- Constructing the associated facilities, pump stations and tank terminals required to move crude oil, including marine facilities that enable access to other markets by ship.

Project Name: Energy East Project and Asset Transfer
Company Name: Energy East Pipeline Ltd.
NEB File Number: OF-Fac-Oil-E266-2014-01 02

Participant Funding is available for this hearing. The deadline to apply for funding will be announced at a later date. For more information on eligibility and how to apply for funding, call 1-800-899-1265 (toll-free) or 403-299-2790 (direct).

The National Energy Board (NEB or Board) has people who can help you to understand the Board's process and answer your questions about process. They can also assist you if you have questions about filling in this ATP form.

For process support on this hearing please contact the Process Advisory Team by emailing energyeast.processhelp@neb-one.gc.ca or calling toll free 1-800-899-1265.

Step 3 – Important Information

The NEB will use only the information provided in this ATP Form to decide whether you are allowed to participate in this hearing. Previously submitted information will not be considered. It is important to provide all the requested information on this ATP Form. It is your responsibility to demonstrate that the NEB should allow you to participate.

You must fully complete all required fields on this ATP Form in order to be considered.

If you do not provide sufficient information on this ATP Form, you will not be allowed to participate.

You should refer to the Guidance document called *Guidance Document on Section 55.2 and Participation in a Facilities Hearing (Appendix A)* when filling in your ATP form.

Service: You must send a copy of your final ATP Form on Energy East Pipeline Ltd. to the following addresses:

Ms. Adrienne Menzies
Facilities Applications Manager
Regulatory Services
TransCanada PipeLines Limited
450 - 1 St SW
Calgary, AB T2P 5H1
Facsimile 403-920-2347

Email: adrienne_menzies@transcanada.com

Ms. Elizabeth Swanson
Associate General Counsel
Pipelines and Regulatory Law
TransCanada PipeLines Limited
450 - 1 St SW
Calgary, AB T2P 5H1
Facsimile 403-920-2310

Email: elizabeth_swanson@transcanada.com

Step 4 – Privacy Agreement

All information and documents you file with the Board as part of this proceeding, including your personal and contact information, will be part of the Board's public record and will be available on the Board's online registry and in its library.*

The Board is authorized to collect, use and disclose your personal information under the authority of the *National Energy Board Act* (NEB Act) and the *National Energy Board Rules of Practice and Procedure, 1995*, and does so in accordance with the *Privacy Act* and *Access to Information Act*.

For more information about your privacy on the NEB's website, please see the NEB website at: <http://www.neb-one.gc.ca/gbl/mprint/nc-eng.html>

Ensure that the contact information you provide is accurate as it will be used by the Board and other Parties to contact you or serve documents on you.

By signing here, you consent to the Board collecting, using and disclosing the personal information submitted here for any purpose related to its proceedings and activities and without your further consent.



Signature

* If the documents you wish to file in this proceeding contain confidential information that you do not want the public to view, submit them to the Board in hard copy along with a request for confidentiality under section 16.1 or 16.2 of the NIB Act. Section 1.5 of the Filing Manual explains what process to follow to submit a request for confidentiality.

5

Step 5 - Contact Information - Group's Main Contact

Enter the name of the person who will appear as your Group's contact on the List of Parties. Any questions or correspondence to the Group will be sent to the person listed below.

Name of Company or Group
Louis Bull Tribe

Name [Mr., Mrs., Ms.; First Name; Last Name]
Mrs. Allison Adams - Bull

Address 1 [apt.; street; city]
PO Box 130

Address 2 [province; postal code; zip code; country]
Marsuacis, AB, T0C 1N0

Phone 780.585.3978
Fax 780
Email adamsbull@outlook.ca

Step 6 - Contact Information - Authorized Representative for Group

A Group's Authorized Representative is someone who speaks or files documents on behalf of the Group. You may have more than one Authorized Representative.

Name: Allison Adams - Bull

Address: PO Box 130

Marsuacis, AB

T0C 1N0

Phone: 780 585 3978

Fax: 780 585

Email: adamsbull@outlook.ca

Step 7 – Method or Level of Participation

Tell us how your Group wants to participate:

A Commenter:

- may provide written views on the proposed project in a Letter of Comment;
- may include information supporting the views such as maps or photographs;
- may comment on proposed terms or conditions that the Board should recommend be added if the project is approved;
- may observe and monitor the hearing through the Board's public registry and hearing broadcasts; and
- is not considered a Party (Intervenor or Company) to the hearing, cannot ask information requests or cross-examine other Parties, and cannot provide final argument.

An Intervenor:

- may file evidence stating their views on the project or providing information;
- may ask written questions to clarify the evidence that others have filed;
- must answer written questions from others, if asked, about the evidence that they have filed;
- may be permitted to speak at an oral portion of the hearing; and
- may prepare and submit a final argument at the end of the process.

Intervening requires a time commitment to the hearing process. In addition to the points above, your Group will be responsible to read documents, respect procedural steps, and meet all deadlines.

If your Group wishes to express a collective opinion or view and does not plan to file evidence or ask or answer questions, select Commenter as the method of participation.

All timely submissions from participants, including letters of comment, are read and considered by the Board.

The NEB will review this ATP Form and decide whether your Group is allowed to participate as well as the method of participation. Your Group may be permitted to participate at a level that differs from what was requested.

Additional information about the role of commenters and intervenors may be found in the *Hearing Process Handbook* (insert C in your package).

Please select one of the following:



Commenter



Intervenor

Step 8 – Interest or Expertise

The NEB will only use the information provided in this ATP Form to decide if your Group will be allowed to participate in this hearing. No other information will be considered. When completing the ATP Form, you should consider the Hearing Description in Step 2 above and the List of Issues in Step 9.

You should also refer to the *Guidance Document on Section 55.2 and Participation in a Facilities Hearing* (insert B in your package).

You are “**directly affected**” if you have a specific and detailed interest in the proposed Project that may be affected by the Board’s decision. You have “**relevant information or expertise**” if you have knowledge that will assist the Board.

If your group is applying as being directly affected you must not only describe how your group has a specific, individual and detailed interest related to the List of Issues but must also show exactly how that interest is likely to be impacted by the Project. If you demonstrate to the satisfaction of the Board that your group is directly affected by the proposed Project, your group will be allowed to participate.

If your group is applying as having relevant information you will need to explain where this information originated, why this information is unique, and how this specific information will assist the Board.

If your group is applying as having relevant expertise you must identify the topics for which you wish to be recognized as an expert and explain how you obtained this expertise. (If applicable, you may wish to include a summary of academic qualifications and work history, as well as any publications or other explanation of why you are an expert). You must also demonstrate to the Board how the expertise your group will provide is relevant to the List of Issues, how this expertise is beyond what the Board already possesses and how this expert information will add value to the Board’s decision making process.

If the Board determines that your group’s relevant information or expertise is required and will assist the Board, it may allow you to participate.

Please select one or both of the following:

- ☐ The Group I am representing is **directly affected** by the proposed Project
- ☒ The Group I am representing has **relevant information or expertise**

Step 9 - Your Group's Connection to the Project Issues

The List of Issues that the Board will consider in the Energy East hearing is set out below. These are the issues that the Board has determined are relevant to this hearing.

Note: The Board will not consider matters related to upstream activities associated with the development of oil sands, or the downstream and end use of the oil transported by the Project.

This is your opportunity to clearly explain to the Board why your group should be allowed to participate. As explained in Step 8, it is necessary to clearly describe (1) a specific, individual and detailed interest related to the List of Issues and exactly how that interest is likely to be impacted by the project and/or (2) the nature of your relevant information or expertise, as it relates to the List of Issues, including (if appropriate) a summary of academic qualifications and work history.

The NEB will only use the information provided in this ATP Form to decide if your group will be allowed to participate in this hearing. No other information will be considered.

Please identify at least one issue that relates to:

- i. How the Group as a whole is directly affected and/or
- ii. The information/expertise that the Group believes is relevant or of value to the Board and provide a brief explanation in the space below.

- ☒ 1. The need for the Project.
- ☒ 2. The economic feasibility of the Project.
- ☒ 3. The commercial, economic, supply and market impacts of the Project.
- ☐ 4. The appropriateness of the tolling methodology, and the method of toll and tariff regulation, including whether Energy East should be regulated as a Group 1 or Group 2 company.
- ☐ 5. The commercial, economic, supply and market impacts of the Asset Transfer, including the need, economic feasibility and commercial impacts of the Eastern Mainline Project. This includes the appropriateness of the proposed capacity of the Eastern Mainline of 708 TJ/d.
- ☒ 6. Transfer of Assets:
 1. The tests to be used to assess the sale and purchase of the assets
 2. The assets to be transferred and any terms to be included
 3. The value which should be assigned to the facilities for the purposes of:
 - o removal from the rate base of the TransCanada PipeLines Limited's natural gas mainline; and

- o inclusion in Energy East's toll calculation

- ☒ 7. The potential environmental and socio-economic effects of the Project, including the environmental effects of accidents or malfunctions that may occur in connection with the project, and any cumulative effects that are likely to result from the Project, as considered under the *Canadian Environmental Assessment Act, 2012*.
- ☒ 8. The potential environmental and socio-economic effects of increased marine shipping.
- ☒ 9. The appropriateness of the general route and land requirements for the Project.
- ☐ 10. The engineering design and integrity of the Project.
- ☒ 11. Potential impacts of the Project on Aboriginal interests.
- ☐ 12. Potential impacts of the Project on directly affected landowners and their land use.
- ☒ 13. Safety and security associated with the construction and operation of the Project, including emergency response planning and third-party damage prevention.
- ☒ 14. Contingency planning for spills, accidents, or malfunctions during construction and operations of the Project.
- ☐ 15. Financial implications of contingency planning for spills, accidents, or malfunctions during construction and operations of the Project.
- ☐ 16. The terms and conditions to be included in any recommendation or approval the Board may issue for the Project.

Limit your answer to no more than 500 words. You may attach additional pieces of paper if required.

Step 10 – Access, Notification and Service

Select which official language you would like to use to participate and receive correspondence:

- ☒ English
☐ French

Documents submitted electronically are immediately available on the Board's electronic document repository, (Click "View Regulatory Documents" under "Applications & Filings" at www.ncb-one.gc.ca). If you have the capability to access the repository, the Board and other Participants in this proceeding may serve you by notifying you that a document has been filed and is available in the repository, instead of serving you with a hard copy of the document.

Are you able to access the Board's electronic document repository to review documents?

- ☐ Yes
☒ No

If Yes, provide an email address where notice that a document has been filed can be sent:



Signature

Step 11 – Review and Submit

You are about to submit your Application to Participate (ATP) Form to the NEB.

Before submitting your application, you should first review it and check that you have:

- ☐ Checked off one box about your Group's interest (Step 1)
- ☐ Checked off that you have permission to identify and speak on behalf of others, and provided their names (Step 1)
- ☐ Signed the Privacy Agreement (step 4)
- ☐ Provided the contact information for the Authorized Representative for the Group (step 6)
- ☐ Checked off ONE box indicating your Group's request to be either a commenter or intervenor (step 7)
- ☐ Checked off your Group's interest or expertise (step 8)
- ☐ Checked off one or more issues (step 9)
- ☐ Provided a brief explanation (step 9)
- ☐ Signed the form (step 10)
- ☐ Made a copy of your form to send to the company (step 3)

When you're ready to submit your ATP form to the NEB, send only the completed ATP form to the address below. If this is a late ATP, you must also provide a cover letter explaining why the ATP is being sent after the deadline.

Sheri Young
Secretary
National Energy Board
517 Tenth Avenue SW
Calgary, AB T2P 0A8
Fax: 403-292-5503

If you notice a typing error or administrative error after filing, contact a NEB Regulatory Officer at 1-800-899-1265, or email energyext.RO@neb-one.gc.ca.

Appendix A - SECTION 55.2 GUIDANCE – PARTICIPATION IN A FACILITIES HEARING

The *National Energy Board Act*¹ (NEB Act) sets out when the National Energy Board (Board) will allow a person² to participate in a hearing to consider an application to construct and operate a pipeline or power line.³

Persons wishing to participate must demonstrate to the Board's satisfaction that they fall within one or both of the two categories described in the NEB Act and set out below.

Directly Affected Person

The Board must hear from any person who, in the Board's opinion, is directly affected by the granting or refusing of a project application. The Board decides on a case-by-case basis who is directly affected. The Board may consider these factors when making this decision:

1. The nature of the person's interest.
 - Whether a person has a specific and detailed interest, rather than a general public interest.
 - Examples of interests that could support participation are:
 - commercial, property or other financial interest (including employment);
 - personal use and occupancy of land and resources; or
 - use of land and resources for traditional Aboriginal purposes.
2. Whether the granting or refusing of a project application causes a direct effect on the person's interest.
 - The degree of connection between the project and the interest.
 - The likelihood and severity of harm a person is exposed to.
 - The frequency and duration of a person's use of the area near the project.

¹ Section 55.2 of the NEB Act states:

On an application for a certificate, the Board shall consider the representations of any person who, in the Board's opinion, is directly affected by the granting or refusing of the application, and it may consider the representations of any person who, in its opinion, has relevant information or expertise. A decision of the Board as to whether it will consider the representations of any person is conclusive.

² The word "person" includes an individual, company, organization or group.

³ Specifically, this guidance applies to applications made under sections 52, 58 and 58.16 of the NEB Act.

Relevant Information or Expertise

The Board may choose to hear from any person who, in the Board's opinion, has relevant information or expertise.

1. The Board may consider these factors when deciding if a person has relevant information:

- the source of the person's knowledge (for example, local, regional or Aboriginal);
- the extent to which the information is within the project scope and related to the list of issues; and
- how much value the information will add to the Board's decision or recommendation.

2. The Board may consider these factors when deciding if a person has relevant expertise:

- the person's qualifications (for example, the person has specialist knowledge and experience);
- the extent to which the person's expertise is within the project scope and related to the list of issues; and
- how much value the information will add to the Board's decision or recommendation.

May 2, 2016

***SENT: Hand Delivered**

Policy Division
Policy Integration Branch Biodiversity
Ecosystem Services and Science Section
9th floor, Oxbridge 9820 - 106 Street
Edmonton, Alberta AB T5K 2J6

Attention: Brian Makowecki, Section Head (brian.makowecki@gov.ab.ca)

Dear Mr. Brian Makowecki,

**Re: Louis Bull Tribe's Comments on Alberta Environment and Sustainable Resource
Development's Draft Biodiversity Policy SSRP & LUF Louis Bull Tribes Table Participant**

I write further to your email and letter requesting that Louis Bull Tribe provide comments on ESRO's (draft), SSRP's (Draft) and NSRP's (draft) Biodiversity Policy. The proposed Biodiversity Policy will provide strategic direction to Crown decision-makers, at all levels of government, in making decisions related to the conservation and management of biodiversity throughout Louis Bull Tribe's traditional territory and Alberta.

As the Crown has a duty to consult on strategic, high level contemplated decisions (Courtoreille, Rio Tinto and Tsuu' T'ina) and the Biodiversity Policy will affect the exercise of Louis Bull Tribe's (LBT) Aboriginal and Treaty rights, Louis Bull Tribe must be meaningfully consulted by Alberta in respect of any government lead Biodiversity Policy. Despite Alberta's failure to provide Louis Bull Tribe a sufficient consultation process in respect of the original ESRO's Biodiversity Policy which is a province wide mandate the provision of follow up based on Free, Prior & Informed Consent, LBT provides here to our comments in order to ensure that Louis Bull Tribe's Aboriginal and Treaty rights are meaningfully considered and adequately addressed in all seven regions of Alberta's Land Management approach with respect to the management of biodiversity in and around Alberta. Most importantly, Louis Bull Tribe's traditional land user's voice needs to be heard, considered, interpreted properly and meaningfully incorporated in the process to develop the Biodiversity Policy, accommodation is integral to the Duty to Consult.

Louis Bull Tribe's Constitutionally-Protected Rights need be considered before providing such "public" consultation process, versus the duty to consult as DRAFTED and tabled to the First Nations of Alberta, in our case Treaty No. 6 tribe, by the Aboriginal Consultation and Accommodation Office (ACO). As such, a PRE & in LBT's Instance and historic Record of Consultation, such a POST-call out for comments on the Biodiversity Policy, among all regional planning biodiversity policies, where such a unique Tribe has limited capacity and training to engage and understand the Provincial process has not been meaningfully or adequately followed through by or with any regulatory, industry or government agents, Alberta's Consultation Office (ACO) for example provided an overview just in January 2016 face to face with the Louis Bull Tribe Band Administrator, the same education and awareness is required for LBT's People's, this has caused a lack of relationships, engagement or opportunities for a

sustainable future or land planning engagement to date; meaningful and adequate consultation is required.

I would like to provide a context then on this knowledge base, or lack of, for Louis Bull Tribe's meaningful and direct participation in the preparation of the Biodiversity Policies in and for Alberta. Louis Bull Tribe, representing the Kisipatnahk Maskwacis Cree Peoples, is a northern member of the Nehiyewak Confederacy and a signatory of Treaty No. 6, underlying the central portions of Alberta. Treaty No. 6 was concluded between the Plains Cree and the Crown in 1876 at Fort Pitt & Fort Carlton. Kiskequin, or Chief Bobtail, signed his "x" mark in an adhesion to Treaty No. 6 at the signing of Treaty No. 7 at Blackfoot Crossing in 1877. Louis Bull Tribe is a member of the Four Maskwacis Bull Tribes of Maskwacis (Formerly labeled as Hobbema), re-named to Traditional Place Name of "Maskwacis", hence the Maskwacis Cree or the larger and historic Cree tribes who resided in the Bear Hills and Pigeon Lake. Louis Bull Tribe's traditional land use area covers the following land use regions: South Saskatchewan, Red Deer, North Saskatchewan, Upper Athabasca, Lower Athabasca, Lower Peace and Upper Peace. Louis Bull Tribe's rights are inextricably connected to the land, waters, air and resources within Louis Bull Tribe's Territory. Louis Bull Tribe's rights pre-exist Treaty No. 6 and exist in Canadian law not as a result of governmental recognition, but because they were not extinguished upon the Crown's assertion of sovereignty. Louis Bull Tribe's Aboriginal and Treaty rights are protected by section 35 of the Constitution Act, 1982. As original stewards of the land, Louis Bull Tribe's Territory, it is our duty to the Creator – Kisemanito, to protect and preserve Mother Earth in order to ensure the continuity of Louis Bull Tribe's way of life, worldview, livelihood, identity & deep rooted kinship & cultural connectivity to Mother Earth, biodiversity then is a major sacred kinship covenant to the Louis Bull Tribe and its medicinal value, quality and quantity. In light of this obligation, Louis Bull Tribe has significant concerns regarding the Crown's level of engagement with us in respect of the Biodiversity Policy. Additionally, Louis Bull Tribe has concerns that Alberta's approach to biodiversity is not supportive of our Aboriginal and Treaty rights. Louis Bull Tribe hereby submits the following comments in respect of the draft Biodiversity Policy. We trust that our comments will demonstrate the requirement of Alberta to initiate consultation between us in respect of the Biodiversity Policy. We request that Alberta utilizes an issues-tracking table in order to ensure adequate and full responses to each of our comments. Louis Bull Tribe's Comments Louis Bull Tribe has the various concerns and comments in respect of the draft Biodiversity Policy, including:

- Louis Bull Tribe has not been provided a sufficient consultation process;
- Alberta must fulfill Treaty promises, including the incidental right to environmental conservation and protection; and
- Alberta's Biodiversity Policy contains significant information gaps and deficiencies.

Below, LBT has provided further explanations on each of these comments. Based on these comments, we provide a response to each of the questions raised in your December 11, 2014 letter, of which LBT was limited in capability and capacity to provide written comment, hence an enhancement document was required, PRIOR to commenting on any REGIONAL Land

Planning comments, engagement or activities, this is Louis Bull Tribes position, and we here to also provide comments as required for the Energy East.

A. *Louis Bull Tribe Has Not Been Provided a Sufficient Consultation Process in respect of the Biodiversity Position.*

A sufficient consultation process is one that is accessible, adequate and provides us an opportunity to participate in a meaningful way (Brokenhead). To date, we have not had any government-to-government discussions in order to fully understand the Biodiversity Policy and agree upon next steps. Instead, Louis Bull Tribe has merely been provided a highly technical document and asked to provide comments within a short timeframe and in light of Louis Bull Tribe's existing capacity constraints. Given the amount of preliminary concerns in respect of the Biodiversity Policy, substantive discussions need to occur in order for consultation to be meaningful.

B. *Alberta Must Fulfill Treaty Promises Treaty No. 6 was an exchange of solemn promises intended to create mutually binding obligations between Kislpatnahk Maskwacis Cree and the Crown.*

As you know, Treaty rights such as hunting for food, fishing, trapping and all other forms of harvesting (medicinal herbs, berries for ceremony, etc.) are afforded constitutional First Priority in resource allocation schemes (Sparrow). Additionally, Louis Bull Tribe's Treaty No. 6 rights were assurances of continuity of our harvesting rights (Badger). Louis Bull Tribe's Treaty rights also encompass rights which are incidental to the rights granted by the Treaty, including environmental conservation required to ensure that Louis Bull Tribe can continue to exercise its rights as formerly in Louis Bull Tribe Territory (Simon). An oral term of Treaty No. 6 evidencing Louis Bull Tribe's incidental right to co-management of its resources within Louis Bull Tribe Territory included an agreement between the Nehiyawak Chiefs and the Crown to a share in the obligation to protect the buffalo and livelihood of the Plains Cree peoples. The Supreme Court of Canada in its decision of *Grassy Narrows* has placed a heavy legal burden on Alberta when it seeks to develop indigenous lands covered by historic treaties.

The Biodiversity Policy as it relates to Traditional Land Use Studies for Energy East must be developed in a manner that respects and promotes our Treaty rights. Alberta's Biodiversity Policy and the Land Use Biodiversity Policies, do not acknowledge the Crown's duty to preserve, prevent any further adverse impacts, nor does the Energy East promote Louis Bull Tribe's way of life or benefit their long term sustainability, use, benefits or interests to the continued livelihood in or along the Energy East Corridor. Specifically, there is no requirement on part of the Crown to demonstrate its understanding of particular biodiversity thresholds and monitoring initiatives required for Louis Bull Tribe to exercise its Treaty rights to hunt, fish, trap, sacred sites access, protection or prevention to further irreparable harms, and strategic harvesting planning

as presented time and again without any First Nations Traditional Land Use Monitoring with Louis Bull Tribe or its Traditional Land User's to date. Therefore, Louis Bull Tribe is concerned that the Biodiversity Policies will fall short of the Crown's obligation to "take up" lands consistently with the honour of the Crown and in keeping with its fiduciary duties which Trans Canada must consider, provide meaningful and adequate follow up with the Louis Bull Tribe and its Peoples to date, there is no longer term relationship or mitigation measures to date.

C. *Alberta's Biodiversity Policy Contains Significant Information Gaps and Deficiencies, these deficiencies potentially impact the rights, uses, interests and any benefits which need be meaningfully and adequately assessed*

I. *Current Conditions of Biodiversity*

Louis Bull Tribe is concerned that there is virtually limited or no detail on the current conditions of biodiversity through Alberta within the drafted Biodiversity Policies. This makes it difficult to determine the level of "action" required to support the intended and high-level outcomes that have been articulated in the Energy East Application and Regulatory Process. In other words, if biodiversity is really low, the state of the environment is low and thus the state of the environment is the state of our health care system. As such, such a superficial policy document will not do much good or provide any certainty, as greater intervention is likely required to protect biodiversity as a medicinal or ceremonial (i.e. rocks, berries) value entrenched in the daily livelihood of the Louis Bull Tribe Peoples.

- ✓ Louis Bull Tribe requests that Alberta vis-a-vis Canada indicate whether or not it will be gathering such data. If so, whether or not Louis Bull Tribe will be directly involved in this data-collection process. Louis Bull Tribe should also be involved in the monitoring process.

II. *Reliance on Land-Use Frameworks*

- LARP; SSRP; NSRP (May 3, 2016); Others TBD

The Biodiversity Framework appears to be contingent on the success of Alberta's Land Use Framework and associated regional plans. To date, Louis Bull Tribe has not been directly involved in developing Alberta's Land Use Framework despite us discussing our concerns and comments at such regional meetings and processes. Louis Bull Tribe has found it difficult to address or meeting any of the Land Use Framework timelines due to lack of accommodation to engagement provisions such as capability or capacity. Our comments to Alberta in respect of the Lower Athabasca, South Saskatchewan and North Saskatchewan Regional Plans have gone unaddressed and will not be considered by the Regional Advisory Committee (RAC) as we understand, such timelines are unaccommodating, inadequate and are thus not meaningful Duty to Consult and

Accommodate in and along the Trans Canada Energy East Corridor, **we therefore cannot consent to the project at this time and recommend that the National Energy Board review our position here to as soon as possible as well.**

Additionally, the land use plans which are cited in support of the Biodiversity Policies are not effective at limiting land uses or curtail activities that are deemed detrimental to biodiversity and the enhancement and increase in the diversity of habitat, natural ecosystems and their relationship to water. In fact, our position is that, great lengths were taken to ensure that all economic pursuits, by Alberta and third parties such as Trans Canada, would not be limited by the Land Use recommendations, this does not hold well with our Traditional Land use continued and future use positions.

- ✓ Louis Bull Tribe requires Alberta and Trans Canada Energy East project application to clearly articulate how the Environmental Planning regarding the Biodiversity Plans will interact with Canada and Alberta's Clean Air Strategy, the Canadian and Alberta Carbon Capture, Canadian and Alberta Cumulative Impacts, Canadian and Alberta Climate Change Strategy, the National Tar Sands Remediation Strategy, Alberta Land Use Framework and Canada's Wastewater and Water for Life Initiatives.
- ✓ Also, we do not know how it relates to any other policies related to land use by Louis Bull Tribe at this time nor do we have the capability or means to meet such high level and necessary Future and sustainable futures Land Use Planning Needs as we are unaccommodated on this front which coincides and strategically aligns with meaningful and adequate consultation and accommodation.

III. Sub-surface Resources

The reconciliation of sub-surface mineral, petroleum and natural gas allocations and the land use planning reflected in the Energy East Application, needs to be reconciled and addressed if the Biodiversity Policies have any chance of having a meaningful impact. To provide a clear example of Louis Bull Tribe's reclamation and remediation concerns, in the pipeline sector and updated Consultation & Accommodation Federal and Provincial (GoA) Guidelines which trigger "Impacts" to Kanata or Canadas' and Alberta's Indigenous Peoples with no regard or inclusion of the United Nations Declaration of the Rights of Indigenous Peoples and the Truth and Reconciliation Commission Report Global and national Mandate to implement and "accommodate" such "findings" and "implementation measures with well mandated monitoring and reporting requirements, such abandoned release stemming from pipeline impacts which remain active even after centuries upon closure where remediation and reclamation impacts are a growing concern in Alberta. Louis Bull Tribe has included a power point of our concerns here to as Appendix to the Energy East Traditional Land Use Report. Louis Bull Tribes' Peoples are witness to such adverse impacts and sub-standard management and enforcement and Monitoring Measures, where LBT witnessed and is impacted daily, has

caused heavy socio-economic burden to our Peoples who reside in Small boy's Camp who bear witness to and may soon have no option but to relocate to Maskwacis due to the constant contamination of natural water, loss of the Boreal Forest leading to loss of wildlife and lack of employment of third party proponents with limited consultation for our Peoples causes concerns and such cumulative and adverse impacts.

- ✓ Louis Bull Tribe seeks that Trans Canada, Canada and Alberta provide further clarity on this comment.
- ✓ Also, Louis Bull Tribe seeks clarity on how this policy will address residuals effects of contaminated sites.

IV. Reclamation & Remediation Standards

The Biodiversity Policy does not mention the objective of improving reclamation & remediation standards as they relate to biodiversity notwithstanding that they are explicitly mentioned as an added stressor of biodiversity. By way of example, strip mining creates devastating residual and permanent scars on the landscape, forests, wildlife habitat, soil, dust on traditional land uses and values such as tar sands and pipeline cumulative impacts such as Energy East complete process of "cradle to grave" roles and responsibilities.

- ✓ Louis Bull Tribe seeks that Trans Canada, Canada (MPMO/NRCAN) and Alberta provide further clarity on this comment.

V. Enforcement Mechanisms

The Biodiversity Policy does not provide any information on any tools or means that will be used by Alberta to achieve the desired outcomes contemplated in the Biodiversity Policy. Such enforcement mechanism may include a standard that requires all reclamation to utilize native species, sediment pollution and impacts to water sources which causes disfiguration of ground surface waterways and harm to fish habitats.

To be Considered HIGH PRIORITY - NOTE: LBT has been seeking support at each meeting attended with Land Use Secretariat & high Level Governance Policy Meetings for a Cultural Tracking & Monitoring Geographic System, fully funded, from Trans Canada as an accommodation measure, where meaningful and adequate consultation provide for such Environmental, GIS and other related training provisions and is willing to Pilot such a Community Based Environment & TLU Monitoring opportunity with all three orders of engagement, duty to consult and accommodate decision makers, such as the Land Use Secretariat, Canada's Natural Resources Canada and/or Major Project Management Office (MPMO) and the Province of Alberta.

VI. The "Taking Action" Measures

At certain sections (i.e. Section 3.0 – GoA Biodiversity Policy, 2014) of the DRAFTED/TABLED & LARP & SSRP & today the NSRP Biodiversity Policies which make up Louis Bull Tribes Traditional

Territory, outlines a number of key actions that are underway or will be considered in the four defined strategic directions to address the challenges to biodiversity. It is unclear how Louis Bull Tribe will be included within the following areas of this plan:

- (i) Integrated Planning and Decision-making;
- (ii) Conservation and Stewardship;
- (iii) Information Management, Inventory, Monitoring and Research; and
- (iv) Education and Awareness.
- (v) Furthermore, as cited at the 15th Session of CERD in New York, New York May 2016, the Maskwacis Cree are cited, Louis Bull Tribe is part of the Maskwacis Cree, have taken measures to ensure the UNDRIP, TRC language implementation is necessary and call upon Trans Canada, Alberta and Canada to meaningfully implement this very important recommendation's documents. As such:

- ✓ Louis Bull Tribe needs its own language, base line collections and data sets and participatory to LBT's values and perspectives incorporated in the "Education and Awareness" measures.

VII. Application of the Biodiversity Policy to Crown and Private Lands

As you know, Aboriginal and Treaty rights are not inconsistent with private lands. The Biodiversity Policy does not mention the different approaches and measures likely required to support biodiversity on both Crown and privately-held lands.

- ✓ Louis Bull Tribe hereto requests for hard copies of ALL existing and unoccupied, updated and available Crown Lands Maps be made available for a more meaningful and desk top review to ensure engagement and allows for indicators and other areas of interest where LBT's inclusion has been minimal and proper tools such as these maps will provide clarity, knowledge and increased communications for such a relationship to continue to fruition, where there was an extremely limited relationship prior to our call out to engagement since April 2016.
- ✓ An additional concern is that, many of our sacred sites in and along the Energy East corridor remain unprotected in this realm of environmental management, and needs be addressed directly with Louis Bull Tribe and its peoples by the Proponent.

VIII. Application of Biodiversity Policy to Urban Areas

The Biodiversity Policy and Envelope should include in the list of challenges at that urban sprawl is not specifically addressed including maintenance of biodiversity and natural capital in urban areas such as river valleys, continued use ,

ix. Indicators and Thresholds

in and throughout section 3.1.1 of the Alberta Biodiversity Policy, where the Energy East Project proposes to construct and operate through, there is no mention in respect of the selection process of the indicators. The selection of the indicators is critical as they form the basis for the management of biodiversity.

- ✓ **HIGH PRIORITY** - Louis Bull Tribe requires that its traditional knowledge, use, be incorporated as one of the criteria used for selecting indicators and thresholds. For example, riparian zones are part of the biodiversity and one of the most abundant harvesting areas yet are the most impacted by UN-MONITORED & poorly managed Recreational Users – Trans Canada, Canada and Alberta needs to ensure a safe haven and common use area for such recreational users or have Indigenous and Community based trackers and monitors in the field during EVERY season as our Traditional Lands usage is constant and seasonally activity based in along the Energy East Project Right of Way.
- ✓ In addition to these comments, Louis Bull Tribe also encloses its specific comments on particular sections of the draft Biodiversity Policy.

Responses to Alberta's December 11, 2014, SSRP First Nations Sub-table and now the NSRP First Nations "Sub-Table Talks" regarding such Questions stemming from Alberta's December 11, 2014 letter to Louis Bull Tribe and ongoing, ask the following three questions which need be deciphered PRIOR TO FURTHER ENERGY EAST Project APPROVAL:

1. Do you support this draft policy as a tool to provide overarching direction for conservation and management of Alberta's native biodiversity? Explain.
2. Do you agree with how the draft policy supports the historical relationship your community has with Alberta's biodiversity for traditional harvest of food, cultural, and spiritual practices? Explain.
3. Do you agree with how the draft policy acknowledges the way your community uniquely approaches biodiversity conservation? Explain.

RESPONSES OVERALL include and are not limited to, since I am the writer and in essence an Interpreter for LBT and its Peoples only, hereto is the overview and response's derived from LBT's on file TLU studies, Louis Bull Tribe 2016 Capacity Building & Environment Conference as SevGen Consulting Mandate to enhance and provide Consultation related advisory and supports, these are our findings to date and will evolve with an increased and healthy relationship:

Louis Bull Tribe cannot at this time support such draft policies or related PROJECTS such as Energy East Project, as the ONLY tools to provide overarching direction for the conservation and management of Alberta's native biodiversity, we need to be capable, trained and in the know.

Louis Bull Tribe believes that more work needs to be done, including addressing the above concerns, to demonstrate Alberta's commitment to protect biodiversity which we understand as Mother Earth and her provisions to our traditional and current practices, they have not changed, but have been altered, which causes us continued concern. In addition, simply defaulting to regional plans will not lead to the desired outcomes in this draft Biodiversity Policy, especially in light of the fact that the regional plans are not finalized and when and where we attend for the past four (4) years from June 2014 – May 2016 respectfully, our recommendations have NOT been implemented, monitored or reported back meaningfully or adequately to date.

- ✓ Most importantly to Louis Bull Tribe, is that there is no express commitment to ensure that LBT is directly involved in the monitoring and documentation of biodiversity. Louis Bull Tribe must be directly involved in these processes. Louis Bull Tribe also needs to be directly involved in the selection of indicators to ensure that traditional knowledge, values, laws, beliefs and perspectives are taken into consideration. Louis Bull Tribe also needs to be directly involved in the selection of indicators and thresholds to ensure that Louis Bull Tribe's laws, beliefs, land use management, traditional knowledge as support by the United Nations Declaration on the Rights of Indigenous Peoples and the three priority areas for the Commission for Environmental Cooperation (CEC) and the call outs by the Truth and Reconciliation Commission (TRC) implementation strategies combined, Prime Minister has mandated us all to implement Indigenous wisdom, LAND USE and knowledge, this is our story, and needs to be shared, implemented and secured through effective planning, inclusion and co-management, this is the Duty to Consult & Accommodate. Such guiding documents need to be addressed and collaborated upon in the same realm, if the Biodiversity Policies have any chance of having a meaningful impact.

Louis Bull Tribe does agree with how the draft policy supports the historical relationship we have with the biodiversity within Louis Bull Tribe Territory relied upon for the exercise of our Aboriginal and Treaty rights. Alberta, Canada and Trans Canada need to seek out and incorporate our traditional knowledge and traditional ecological knowledge into the draft Biodiversity Policies, Project Monitoring and Environmental indicators, thresholds and triggers, and seek our Free, Prior and Informed Consent. To maintain biodiversity, habitats & complete ecosystems are critical to whole assemblages of organisms and natural laws or "occurrences" to transpire and must be identified, maintained and protected through such land planning initiatives and ACCOUNTABILITY then is also necessary through fully funded and targeted community based monitoring programs. A species specific approach will not work to achieve these types of goals and therefore, the Traditional Knowledge and full inclusion of the original stewards of the land is critical.

Louis Bull Tribe does agree with how the draft Biodiversity Policy and Energy East Project acknowledges the way your community uniquely approaches biodiversity conservation. Simply put, there is virtually no acknowledgement that the Biodiversity Policy and Trans Canada Project will lead to measures that uphold the unique approaches and perspectives brought

forward by Louis Bull Tribe as it relates to conservation, preservation and continued traditional land uses & activities where further cumulative and irreparable harms such as the annihilation of the Hardisty Bison Pound since our engagement in 2009 have been adversely impacted.

There is nothing in the Biodiversity Policy demonstrating measures to avoid bio-piracy or to build and enhance increased creation of trust between Louis Bull Tribe, Trans Canada and Alberta. Where for example, Alberta just expects Indigenous Nations to hand over sensitive information and documentation without any regard to include and translate into Cree Language, curriculum development and meets Indigenous human health needs, opportunities'.

Moving Forward & In Closing

Moving Forward, Louis Bull Tribe is requesting for a face to face meeting with Trans Canada, Alberta and the Major Projects Management Office (MPMO/NRCan) to discuss our specific input and resources to facilitate this important process. Meaningful consultation, in this instance, requires that the Crown and Proponent meet with our Leadership and Knowledge Holders to understand the breadth of our comments and this important Biodiversity Policy. Our traditions and values are maintained through a sophisticated form of oral traditions and not normally amenable to proper expression in the requested format. We look forward to your favourable consideration of our requests. Louis Bull Tribe's meaningful engagement in this important process is a prerequisite to the development of a policy which cumulatively impacts a Trans-Canada and proponent major project, namely Energy East Trans Canada, which respects our constitutionally-protected rights. We request that you respond to us by July 30, 2016 indicating the proposed process where you are requesting to move forward and dates for us to meet. We have taken an initial step to contact Karen Gardner, and the energy East Project Team Lead, and are collaborating our efforts as an initial step to Indigenous education and awareness. As stated above, Louis Bull Tribe requests that responses to its comments be provided by way of an issues-tracking table and to assist our offices with such "filings and records of consultation" until such time innovative technologies can be accommodated.

Should you have any questions regarding this letter or its enclosure, please do not hesitate to contact me directly 780.335.3235 or norinesaddleback9@gmail.com.

Sincerely,

Norine Saddleback Aug 8/16

Norine Saddleback SevGen Consulting
& on behalf of Louis Bull Maskwacis Cree Nation
Interim Consultation Coordinator

Cc: Chief Irvin Bull, LBT & Maskwacis Cree Nation
LBT Consultation Committee
Stantec Consulting – to add into the LBT TLU Energy East Filing by June 15, 2016
LBT Legal Counsel, Whiten Law

Two recent pipeline proposals, the Keystone XL in the United States and the Northern Gateway in Canada, have received public attention largely because of concern for the environment. For some, a pipeline is a high-risk potential source of oil spills symbolized by images of oil gushing from ruptures and oil-spilled birds. For others, a pipeline is the safest and cheapest way to deliver fossil fuels, a commodity whose exploitation is critical to the well-being of society. One of the main opportunities for the public to voice their concerns or support for pipelines is during an environmental assessment of a pipeline project. This paper broadly discusses the environmental risks associated with pipelines, with particular reference to those risks addressed during environmental assessments of proposed pipeline projects.

1 Introduction

- 4 Alternatives
- 5 Conclusion
- Notes

- 1 Introduction
- 2 Background: Pipeline is Just a Pipeline
- 3 Environmental Effects of Pipelines
- 3.1 Environmental Effects of Pipeline Construction and Operation
- 3.2 Pipeline Leaks and Ruptures

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Tim Williams, Industry, Infrastructure and Resources Division
6 July 2012

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2. Sometimes a Pipeline is Just a Pipeline

Opposition to pipelines is often linked to indirect effects associated with the source of petroleum liquids and what happens to petroleum liquids at the end of the pipe. However, for an environmental assessment, the risks examined are most often just those linked to the pipeline proposal itself. The potential environmental effects associated with a pipeline proposal therefore depend on the specifics of the proposal. For example, what type of commodity is to be transported in the pipeline? What risks are inherent in the route? An environmental assessment will examine environmental effects associated with the project as defined, or scoped, at the outset of the assessment.

A pipeline project consists of the construction, operation and decommissioning of the pipeline itself. This includes the installation of the pipeline across the pipeline's route and any related water bodies, as well as associated pumping stations required to maintain the flow and supporting infrastructure, such as access roads.

For some, however, a pipeline is more than a pipeline. Pipelines are a means to transport petroleum products from source to consumer. A supply at the beginning of the pipeline and a market at its termination are required, usually in the form of a refinery or, to transport it to a market, another pipeline or other mode of transportation, such as an oil tanker. In this way, pipelines can be viewed as facilitating both the development of a source of petroleum and its final consumption, including related greenhouse gas emissions.

Environmental assessments of pipelines do not consider potential environmental effects associated with the development and consumption of a resource, but they may consider supply and terminus infrastructure if it is an integral part of the project and requires permits.

The Northern Gateway Pipeline proposal,¹ for instance, includes the assessment of the pipelines, pumping stations, all-season roads and tank terminal, as well as the loading and unloading of berths in Kitimat. However, the pipeline will necessitate about 220 tankers a year to visit the port, an increase of 88% over current traffic.² The assessment, therefore, also examines marine transportation within the proposed shipping lanes within the boundaries of Canadian waters, in the Hecate Strait, and the channels between the proposed Kitimat marine terminal and the open ocean.³ However, the proposal does not include the effects linked to the facilitation of oil sands development or the emissions that will result from downstream use of its contents.

3 Environmental Effects of Pipelines

The construction, operation and decommissioning of a pipeline is associated with a number of environmental effects. Risks are also posed by a malfunction or accident or, in a worst case scenario, a rupture.

3.1 Environmental Effects of Pipeline Construction and Operation

Environmental effects are defined for the purposes of a federal environmental assessment. This may include, depending on the jurisdiction of the project, any change that the project may cause in the environment,⁴ including any effects of such a change on socio-economic conditions, as well as change to heritage and the use of lands for traditional purposes by Aboriginal persons.⁵

In other jurisdictions, the definition of environmental effect is sometimes left to an administrator (British Columbia); at other times, it would explicitly include socio-economic factors (Ontario).

An environmental effect may therefore be, depending on the project and jurisdiction, defined broadly to include the indirect effects of environmental change on socio-economic and cultural conditions, as well as on the use of lands by ~~Aboriginal people~~.

All pipelines will have some environmental effects. Possible environmental effects are compiled at the beginning of an environmental assessment in an environmental impact statement. Environmental aspects considered in such statements include the following.²

- Atmospheric environment: Air quality can be affected by dust during construction and by air contaminants emitted by the combustion of fossil fuels used for construction equipment and pumping stations (if not driven by electricity). Emissions of greenhouse gases directly related to the project are generally insignificant, relative to national emissions.
- Acoustic environment: Noise is increased relative to background noise by construction activities and the operation of pumping stations.
- Soils: Soils can be eroded, compacted and mixed, contaminated, and removed, and they can be solidified by local emissions of chemicals causing acid rain.
- Geology and terrain: Possible alterations of geology can cause landslides, along with accompanying risks to safety and environment, such as to fish habitat.
- Vegetation: Vegetation (including old growth forests and rare communities of plants) can be affected by surface disturbance, changes in water flows, the arrival of alien species and air contamination.
- Wildlife: Risks to wildlife can be caused by the removal, alteration and fragmentation of habitat, as well as by noise, changing access and sightlines for predators, and the creation of barriers to movement.
- Surface water resources: Water quality and quantity could be affected by erosion and crossing excavations as well as by herbicides applied to maintain a clearing around the pipeline.
- Freshwater fish and fish habitat: Activities related to the pipeline such as the clearing of vegetation, and the grading and placement of structures in water, have the potential to affect the productive capacity of fish habitat, migration, and fish health and mortality.
- Hydrogeology: Blasting, grading and tunnel construction could alter both surface and groundwater flow and expose rock formations, which could potentially leach acid or metals.
- Paleontology: Fossil resources, which are important for the scientific understanding of evolution and climate change, can be affected by direct construction activities as well as by fossil collectors who have increasingly greater access to these resources.

Pipelines have been constructed for many decades and there is a great deal of information on how to mitigate their standard environmental effects, such as those on fish habitat associated with river crossings. For example, pipeline routes can be changed to avoid vulnerable areas; project design and construction can be specific to circumstances (such as trenchless river crossings); and habitat can be compensated for, if necessary. However, assessing the cumulative impacts of multiple aspects of a project that may occur in a single ecological unit (such as multiple crossings throughout a river basin) is more difficult. As a result, the necessary mitigation efforts are less well understood.²

The environmental impacts of pipelines cannot be avoided entirely, only reduced to acceptable levels. What is deemed acceptable is a value judgment, and so will always be a point of contention, particularly for those who use the land through which the pipeline passes, without gaining many, or any, of the benefits.

3.2 Pipeline Leaks and Ruptures

The environmental risks of most concern to people, however, are not those associated with a functioning pipeline but with a rupture of a pipeline. Environmental assessments must also assess the risks of such spills.

The accidental release of crude oil or petroleum products to the environment can cause a number of problems to the environment and to human health, and can gain a very high profile with the public. Crude oil and petroleum products have different potentials to combust, but most can either catch fire or explode, creating an immediate hazard. They also may contain a variety of toxic chemicals such as benzene, hydrogen sulphide, toluene and xylene.⁹ In addition, the physical properties of oil interfere with the normal functioning of organisms, most emblematically when coated birds lose their capacity to float, stay warm and fly.

~~Pipeline ruptures are not uncommon.~~ In North America, two recent ruptures, one in July 2010 into the Kalamazoo River near Marshall, Michigan and another north of Peace River, Alberta in April 2011, released over 3,000 cubic metres (m³) and 4,000 m³ respectively of heavy crude.⁹ According to Canada's National Energy Board, over 30 federally regulated pipelines ruptured between 1992 and 2011, three of which released over 3,000 m³ of oil.¹⁰

Older pipelines regulated by the NEB are clearly more vulnerable to rupture, the result of corrosion and fatigue, substandard older technology or difficulty in locating the pipeline because of older, incomplete records. Human error plays an important role as well, with improper operation and external third-party interference contributing to some of the ruptures.

However, ruptures are becoming less frequent, despite the fact that the total length of pipelines are increasing over 6% per year. The Alberta Energy and Utilities Board (EUB) reported in 2007 that there were 758 ruptures in all Alberta pipelines between 1990 and 2005. While there were, on average, 88 ruptures per year between 1990 and 1995, there were 24 between 2000 and 2005, and only 11 in 2005.¹¹ Trends in large-scale releases (1,000 m³ to 10,000 m³) of hydrocarbon liquids are, however, not possible to analyze as they have been too sporadic.¹²

Smaller releases, though, can also have an impact and are far more frequent than ruptures. Of the 4,769 releases of hydrocarbon liquids between 1990 and 2005 outlined in the Alberta EUB report, six involved releases of between 1,000 and 10,000 m³, yet there were 4,717 with less than 100 m³. The total number of yearly releases increased from 168 in 1990 to 311 in 2005, but has remained relatively unchanged for the last 10 years.¹³ In summary, the safety of pipelines in terms of number of releases of hydrocarbon liquid leaked per unit length of pipeline is improving, but because pipeline length is increasing, the number of releases remains fairly constant.

The risks of releases and ruptures are clearly a point of contention surrounding pipeline proposals, particularly those involving the transport of diluted bitumen (also known as "dilbit").¹⁴ Dilbit has been reported to be less safe to transport than conventional oil, with it being said to be more acidic and corrosive than other forms of crude oil transported in pipelines. Dilbit may also create pressure changes in the pipeline, making it more difficult to detect leaks and ruptures, such as that which occurred into the Kalamazoo River.¹⁵ However, this corrosion analysis has been reported to be flawed, particularly in its comparison of pipeline incidents in the United States and Canada, which have different reporting requirements.¹⁶ A more detailed analysis of dilbit and conventional crude suggests that their corrosion characteristics are very similar.¹⁷

The environmental effects of a spill will also depend on the vulnerability of the region, its characteristics and the ease of response. A small spill in the wrong place can have a significant environmental impact. In the end, recovery will happen, but the cost and impact in the meantime can be significant. The Kalamazoo River spill has cost Enbridge, the pipeline's owner, US\$725 million in cleanup costs and the Kalamazoo River was closed for most purposes for almost two years.

potential
for increased
cumulative
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concern.

4 Alternatives

As a result of current economic pressures and lack of pipeline capacity, alternatives to pipelines are increasingly being used to move petroleum products to the coasts of North America, particularly in the United States. The main alternative to pipelines is trains. The Canadian Energy Pipeline Association reports that its entire network transports three million barrels of oil every day, the equivalent of 5,000 rail cars.¹⁸ However, perhaps only 5,000 barrels of western Canadian oil per day are currently shipped by rail.¹⁹

Trains are more expensive and come with a number of environmental concerns associated with their normal operation, such as engine emissions that are not generally associated with pipelines.²⁰ They, too, may lead to releases associated with accidents. In Canada in 2011, there were 272 derailments on 85 million train miles.²¹ In 2005, a train derailed, spilling 700 m³ of heavy fuel oil into Lake Wabamun, Alberta.²²

5 Conclusion



The direct environmental risks of pipelines are relatively low. However, there are certainly risks, particularly those associated with leaks and ruptures. Establishing acceptable levels of risk, particularly for those in proximity to a pipeline, will always be a difficult task. Choosing a pipeline route that avoids vulnerable areas is a key factor.

Indirectly, pipelines are an important part of the infrastructure facilitating petroleum use around the globe. Much of the argument against some current pipeline projects is not about the direct risks, but those indirectly associated with this exploitation, namely climate change and the disturbance of large-scale oil sands mining. The potential contribution to global warming through burning oil from oil sands is relatively small, but is seen as symbolic of our fossil fuel dependence in general.²³

Given our current dependence on petroleum products and the time and effort required to shift this dependence, most estimates suggest that we will be using them for decades to come. Given the societal choice to continue to use such fuels, pipelines will almost certainly be the means used to transport them.

Notes

† Papers in the Library of Parliament's *In Brief* series are short briefings on current issues. At times, they may serve as overviews, referring readers to more substantive sources published on the same topic. They are prepared by the Parliamentary Information and Research Service, which carries out research for and provides information and analysis to parliamentarians and Senate and House of Commons committees and parliamentary associations in an objective, impartial manner. [[Return to text](#)]

1. The Northern Gateway project is a pipeline proposal to take bitumen from the Alberta oil sands across British Columbia to the port of Kitimat. See Canadian Environmental Assessment Agency, *Northern Gateway Pipeline Project*. [[Return to text](#)]
2. Canadian Environmental Assessment Agency, *Enbridge Northern Gateway Project, Soc. 52 Application*  (453 kB, 1 page), May 2010. [[Return to text](#)]
3. Canadian Environmental Assessment Agency, *Agreement Between the National Energy Board and the Minister of the Environment Concerning the Joint Review of the Northern Gateway Pipeline Project*  (78 kB, 14 pages), 4 December 2010. [[Return to text](#)]

4. Environment is defined in s. 2(1) of the *Canadian Environmental Assessment Act, 2012*, S.C. 2012, c. 19, s. 52, as:
the components of the Earth, and includes
(a) land, water and air, including all layers of the atmosphere,
(b) all organic and inorganic matter and living organisms, and
(c) the interacting natural systems that include components referred to in paragraphs (a) and (b). [[Return to text](#)]
5. *Canadian Environmental Assessment Act, 2012*, s. 5. [[Return to text](#)]
6. Canadian Environmental Assessment Agency, Enbridge Northern Gateway Project, Sec. 52 Application (2010). [[Return to text](#)]
7. House of Commons, Standing Committee on Environment and Sustainable Development, *Evidence*, 15 November 2011 (Dr. Peter Usher, P. J. Usher Consulting Services). [[Return to text](#)]
8. See Center for Disease Control, *Table of Chemical Constituents Commonly Found in Crude Oil* (86 kB, 3 pages), September 1999; and for more detail, U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, *Toxicological Profile for Total Petroleum Hydrocarbons (TPH)* (8.3 MB, 316 pages), September 1999. [[Return to text](#)]
9. Michigan, Department of Environmental Quality, *Oil Spill News and Updates*; see also CBC Radio, "[Kalamazoo Oil Spill](#)," *The Current with Anne Marie Tremont*, 20 June 2012. [[Return to text](#)]
10. National Energy Board, *Pipeline Ruptures*; see, in particular, the accompanying [table](#). [[Return to text](#)]
11. Alberta Energy and Utilities Board, *Pipeline Performance in Alberta, 1990-2005* (4.3 MB, 88 pages), April 2007. [[Return to text](#)]
12. *Ibid.*, p. 55. [[Return to text](#)]
13. Sean Khers, Canadian History and Environment, *The History of Oil Pipeline Spills in Alberta, 2006-2012*, Blog post, 7 June 2012. [[Return to text](#)]
14. Bitumen, the unrefined product of oil sands operations, is too viscous to transport by pipeline and so must be diluted with other petroleum substances such as condensate. [[Return to text](#)]
15. Anthony Swift et al., *Tar Sands Pipelines Safety Risks* (6.9 MB, 18 pages), Natural Resources Defense Council, National Wildlife Federation, Pipeline Safety Trust and Sierra Club, February 2011. [[Return to text](#)]
16. Alberta Energy Resources Conservation Board, "[ERCB Addresses Statements in Natural Resources Defense Council Pipeline Safety Report](#)," News release, 18 February 2011. [[Return to text](#)]
17. Jenny Been, *Comparison of the Corrosivity of Dilbit and Conventional Crude* (810 kB, 29 pages), Alberta Innovates, Technology Futures, September 2011. [[Return to text](#)]
18. Canadian Energy Pipeline Association, *Why Pipelines Are Needed*. [[Return to text](#)]
19. Lynda Harrison, "[Riding the Bull: Oil companies climb aboard potential alternative to pipelines](#)," *Oil and Gas Inquirer*, September 2011. [[Return to text](#)]
20. See, for example, Organisation for Economic Co-operation and Development, *The Environmental Effects of Freight* (148 kB, 38 pages), 1997. [[Return to text](#)]
21. Transportation Safety Board of Canada, *2011 Rail Annual Statistics - Highlights*. For a very rough estimate, consider the following. The distance from Edmonton to the United States border is approximately 800 kilometres (375 miles). Canada exports roughly two million barrels of crude to the United States every day. If a train is 100 cars long, then approximately 33 trains a day would have to make the voyage. In a year, this would amount to over four million train miles. Assuming the same rate of derailments, this would translate into 12 derailments per year. [[Return to text](#)]
22. Transportation Safety Board, "[Background - Wabamun Derailment \(R06E0059\) - Recommendations](#)." [[Return to text](#)]

23. Andrew Weaver, "Our New Study: Global Warming From Coal Worse Than Oil Sands," The Huffington Post
Canada, 21 February 2012. [Return to text]