



LETTER DECISION

File OF-Fac-Oil-T260-2013-03 03
22 June 2018

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Mr. Gregory J. McDade, Q.C.
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Dear Mr. Stoness, Mr. Denstedt and Mr. McDade:

**Trans Mountain Pipeline ULC (Trans Mountain)
Trans Mountain Expansion Project (TMEP)
Application to Vary Order XO-T260-010-2016 (Project or Application)
pursuant to section 21 of the *National Energy Board Act* (NEB Act)
Letter Decision**

Background

On 1 December 2016, the National Energy Board (NEB or Board) issued Certificates of Public Convenience and Necessity OC-64, AO-003-OC-2, and AO-002-OC-49. On 6 June 2016, the Board issued Orders XO-T260-007-2016, XO-T260-008-2016, XO-T260-009-2016, XO-T260-010-2016, and MO-015-2016, which took effect upon the issuance of the Certificates. The Certificates and Orders authorize the construction and operation of the Project, subject to 157 conditions.

Order XO-T260-010-2016 effectively approved the construction and operation of five new tanks in the Edmonton Terminal West Tank Area, one new tank in the Sumas Terminal and 14 new tanks at the Burnaby Terminal, required for the operation of the TMEP.

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On 1 March 2017, the Board received Trans Mountain's Application, pursuant to section 21 of the NEB Act, seeking variance to Order XO-T260-010-2016 to accommodate design changes to the Burnaby Terminal tank configuration. The main relief requested is as follows:

- a reduction in the diameter of five of the 14 approved tanks;
- a net reduction of 50,880 m³ (320,000 bbls) in storage capacity; and
- reconfiguration of the secondary containment system to reduce the number of three-tank shared containment areas from four to one.

On 28 June and 5 September 2017, and 5 and 19 January 2018 Trans Mountain responded to Board Information Requests (IRs) No. 1 ([A84680](#)), No. 2 ([A85834](#)), No. 3 - Part 1 ([A89029](#)), and Part 2 ([A89374](#)), respectively.

Trans Mountain's Application requested the Board to adopt the reports provided in compliance to Conditions 22 and 24¹ of Order XO-T260-010-2016 as evidence in the hearing of the Application. Note that compliance to Conditions 22 and 24 is being considered in a separate process for which the Board will release a separate decision.

Process Steps

The Board opened two comment periods with respect to the Application via letters dated 5 June 2017 ([A84209](#)) and 17 April 2018 ([A91346](#)). The Board required Trans Mountain to provide a copy of the 5 June 2017 letter to all Intervenors from the OH-001-2014 TMEP proceeding as well as interested persons.

In response to the Board's 5 June 2017 letter, the Board received a letter of comment from the City of Burnaby on 30 June 2017 ([A84741](#)) and a reply from Trans Mountain on 14 July 2018 ([A84954](#)).

The second comment period, opened specifically for the City of Burnaby, was scoped to Trans Mountain's responses to NEB IRs No. 1, No. 2 and No. 3. The City of Burnaby filed a letter of comment on 3 May 2018 ([A91717](#)). Trans Mountain provided a reply to the City of Burnaby's written comments on 16 May 2018 ([A92010](#)), after the Board granted an extension to the reply deadline ([A91882](#)).

Decision

The Application introduces important design changes to the Burnaby Terminal. The Board is of the view that the design changes in the Application and related filings represent significant improvements to the preliminary design proposed during the OH-001-2014 TMEP proceeding and achieves the intended outcome of Conditions 22 and 24 imposed by the Board, namely, a safer terminal design, which minimizes risks.

¹ Trans Mountain was required to file Condition 22 (Updated terminal risk assessment) and Condition 24 (Secondary containment - Burnaby Terminal) 6 months prior to commencing construction of the Project.

The Board has examined the Application, Trans Mountain's subsequent filings and the City of Burnaby's letters of comment, and has determined that it is in the public interest to vary Order XO-T260-010-2016 to reflect the design changes to the Burnaby Terminal.

All conditions included in Order XO-T260-010-2016 continue to apply to this Project. Having considered the Application and related filings, the Board does not propose any additional conditions specific to this Project.

The Board's rationale for its decision on the Application is provided in the sections below. Numerous topics were raised by the City of Burnaby and the Board during the review of the Application. The Board has focused on the key issues below. Indented text represents the views of the Board.

For matters that the City of Burnaby has raised with respect to the Application, and where the Board has not provided a summary of evidence or views, the Board has generally agreed with the reply or response provided by Trans Mountain in response to the matter.

Engineering Matters

Reduction in tank diameters and storage capacity, and increased tank spacing

The Application proposes to decrease the aggregate tank capacity by 50,880 m³ (320,000 bbls) through reductions in tank diameters. The design changes proposed in the Application also increase tank spacing based on its principle of risk reduction through design measures.

The Board notes that the proposed design changes in the Application, including the decrease in product volume and an increase in tank spacing, reduce risk at the Burnaby Terminal. The increased tank spacing complies with requirements set out in the *National Fire Protection Association 30 - Flammable and Combustible Liquids Code* (NFPA 30) and the *British Columbia Fire Code* (BCFC).

Reconfiguration of the secondary containment system

Trans Mountain has proposed several design changes to the secondary containment system for the expanded Burnaby Terminal, including minimizing shared secondary containment areas, elimination of the Partial Remote Impoundment, and the addition of an interconnected spill containment system for spill management within the Burnaby Terminal property boundary.

The Board notes that the updated secondary containment design reduces fire risks, and is capable of controlling and containing a multiple tank release within the Burnaby Terminal property boundary through the interconnected spill containment system. TMEP's overall secondary containment volumetric capacity at the Burnaby Terminal exceeds the requirements of the BCFC and *CSA Z662 – Oil and Gas Pipeline Systems*.

Fire water reservoir

Trans Mountain indicated in the Application the need to remove the existing fire water reservoir and replace it with a new, larger reservoir as part of its firefighting improvements for the TMEP with respect to the Burnaby Terminal. The Board requested further details on the assessment performed to determine the capacity of the new reservoir. Trans Mountain's response indicated that a worst-case full surface tank fire, including cooling of adjacent exposed tanks, was assessed to size the new reservoir. The assessment also included reserve water, and allowances for losses.

The City of Burnaby indicated that the fire water reservoir is undersized due to discrepancies between previous and current versions of the KMC TMTF Emergency Response Plan (Plan) in selecting the largest firefighting water requirement. The City of Burnaby stated that previous versions of the Plan reference a full surface containment bay fire (*i.e.*, a large pool fire) scenario, while the current version of the Plan replaced the full surface containment bay fire with a smaller spill event. The City of Burnaby proposed alternative firefighting tactics for large pool fires exceeding the fire water volumes anticipated in the Application.

In response to the City of Burnaby, Trans Mountain stated that it recognizes the possibility of occurrence of fire scenarios other than a full surface tank fire, including large pool fires as suggested by the City of Burnaby. Trans Mountain confirmed that it will continue to evolve its plans to respond to all types of fires, and will submit them under future condition requirements for emergency response plans in Condition 125.² Trans Mountain stated the emergency response plans would include replenishing the fire water reservoir during an emergency.

The Board is satisfied that the fire water reservoir is appropriately sized to respond to a full surface tank fire, which is a significant fire event. Trans Mountain's evidence indicates that the sizing of the fire water reservoir is based on a full surface tank fire scenario. Further, according to Trans Mountain's fire water reservoir sizing assessment, the fire water reservoir volume conforms to fire code requirements and industry recommended practices.

The Board notes the potential for fire scenarios other than a full surface tank fire, such as a large pool fire scenario raised by the City of Burnaby. The Board notes that Trans Mountain has a plan for the Burnaby Terminal to respond to fires of all types such as large pool fires. The plan includes replenishment of the fire water reservoir during an emergency. Trans Mountain has committed to continue to evolve this plan based on the final design of the Burnaby Terminal to support future emergency response plans which will be submitted under Condition 125.

The Board reminds Trans Mountain that under Condition 127³ it must file an independent third party report that confirms the adequacy of the proposed fire protection and firefighting systems. The report must demonstrate, with respect to the Burnaby Terminal that the resources and firefighting systems are capable of suppressing fires associated with all scenarios identified in the terminal's final risk assessment required by

² Condition 125 – Emergency Response Plans for the Pipeline and for the Edmonton, Sumas and Burnaby Terminals

³ Condition 127 – Terminal fire protection and firefighting systems

Condition 129.⁴ The Board notes that fire water volumes are considered to be a firefighting resource in firefighting emergency planning; therefore, the report should address the fire water reservoir.

Emergency Response

Consultation

Trans Mountain stated that broad engagement activities related to the TMEP commenced in 2012 and are ongoing. Trans Mountain committed to further engagement activities such as information sessions and meetings with local stakeholders, including the Burnaby Fire Department to update them about the detailed engineering refinements as well as construction planning and execution.

The City of Burnaby indicated that it had concerns with respect to engagement with Trans Mountain with respect to the TMEP and the Application. For example, the City of Burnaby states that Trans Mountain has made no effort to update its filings for Conditions 22 and 24 in order to address or incorporate the concerns of the City of Burnaby.

In response to the City of Burnaby's comments, Trans Mountain indicated that it had made repeated attempts to engage with the City of Burnaby in relation to the Application, condition compliance, and emergency response. It provided specific examples of engagement or attempted engagement activities with the City of Burnaby with respect to TMEP conditions and emergency response planning, including the expansion of the Burnaby Terminal. Trans Mountain stated that it received email correspondence from Burnaby that the Technical Working Group meetings scheduled with Burnaby for January 30, February 7, and March 2, 2018, "should be postponed until further notice."

The Board notes Trans Mountain's commitment to continued engagement with the City of Burnaby, as well as local stakeholders. In the Board's view, consultation and communication between Trans Mountain and local governments, emergency response organizations and first responders is necessary for emergency response to be effective.

Numerous conditions imposed on Trans Mountain through the various regulatory instruments issued for the TMEP, including some related to emergency management, are still outstanding or ongoing and involve consultation with affected parties, including municipalities, to hear concerns and to discuss potential solutions. The Board expects Trans Mountain to continue its engagement for the TMEP and provide opportunities for the City of Burnaby and other affected stakeholders. The Board also encourages affected stakeholders to undertake genuine consultation, regardless of their views about the Application or the broader TMEP. In the event of an emergency situation, all parties must be prepared to respond.

The Board notes the existence of the Technical Working Groups, established to specifically address technical matters in relation to the TMEP. The Technical Working Group meetings are an appropriate forum for municipalities, including the

⁴ Condition 129 – Final terminal risk assessments

City of Burnaby, and Trans Mountain to address questions and concerns related to the TMEP. The Board encourages Trans Mountain and the City of Burnaby to collaborate in order to address issues of interest to both parties, including emergency response.

Timing of emergency response plans

The City of Burnaby indicated that matters pertaining to emergency response planning, which are due prior to operations, should be dealt with now, and not at the last step when there is no opportunity to change the layout of the tank farm to reduce risk.

Trans Mountain stated that emergency response planning is informed, in part, by the final design of the expanded Burnaby Terminal, for which Trans Mountain is currently seeking approval from the Board. If Trans Mountain were to proceed with emergency response planning in advance of the approval of the final design of the expanded Burnaby Terminal, such measures may not be adequate in responding to the potential hazards associated with the operation of the expanded Burnaby Terminal.

Trans Mountain stated it is of the view that such an approach is not only irresponsible to the safety of the surrounding community, but also incongruent with the Board process defined for condition filings. Trans Mountain indicated that risk assessment is a valuable tool for informing what emergency response and fire suppression containment resources are required and where they are to be located, and the content of emergency response plans, fire pre-plans and tactical response plans.

The Board is satisfied with the proposed timing pertaining to emergency response planning. In the Board's view, there is a sequential nature to the development of response plans and response infrastructure. Prior to the development of response plans, the design of the expanded terminal must be finalized, and the applicable pre-construction conditions approved or accepted by the Board, as appropriate, including the approval of Conditions 22 and 24.

Socio-Economics/Environment

Trans Mountain conducted a review of the socio-economic and environmental⁵ elements for the Project to evaluate whether any new or unique interactions change the indicators, potential residual effects, or significance conclusions of the original TMEP Environmental and Socio-Economic Assessment (ESA) and related filings. Trans Mountain concluded that there are no new or unique interactions with the socio-economic and environmental elements identified as a result of the Project.

⁵ In a separate filing ([A92114-2](#)) dated 25 May 2018 for its Burnaby Terminal Facility Piping Relocations (XO-T260-003-2017) and Facility Piping Decommissioning (MO-021-2017) Projects, Trans Mountain updated the Board that the red-tailed hawk nest in the southwest corner of the property was found to be unoccupied and had been removed

The Board notes that all Project activities associated with the Burnaby Terminal design changes remain within the fence line of the Trans Mountain-owned Burnaby Terminal. In the Board's view the potential socio-economic and environmental effects of the Project are limited in nature. The Board agrees with Trans Mountain that the Project will not change the conclusions of the original TMEP ESA and related filings, and that no new mitigation measures are required beyond those identified during the OH-001-2014 TMEP proceeding.

Other Matters

On 19 July 2017 the Board approved Trans Mountain's application to vary Certificates OC-2 and OC-49 ([A85032](#)). In its decision, the Board stated that a variance of Order XO-T260-010-2016 was also required to remove Tank No. 9 from Schedule A, reflecting that Tank No. 9 of the Edmonton Terminal West Tank Area will remain operating according to its current specifications.

The Board has amended the attached Schedule A to reflect its 19 July 2017 decision.

Yours truly,

Original signed by

Sheri Young
Secretary of the Board

Attachment