

National Energy
Board



Office national
de l'énergie

DECISION

File OF-Fac-Oil-T260-2013-03 15
2 March 2018

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Dear Mr. Palk, Ms. Bailer Palk, Mr. Carter, Mr. Stoness and Mr. Denstedt:

**Trans Mountain Pipeline ULC (Trans Mountain)
Trans Mountain Expansion Project - Certificate OC-064
Decision for Detailed Route Hearing MH-018-2017
Mr. Stuart Palk and Ms. Wendy Bailer Palk**

1. Background

On 19 May 2016, the National Energy Board (NEB or Board) issued its Report recommending that Governor in Council approve the Trans Mountain Expansion Project (TMEP), subject to 157 conditions ([A77045](#)).

The TMEP included twinning the existing 1,147 kilometre long Trans Mountain Pipeline (TMPL) system in Alberta (AB) and British Columbia (BC) with approximately 981 kilometres of new buried pipeline; new and modified facilities, such as pump stations; additional tanker loading facilities at the Westridge Marine Terminal in Burnaby; and reactivating 193 kilometres of existing pipeline between Edmonton and Burnaby. Trans Mountain requested approval of a 150 metre wide corridor for the TMEP pipeline's general route.

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On 29 November 2016, Governor in Council directed the Board to issue the Certificate of Public Convenience and Necessity OC-064 (Certificate) ([A80871](#)), the effect of which was to approve the TMEP, including the 150 metre wide corridor.

On 17 and 24 February 2017, Trans Mountain applied to the Board for Segments 1 and 2 of its TMEP detailed route, submitting the Plan, Profile, and Book of Reference (PPBoR). Under section 34 of the *National Energy Board Act* (NEB Act), Trans Mountain made available for public viewing copies of its PPBoR, served notices on owners of lands proposed to be acquired for the proposed detailed route¹, and published notices in newspapers in the vicinity of the proposed detailed route².

In all detailed route hearings, the Board considers the following issues:

1. the best possible detailed route of the pipeline;
2. the most appropriate method of constructing the pipeline; and
3. the most appropriate timing of constructing the pipeline.

In its 31 August 2017 Letter of Decision ([A85762](#)), the Board stated that it would not consider the issue of compensation to be paid to landowners as that matter is not within its jurisdiction.

2. Detailed Route Hearing MH-018-2017

Mr. Stuart Palk and Ms. Wendy Bailer Palk are the registered owners of lands located at NE 22-53-16 W5M, Lot 2, Block 1, Plan 9624104, in the rural municipality of Yellowhead County in AB. The property is shown on PPBoR: M002-PM03006-056 and in Figure 1³. Trans Mountain identified this land as Tract 522. The Palk and Bailer Palk lands are proposed to be crossed by the new TMEP pipeline in Segment 2. Mr. Palk and Ms. Bailer Palk reside on the lands.

Mr. Palk and Ms. Bailer Palk filed their statement of opposition ([A82320](#)) on 29 March 2017 which was set down for a hearing by the Board in its Hearing Order ([A85764](#)) dated 31 August 2017. The Hearing Order set a November-December 2017 timeframe for the hearing to occur with details to follow in a procedural update.

A request for a site visit of the Palk and Bailer Palk lands was filed with the Board on 24 October 2017 ([A87158](#)). In Ruling No. 4 ([A87818](#)), issued 15 November 2017, the Board set out its decision as to which properties would have a site visit in Segment 1 and Segment 2. The Board granted a site visit to Mr. Palk and Ms. Bailer Palk and it occurred on 23 November 2017 ([A88645](#)).

¹ As required by [paragraph 34\(1\)\(a\)](#) of the NEB Act.

² As required by [paragraph 34\(1\)\(b\)](#) of the NEB Act.

³ The map in Figure 1 was originally filed by Trans Mountain as part of its evidence for detailed route hearing MH-018-2017 ([A86694](#)). It was used and marked during the hearing and subsequently entered as an exhibit on the record ([A87913](#)).

On 20 October 2017, Mr. Carter, on behalf of Mr. Palk and Ms. Bailer Palk, filed a Notice of Motion ([A87090](#)) requesting the Board compel Trans Mountain to provide additional information. The Board dismissed the motion on 31 October 2017, having received comments from Trans Mountain, noting that Trans Mountain had voluntarily provided additional information in response to the motion ([A87403](#)).

In light of receiving additional information from Trans Mountain on 26 October 2017, the Board extended the deadline for Mr. Palk and Ms. Bailer Palk to file their written evidence from 31 October 2017 to 7 November 2017.

On 31 October 2017, Mr. Carter filed a letter with the Board ([A87408](#)) stating that the information provided by Trans Mountain on 26 October 2017 was insufficient. The Board viewed this letter as a new Notice of Motion, and requested comments from Trans Mountain and Mr. Carter on behalf of his clients. On 24 November 2017, the Board issued Ruling No. 5 dismissing the motion ([A88137](#)).

The oral hearing for Mr. Palk and Ms. Bailer Palk was held on 24 November 2017, in Edson, AB. Mr. Palk and Ms. Bailer Palk were present. Trans Mountain presented a panel of witnesses for cross-examination. Mr. Carter, on behalf of his clients, asked questions of Trans Mountain’s witness panel, and provided final argument. Mr. Palk and Ms. Bailer Palk provided comments and answered questions.

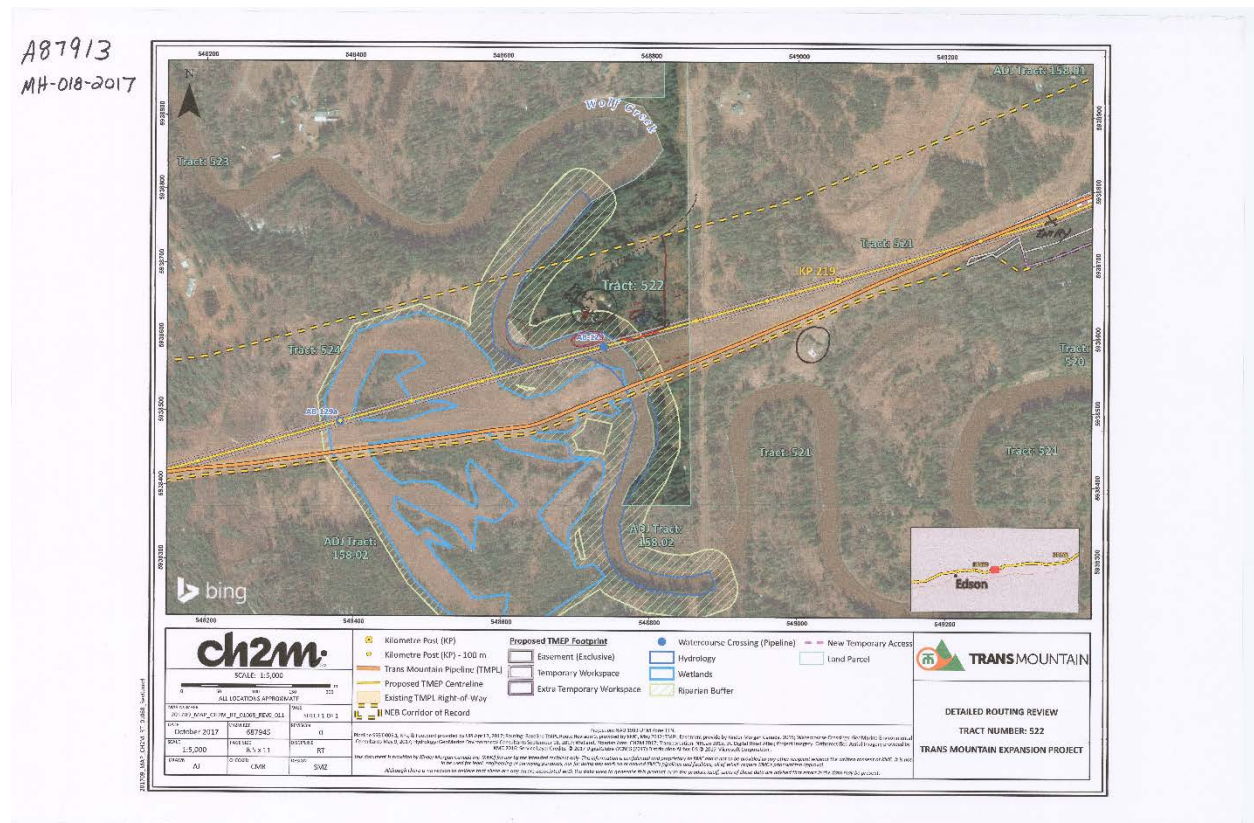


Figure 1 Map of Stuart Palk and Wendy Bailer Palk’s property. The notations on this map were made by the Parties during the hearing and it was entered as Exhibit No. [A87913](#).

2.1 Proposed Detailed Route

2.1.1 Trans Mountain's Routing Criteria

In selecting its 150 metre wide corridor and detailed route for the new TMEP pipeline, Trans Mountain submitted in its written evidence and opening statement at the detailed route hearing that it had established a hierarchy of routing principles. In descending order of preference, these were:

1. where practicable, co-locate the new TMEP pipeline on or adjacent to the existing TMPL easement;
2. where co-location was not practicable, minimizing the creation of new linear corridors by installing the new TMEP pipeline adjacent to existing easements or rights-of-way for other linear facilities including other pipelines, power lines, highways, roads, railways, fibre optic cables and other utilities;
3. if co-location with any existing linear facility was not feasible, install the new pipeline in a new easement selected to balance safety, engineering, construction, environmental, cultural and socio-economic factors; and
4. in the event a new easement was necessary, minimize the length of the new easement before returning to a contiguous right-of-way.

Trans Mountain submitted that it had been engaging landowners in its routing discussions since 2012 and used this feedback to optimize the location of its 150 metre wide corridor. Trans Mountain stated that the width of the corridor provided flexibility for minor route adjustments including those informed by landowner input.

2.1.2 Proposed Detailed Route on the Palk and Bailer Palk Lands

The proposed detailed route for the new TMEP pipeline on the Palk and Bailer Palk lands, located on the east side of Wolf Creek, includes a horizontal directional drill to the north of the existing TMPL alignment (referred to at times during the hearing as the 'straight alignment'). As shown in Figure 1, the proposed detailed route crosses through the southern portion of Mr. Palk and Ms. Bailer Palk's property.

Approximately 100.8 metres of new pipeline and a corresponding permanent easement area of 0.101 hectares (0.25 acres) would be situated on the property. The width of the permanent right-of-way is 10 metres. No temporary workspace is required on the property.

The proposed route on the Palk and Bailer Palk lands includes a horizontal directional drill crossing of Wolf Creek that coincides with the Berry lands, located on the west side of Wolf Creek (proceeding MH-007-2017).

Views of Mr. Palk and Ms. Bailer Palk

In their statement of opposition, Mr. Palk and Ms. Bailer Palk stated that they are opposed to the new TMEP pipeline route on their property because of the proximity to their residence (which is approximately 50 metres away), well, septic mound, and proposed location of a future residence for their son and his family. They were also opposed because of the removal of trees on their property, and the additional safety risk of having another pipeline on their property. They questioned whether there would be restrictions on the use of their land due to the prescribed area.

Mr. Palk and Ms. Bailer Palk asserted that contrary to Trans Mountain's routing criteria, the new TMEP pipeline easement fragments their land, allowing no access to the south section of the property and also orphans a strip of land approximately 10 metres wide in between two easements which cannot be used or developed because of the prescribed area.

Mr. Palk and Ms. Bailer Palk expressed concern with Trans Mountain's proposed horizontal directional drill alignment as applied for, stating that the new pipeline would be approximately 50 metres from their residence and 15 metres from a proposed residence for their son. In their evidence and during the hearing, Mr. Palk and Ms. Bailer Palk also reiterated their concerns regarding the clearing of trees, raised many concerns about their interactions with land agents and consultants, and compensation related to impacts on property value.

Mr. Palk and Ms. Bailer Palk stated that one of their biggest concerns is in regard to their water well and the impacts that the drilling could have on the aquifer. Mr. Palk and Ms. Bailer Palk stated that their well is 62 feet deep but they do not know the depth of the aquifer, and raised concerns about drilling fluids migrating into the aquifer and contaminating their well. In addition, Mr. Palk and Ms. Bailer Palk raised concerns about how long the drilling would take and stated that notifying them of the drilling does not mitigate the impacts from noise and emissions.

Mr. Palk and Ms. Bailer Palk stated at the hearing that they do not want an open cut on their land under any circumstance.

Views of Trans Mountain

Trans Mountain submitted that the existing TMPL crossing of Wolf Creek was constructed many years ago by open cut and has a bend on the west side of the creek, and that it was not possible to replicate the bend and install the new TMEP pipeline within the existing TMPL easement using a horizontal directional drill.

In its evidence and at the hearing, Trans Mountain submitted that environmental impacts to Wolf Creek and the surrounding areas are best avoided by conducting a trenchless crossing by horizontal directional drill. Trans Mountain submitted that an open cut would require a construction footprint width of 45 metres or more, but that the horizontal directional drill method would require 10 metres or less.

Trans Mountain stated in its written evidence and at the hearing, that completing the installation of the pipeline by horizontal directional drill will not require the 10 metre easement to be cleared, stripped and graded. Trans Mountain stated any clearing activity would mainly consist of clearing underbrush to lay the steering cables for the horizontal directional drill.

Trans Mountain stated that given everything it knows to date, the proposed detailed route is the best route because the straight alignment has a higher chance of success than a more complex and curved design. Trans Mountain stated that its contingency plan for the Wolf Creek crossing is an open cut construction, which would require Trans Mountain to develop a design with alternative routing and proceed with an application to the Board and Fisheries and Oceans Canada⁴ for that alignment.

Trans Mountain also stated it was not aware of any plans for development that may overlap the 10 metre easement but that the easement could reasonably be incorporated into any future plans, and that there was no restriction on land-use activities outside of the 10 metre easement. Trans Mountain further stated that Mr. Palk and Ms. Bailer Palk could have both a septic field and storage shed in the prescribed area and that the prescribed area could also be used as access for quads or sleds.

In response to concerns regarding the water well, Trans Mountain submitted that it has plans in place to protect water wells and watercourses during construction. Trans Mountain stated that it had identified a water well on Mr. Palk and Ms. Bailer Palk's property and committed to updating the Water Well Inventory. In response to concerns regarding noise, Trans Mountain stated that as part of NEB Condition 74 in Certificate OC-064, Trans Mountain will develop a site-specific Noise Management Plan, which is required to be submitted to the Board three months prior to the drilling taking place. Trans Mountain committed to reviewing the applicable plans with Mr. Palk and Ms. Bailer Palk.

Trans Mountain submitted in its final argument that the proposed route is the best possible route given the risk and feasibility of successfully crossing Wolf Creek and that the proposed method and timing of construction are also appropriate.

2.1.3 Alternate Route

Two alternate routes were discussed in MH-018-2017, these were:

Option 1 Stay within the Existing Easement:

Views of Mr. Palk and Ms. Bailer Palk

Mr. Palk and Ms. Bailer Palk stated in their written evidence that they want the route moved south, suggesting that the new TMEP pipeline could follow the existing right of way on the east side of creek and continue onto Crown land then return back to the existing right of way with an open cut. This proposed alternate route would involve a slight curved alignment for the

⁴ Additional information on Fisheries and Oceans Canada applications and the role the Board plays in those applications can be found here: <https://www.neb-one.gc.ca/bts/ctrg/mmrndm/2013fshrcnscnd-eng.html>

horizontal directional drill which they submitted would be feasible based on their communication with an unnamed horizontal directional drilling company. A hand drawn map depicting this proposed alternate route was included in the written evidence of Mr. Palk and Ms. Bailer Palk.

Views of Trans Mountain

In response to the suggestion of the alternate route, Trans Mountain replied that its proposed route and horizontal directional drill construction method significantly limits its environmental impact on Wolf Creek and the riparian areas. During the oral hearing, Trans Mountain stated that there was no space within the approved NEB corridor to install the new TMEP pipeline to the south of the existing TMPL. Further, Trans Mountain stated that adding a horizontal deflection or bend into the horizontal directional drill path adds complexity and increases potential risk.

Trans Mountain noted that the pipeline, as applied for, would be more than 41 metres below the ground, and that the proposed alignment is not expected to impede land use or access to the south section of the parcel.

Option 2 Curved Horizontal Directional Drill that Closely Follows the Existing Right of Way:

Views of Mr. Palk and Ms. Bailer Palk

Mr. Palk and Ms. Bailer Palk preferred a curved horizontal directional drill that closely follows the existing right of way. A map depicting this further curved option was attached to an email entered as exhibit [A87912](#).

Views of Trans Mountain

At the hearing, Trans Mountain stated that the routing decisions it had made on the Palk and Bailer Palk lands were driven largely by environmental and technical considerations with the overarching goal of minimizing the length of deviation from the existing line while finding a safe way to cross Wolf Creek. Trans Mountain further stated that it had already tried to optimize the location of the route to minimize impacts to the property.

Trans Mountain stated that incorporating a horizontal deflection or bend into the horizontal directional drill alignment would add complexity and increase the potential risk. Trans Mountain stated that the proposed 1,300 metre horizontal directional drill is a long, complicated, and specialized construction technique and that it sought to minimize any complications. Trans Mountain further stated that the risk associated with a curved horizontal directional drill is related more to the drilling of the hole, not the pulling of the pipe through the hole, and that the risk had not been quantified. Trans Mountain stated that it conducted environmental and geotechnical studies to assess horizontal directional drill feasibility as part of the OH-001-2014 proceeding.

In its filings, Trans Mountain identified Wolf Creek as having steep, erodible and unstable banks⁵ with a high fish habitat sensitivity rating⁶, and stated that if an isolated trenched pipeline crossing method (a specific method of conducting open cut crossings) was used then the Fisheries and Oceans Canada's measures to avoid causing serious harm to fish would not be met⁷. Trans Mountain stated that as a result of the environmental considerations at this crossing location, Wolf Creek was identified for a horizontal directional drill crossing, to minimize impacts on environment.

Trans Mountain stated that it would want to do the horizontal directional drill in the least risky way with the highest chance of successfully completing the crossing to avoid the need to use a contingency crossing methodology. Trans Mountain stated that if it were to go to an open cut crossing, it would proceed with an application to the Board and Fisheries and Oceans Canada⁸ for an alternative contingency crossing method and alternative routing. In the event a contingency crossing is required, Trans Mountain committed to consulting with Mr. Palk and Ms. Bailer Palk when drafting the pipeline construction contingency plan for a conventional open cut at the Wolf Creek crossing.

Trans Mountain stated in final argument that all parties agreed that an open cut crossing is the least preferred option and submitted that the horizontal directional drill significantly reduces environmental impacts, which was the primary driver in deciding on the method to cross Wolf Creek. Trans Mountain further submitted that a straight alignment for the crossing has a higher chance of success and less risk of failure when compared to a more complex curved design, a design that would add a level of complexity and risk that Trans Mountain considers unacceptable.

2.2 Summary of Commitments

During the hearing and in its evidence, Trans Mountain committed to:

- Continuing engagement with Mr. Palk and Ms. Bailer Palk;
- Minimizing the tree clearing, provided that the regulatory safety and pipeline integrity requirements can be satisfied;
- Preserving the trees over the new TMEP pipeline horizontal directional drill path;
- Meeting with Mr. Palk and Ms. Bailer Palk and present the environmental plans, including the Environmental Protection Plan and a number of the Management Plans that are applicable to their property;

⁵ Wolf Creek identified on Sheet 68 of the Resource Specific Mitigation Tables ([A86570-9](#))

⁶ Wolf Creek identified on Page E-2 of the Riparian Habitat Management Plan ([A86536-7](#))

⁷ Wolf Creek identified in the Watercourse Crossing Inventory on Page A-24 of Appendix A ([A86566-1](#)), and Page F-49 of Appendix F ([A86568-4](#))

⁸ Additional information on Fisheries and Oceans Canada applications and the role the Board plays in those applications can be found here: <https://www.neb-one.gc.ca/bts/ctrg/mmrndm/2013fshrcnscnd-eng.html>

- In the event the horizontal directional drill crossing fails, consulting with Mr. Palk and Ms. Bailer Palk when drafting the contingency plan for the conventional open cut construction; and
- Adding Mr. Palk and Ms. Bailer Palk's water well to the Water Well Inventory and Environmental Alignment Sheets.

3. Board Decision for Detailed Route Hearing MH-018-2017

The Board appreciates the time spent by Mr. Palk and Ms. Bailer Palk and Trans Mountain in discussing their concerns at the detailed route hearing.

The Board notes that issues regarding tree clearing, noise, water wells, the septic field and land use raised by Mr. Palk and Ms. Bailer Palk were addressed through commitments made by Trans Mountain in both its written submissions and at the hearing. The Board also notes that Trans Mountain has committed to meeting with Mr. Palk and Ms. Bailer Palk to provide more information and continue engagement. The Board is of the view this will provide a means for issues to be raised and addressed.

Regarding the issues raised by Mr. Palk and Ms. Bailer Palk related to land value and compensation, the Board will not address these matters in this decision as they are outside of the Board's jurisdiction.

The Board notes the concerns expressed by Mr. Palk and Ms. Bailer Palk about the impacts that the applied-for alignment of the trenchless crossing methodology for Wolf Creek will have on their lands. The Board also recognizes that the trenchless crossing will substantially reduce a number of adverse effects in comparison to the open cut contingency methodology, including reducing tree removal and avoiding environmental effects on Wolf Creek and the surrounding riparian area. The Board understands that Mr. Palk and Ms. Bailer Palk support the trenchless crossing methodology over an open cut crossing, but would prefer the routing to be located further from their residence, via a curved horizontal directional drill alignment.

The Board notes that no expert evidence was presented to quantify the complexity and risk of both of the curved horizontal directional drill alignments discussed during the hearing. However, the Board is of the view that there would be an increase in complexity and risk attempting the installation of the horizontal directional drill for the curved alignment over the straight alignment.

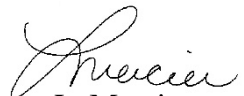
Based on all of the submissions made in written evidence and at the oral hearing, the Board has determined that both Mr. Palk and Ms. Bailer Palk and Trans Mountain share the view that the environmental effects of an open cut crossing would be much greater than those of a horizontal directional drill. Therefore, in order to minimize the risk of causing greater environmental effects, the Board is of the view that the detailed route selected should be the one with the greatest likelihood of success, that being the horizontal directional drill along the straight alignment as proposed by Trans Mountain.

With respect to the contingency crossing methodology, if a contingency crossing is required there may be additional impacts that would require Board review and approval. Trans Mountain will be required to make an application and the Board could undertake a process that would include an opportunity for impacted landowners, if any, to express their views. The Board is not approving the contingency crossing at this time.

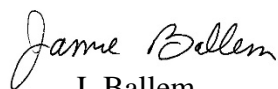
The Board has carefully considered the impacts that any decision on the Wolf Creek crossing would have on both the Palk and Bailer Palk lands and the Berry lands located on the west side of Wolf Creek (proceeding MH-007-2017). Having considered all of the evidence filed on the record by the Parties, the representations made at the oral portion of the detailed route hearing, and the matters described above, the Board finds that the route proposed by Trans Mountain is the best possible detailed route of the pipeline, and the methods and timing of constructing the pipeline are the most appropriate, subject to the commitments made by Trans Mountain.

Any approval by the Board of the PPBoR for Mr. Palk and Ms. Bailer Palk's lands will include a condition requiring Trans Mountain to list and fulfill the commitments it made in the course of this detailed route hearing, and update its alignment sheets. Mr. Palk and Ms. Bailer Palk are entitled to seek remedy from the Board if the commitments are not being fulfilled.

Trans Mountain is reminded that the relevant conditions of approval in Certificate OC-064 also apply to the construction and operation of the TMEP on Mr. Palk and Ms. Bailer Palk's lands.

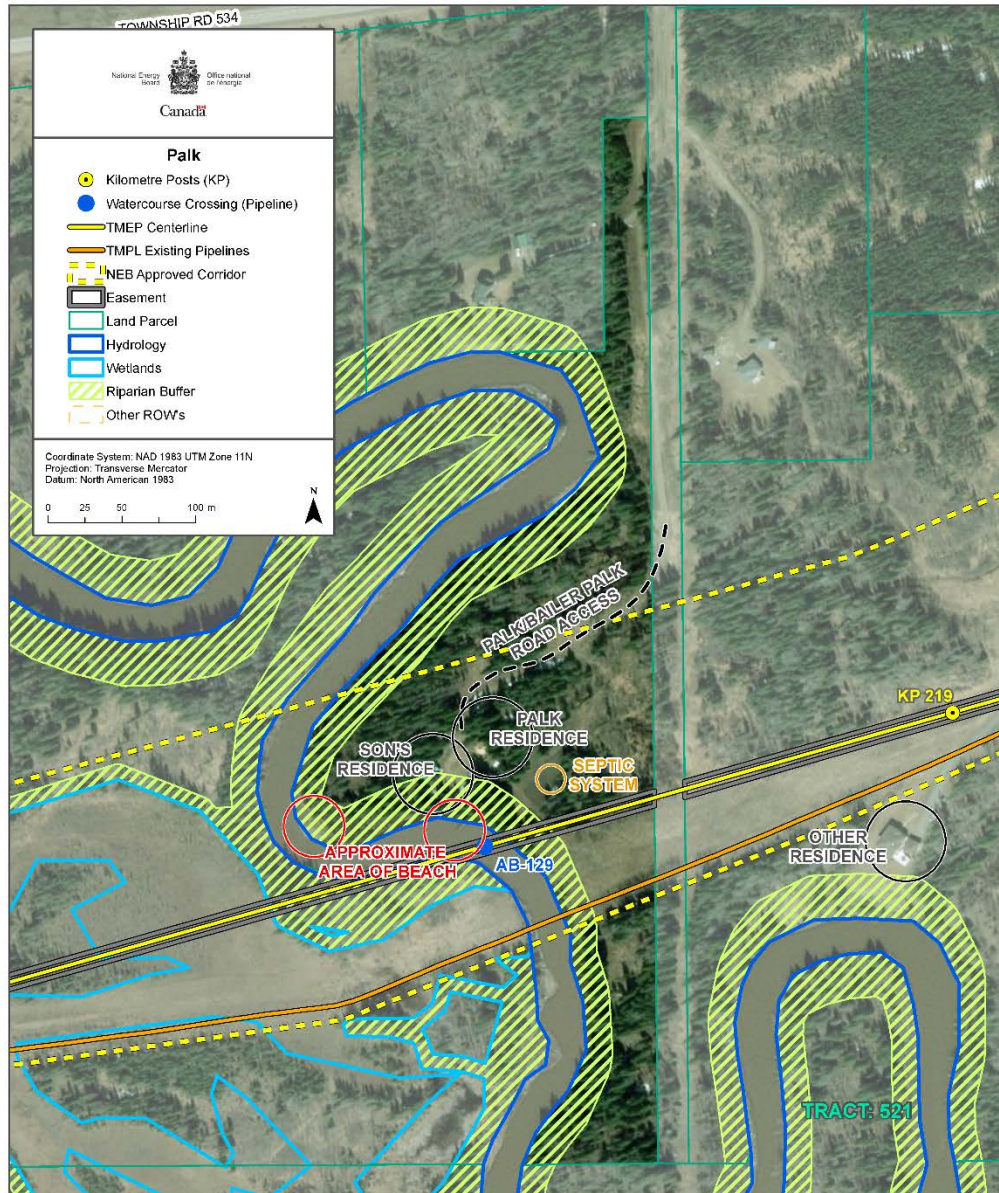

L. Mercier
Presiding Member


S. Parrish
Member


J. Ballem
Member

Appendix I – Map of Mr. Palk and Ms. Bailer Palk’s property

This map was created by the NEB for illustrative purposes only.



MAP PRODUCED BY THE NEB, FEBRUARY 2018. THIS MAP HAS BEEN GENERATED BY THE NEB FOR ILLUSTRATIVE PURPOSES ONLY. THE NEB DISCLAIMS ALL RESPONSIBILITY FOR ANY ERRORS, OMISSIONS AND INACCURACIES. READERS WISHING TO CONSULT THE ACTUAL MAPS AS THEY WERE FILED SHOULD REFER TO THE OFFICIAL RECORD.