Trans Mountain Pipeline ULC (Trans Mountain)
Onshore Pipeline Regulations and Filing Manuals Update
Phase 2 – Engagement Overview
Due Date: March 31, 2025

D. OPR – Environmental Protection Topic Paper

This paper describes potential amendments to the OPR to improve the CER's environmental oversight. Any suggestions for improvement regarding this topic are welcome, and in particular, the CER seeks your comments on proposed improvements related to:

- the duty to report and manage contamination;
- reclamation, vegetation management and restoration;
- participation in the development of environmental monitoring programs by Indigenous Peoples;
- environmental protection plans for construction, operations and maintenance activities;
- construction to operation transition plans;
- climate resiliency; and
- inclusion of International Standards Organization (ISO) standards related to environment.

Background: Environmental Protection

The CER holds companies accountable to protect the environment throughout the lifecycle of an energy project. Companies must develop, implement and maintain an Environmental Protection Program that anticipates, prevents, manages and mitigates conditions that could adversely affect the environment.

The CER is considering numerous options to meet objectives related to preventing and addressing impacts to the rights and interests of Indigenous Peoples. As stated in the Topic Paper on the Rights and Interests of Indigenous Peoples, Socio-Economic Effects, and Engagement, the CER is considering the addition of a new protection program to prevent and address impacts to the rights and interests of Indigenous Peoples and new management system requirements. This would require companies to develop, implement and maintain a program that is integrated with its management system, to anticipate, prevent, manage, and mitigate conditions that could adversely impact the rights and interests of Indigenous Peoples. The proposed management system requirements (OPR, s. 6.5) include:

- a management system requirement for companies to establish and implement a process to engage with Indigenous Peoples and to demonstrate how Indigenous knowledge, including protocols and practices, that is made available to a company and is applicable to its protection programs, is incorporated into these programs; and
- a management system requirement to establish and implement a process to identify Indigenous laws and policies, and where these are made available to the company and are applicable to its protection programs, demonstrate how they are addressed in their protection programs.

A company's management system must be integrated with its protection programs, including for Environmental Protection. The management system processes proposed above would therefore need to be integrated into a company's Environmental Protection Program to help ensure Indigenous knowledge, including protocols and practices, and any relevant Indigenous laws and policies, are reflected in a company's approach to protecting the environment.

Subtopic 1: Duty to report and manage contamination

Through the Environmental Protection Program required by section 48 of the OPR, a company must proactively manage contaminated sites. In October 2020, the CER published an updated Remediation Process Guide with clear objectives and a process for demonstrating that contamination is being managed in a manner that protects the environment and human health. The Remediation Process Guide

specifies what needs to occur upon encountering contamination or suspected contamination. Currently, there is no requirement to report contamination other than when it is caused by a reportable incident, as set out in the regulation.

In response to the discussion paper released during the first phase of engagement on the OPR Review, the CER heard the following with respect to contaminated sites management:

- although managing contaminated sites effectively may be covered under the environmental protection program, the OPR does not provide clear or explicit requirements for doing so; and
- requirements for reporting contamination should be clarified in the OPR along with guidelines and processes for companies to follow.

Objectives for Improvement

The objectives of new requirements will be to help ensure that companies:

- report contamination to the CER for the full lifecycle of the pipeline; and
- manage contamination and any potentials risks in a manner that is timely and protects human health, property, and the environment.

Proposed Options

To meet the objectives outlined above, the CER is considering adding the following requirements to the OPR:

1. if, at any time, a company becomes aware of contamination or potential contamination relating to the lifecycle operation of its pipeline, the company must:
    - as soon as practicable, confirm contamination with analytical testing; and
    - immediately report the details of the contamination to the Regulator;
2. if contamination has migrated off the right-of-way or company owned or leased lands, a company must notify the Regulator immediately; and
3. throughout the lifecycle of the pipeline, a company must manage contamination and any potentials risks in a manner that is timely and protects human health, property, and the environment.

Discussion Question

d.1) What is your feedback on the proposed requirements above?

Response:

Trans Mountain's response to each of the proposed options (requirements) are as follows:

Proposed Option 1:

Trans Mountain is generally supportive of requirements for contamination reporting and management being added to the OPR, provided that such requirements are in alignment with the CER's current requirements in the *Remediation Process Guide* (RPG).

To align with the RPG, proposed requirements should not require immediate reporting for historical contamination as historical contamination is not an incident and should consider temporal factors such as the time required to complete verification of contamination, track origin/cause, consider appropriate solutions such as remediation or management in consideration of existing infrastructure, environmental risks and stakeholder needs. The proposed requirements should also be risk based and scalable to that risk (i.e., the size of the contamination, location relative to environmental receptors, occurrence on or off company property, and location accessibility given existing infrastructure).

Consistent with the RPG, Trans Mountain is opposed to reporting ***potential*** contamination. Contamination should be verified prior to reporting to prevent speculative reporting that may result in regulatory burden to both the company and the CER. Administrative efficiency will be negatively affected

if companies must subsequently demonstrate to the CER that a potentially contaminated site has no evidence of hydrocarbons.

Proposed Option 2:

It is a reasonable expectation of the regulator to require a company to report contamination that has migrated off the right-of-way or company-owned or leased lands. However, similar to proposed option 1, Trans Mountain believes the reporting should take place when there is verification that contamination has migrated, and the origin/cause. Immediate reporting would not be beneficial or practical.

Proposed Option 3:

The requirement for a company to manage contamination and any potential risks in a manner that is timely and protects human health, property, and the environment over the lifecycle of the pipeline is a reasonable requirement of the OPR. Trans Mountain encourages the CER to continue leveraging the RPG, as in Trans Mountain's view, it is an effective tool in reporting and managing contaminated sites.

Subtopic 2: Section 21 of the OPR: Reclamation, Vegetation Management, and Restoration

The CER expects that companies conduct reclamation and manage vegetation throughout the lifecycle of a facility.

For operating pipelines, reclamation, vegetation management and restoration occur in a staged approach.

- Reclamation occurs immediately following activities that disturb the soil and vegetation, such as construction or operation and maintenance activities. Reclamation monitoring following construction is often referred to as post-construction environmental monitoring.
- Throughout operations, vegetation is managed to allow patrolling and monitoring activities that are needed to ensure the safe operation of the pipeline.
- Restoration takes place once the pipeline is no longer operating, upon abandonment. Restoration of sensitive areas, such as watercourses and critical habitat may take place throughout operations.

Currently, section 21 of the OPR states: "After a pipeline is constructed, the right-of-way and temporary work areas of the pipeline shall be restored to a condition similar to the surrounding environment and consistent with the current land use."

During an industry workshop in October 2023, the CER heard that maintenance, patrolling and damage prevention practices are all necessary activities for safe operation of the pipeline, and should be incorporated into requirements for managing vegetation on pipeline rights-of-way. The need for these activities must be balanced with the requirement to protect the environment by considering best practices for managing vegetation throughout operations.

The CER has also heard that restoring land to current land use may not adequately address the cumulative effects that multiple projects have on the cultural and historical use of the land.

In response to this feedback, the CER wishes to obtain further information in relation to revising section 21 of the OPR.

Objectives for Improvement

The objectives of new requirements will be to help ensure that:

- the CER's expectations for reclamation, vegetation management and restoration are clear; and
- companies incorporate environmental protection into the relevant processes and procedures to monitor and patrol the right-of-way.

Proposed Options

To meet the objectives outlined above, the CER is considering building on the requirements in section 21 with further guidance to be developed. These requirements would incorporate the following concepts:

- After a disturbance, the rights-of-way and temporary work areas (including temporary access) associated with the pipeline must undergo reclamation in a timely manner.
    - Reclamation means the process of re-establishing a site affected by company activities to a productive use that prevents or minimizes any adverse effects on the environment, people, property, sites of cultural and historical significance and use of the land.
    - Reclamation includes the stabilization and contouring of the surface of land, maintenance of soil, management of invasive species and weeds, revegetation, and return of the water regime to a pre-disturbance state.
- During operations, disturbance to vegetation must be minimized except as necessary to enable pipeline surveillance and monitoring, and ready access for maintenance activities and emergency response.
    - Vegetation must be managed in a manner that supports activities required to maintain the safe operation of the infrastructure, but also encourages revegetation in sensitive areas and allows for restoration upon abandonment.
- As part of the abandonment activities, the right-of-way must be restored to a condition similar to the surrounding environment and consistent with pre-disturbance land use, where feasible.
    - These goals must be established in consultation with potentially impacted parties, including landowners and Indigenous Peoples (see subtopic 3 of the Rights and Interests of Indigenous Peoples, Socio-economic Effects, and Engagement paper for further information about the CER's proposal for engagement requirements).

Discussion Questions

d.2) Do these requirements enhance environmental protection and clarify CER expectations in the areas of reclamation and vegetation management?

Response:

In Trans Mountain's view, while the proposed requirements may clarify the CER's expectations, companies require flexibility to tailor reclamation and vegetation management to address priority/sensitive areas, pipeline monitoring needs and to meet commitments to landowners. Based on Trans Mountain's experience, there is an expectation from the CER that reclamation will happen more quickly after a major project than is practicable. Reclamation plans need to consider planting windows, remote access needs, contracting strategies and the time required for plantings to establish. As such, the CER's expectation for reclamation in a timely manner may differ from what companies are able to action. To remedy this, the CER may want to consider meeting with companies to understand plans for final clean up and reclamation, and the timing and drivers for the timing of these activities (i.e., environmental windows, contracting strategies).

Additionally, the proposed requirements do not include consideration for cases where a landowner or Indigenous group may request a specific form of post-disturbance reclamation to suit desired land use. Accordingly, any requirements under the OPR must allow for flexibility for companies to best manage reclamation where the regulations may differ from chosen preferences from landowners and Indigenous communities.

d.3) The requirement proposed in the third bullet above states that the goals of restoration are to restore the land to a condition similar to the surrounding environment and consistent with the pre-disturbance land use. Are these appropriate goals for restoration? If not, what should be the goals for restoration?

Response:

Trans Mountain suggests an appropriate goal would be to restore the land to a condition similar to the surrounding environment, in consideration of the CER's abandonment methods and calculations.[1] The company would also need to consider feedback from potentially impacted parties, commitments made to landowners, input from Indigenous communities and government authorities in defining end-point restoration objectives. In some cases, where a pipeline has been operating for several decades, a pre-construction baseline may not be known, nor may it be relevant, in the case of growing communities or urban environments.

d.4) What is your feedback on establishing restoration goals in consultation with potentially impacted parties?

Response:

Please see the response to request d.3), above. Trans Mountain recognizes the importance of establishing restoration goals in consultation with potentially impacted parties but notes consideration must be given to situations where landowner wishes conflict with Indigenous feedback. Any restoration goal must allow companies to proceed with engagement as appropriate and create customized plans for execution.

Subtopic 3: Section 21 of the OPR – Participation in development of environmental monitoring by Indigenous Peoples

During the hearing process for new projects, Indigenous Peoples have expressed interest in participating in the development of post-construction monitoring programs for new projects. Inclusion of Indigenous Peoples in monitoring programs adds value to the assessment of the effectiveness of mitigation measures identified in the Environmental Protection Plan (EP Plan).

In the first phase of engagement on the OPR Review, the CER heard:

- when Indigenous Peoples are involved in the development of monitoring indicators, they are best positioned to carry out the monitoring activities because these indicators have the potential to hold cultural significance for Indigenous Peoples; and
- that the expertise on the effectiveness of monitoring certain sites, plants used for harvesting and other environmental components is held by Indigenous Peoples.

In response to this feedback, the CER wishes to obtain further information regarding improving section 21 of the OPR.

Objectives for Improvement

The objective of new requirements will be to help ensure that companies include Indigenous Peoples in the development, implementation, and monitoring of reclamation activities.

Discussion Questions

d.5) What does involvement by Indigenous Peoples in monitoring over the lifecycle of the pipeline look like to you? Please provide any applicable examples or best practices.

Response:

Please see the response to Paper M, request m.21).

[1] As a part of the Commission's calculation of the 2021 Abandonment Cost Estimate for federally regulated pipelines, it utilized geospatial pipeline and aboveground facility data submitted by the companies and geospatial land cover data from Natural Resources Canada's publicly available GIS datasets for land use and crossing categories [C24949-3, Section 4.1.1, PDF p.18].

d.6) In the context of the CER's expectations of regulated companies, how could more independent monitoring and reporting by Indigenous Peoples be effectively and safely achieved? What challenges might be involved? Please provide any applicable examples or best practices.

Response:

Please see the responses to Paper M, requests m.20) and m.21).

d.7) Would the proposed processes in Subtopic I of the Rights and Interests, Socio-Economic Effects, and Engagement Topic Paper help ensure that Indigenous Peoples are included in the development and implementation of environmental monitoring activities, or are additional requirements or guidance required specific to monitoring?

Response:

The involvement of Indigenous Peoples in monitoring activities is more explicitly addressed in Paper M. Please see Trans Mountain's response to Paper M, requests m.20) and m.21).

Subtopic 4: Environmental Protection Plan required for Construction and Operation and Maintenance Activities

Companies typically submit an EP Plan for constructing a new pipeline. When doing so, the EP Plan should reflect the implementation of a company's Environmental Protection Program. The CER has found that the EP Plans can better describe specifications for reclamation for new projects. For operations and maintenance activities, the CER is proposing that companies develop EP Plans, according to the scale and scope of the activity, that describes the hazards that are identified and risk controls that will be applied during each specific operations and maintenance activity. The EP Plan is a product that needs to be adapted for specific applications and activities. Currently there is no explicit requirement in the OPR for an EP Plan to be developed for specific operations and maintenance work.

In the first phase of engagement on the OPR Review, the CER heard:

- requirements should be developed to ensure that both EP Plans and the Environmental Protection Programs incorporate measures to anticipate, prevent, manage and mitigate impacts to Indigenous and Treaty rights stemming from projects, throughout the full lifecycle; this may also include specific requirements to reduce or eliminate project contributions to cumulative impacts; and
- protection of Indigenous and Treaty rights must be started at the planning and design phase, and new projects must consider this throughout operating, maintenance, and abandonment phases, not just the construction phase.

In addition, the CER heard:

- both industry and Indigenous Peoples seek greater consistency between federal and provincial environmental standards and expectations;
- companies expressed that further guidance or clarification on the contents of an environmental program would be useful; and
- industry views environmental protection as being best managed through an Environmental Protection Program for the lifecycle of the project, with EP Plans useful for specific activities such as construction.

In response to this feedback, the CER wishes to obtain further information regarding a requirement for activity-specific EP Plans for operation and maintenance activities which demonstrate that the environmental hazards and potential hazards have been assessed prior to the activity and any necessary controls have been put in place to manage and mitigate any identified concerns.

Objectives for Improvement

The objective of new requirements will be to help ensure that companies have an environmental protection plan in place for all work and activities, scalable to the scope of the work, including operations and maintenance activities.

Proposed Options

The CER is considering the following options to meet the objectives outlined above:

- EP Plans will be developed and implemented for:
  - all construction projects; and
  - all operations and maintenance activities;
- EP Plans would only need to be submitted to the CER through a condition requirement or by request; and
- EP Plans would be scalable to the size and scope of the work; for projects that have few or no environment interactions, the EPP could simply state there are no interactions.

Discussion Questions

d.8) What are the costs or benefits of adding a requirement to develop an EP Plan that is scalable to the scope of the work for all construction, operations and maintenance activities?

Response:

Trans Mountain is of the view that the development of EP Plans for operation and maintenance activities is currently incorporated under corporate Environmental Protection Programs required under section 48 of the OPR. It is important that an EP Plan is commensurate and scalable to the size and nature of the activity as potential environmental impacts differ depending on the extent and location of the activity. In some cases, it may be appropriate to use a standardized EP Plan for a given suite of activities interfacing with similar environmental features. For activities that have no environmental interactions (i.e., in-fence line activities where there are no environmental features), a specific EP Plan should not be required.

The currently scalable approach allows for companies to scale EP Plans as needed to protect environmental features given the extent of the project impact in a cost-effective manner.

d.9) Are there alternative means to an EP Plan, that would help ensure that environmental protection is being considered and communicated during construction, operations and maintenance activities?

Response:

Trans Mountain suggests alternate means such as reduced-scale EP Plans where there are limited environmental features, and/or the risk to the environment is minimal. Companies should be given the latitude to implement scaled approaches, such as the use of an environmental checklist to identify environmental risks and provide simple mitigations where appropriate.

d.10) Would the proposed requirements in Subtopics 1 and 3 of the Rights and Interests, Socio-Economic Effects and Engagement Topic Paper help ensure that EP Plans and the Environmental Protection Programs incorporate measures to prevent and address impacts to the Rights and Interests of Indigenous Peoples?

Response:

Please see the responses to Paper I, requests i.1)-i.6) and i.12)-i.16).

Subtopic 5: Construction to Operations and Sale or Transfer of Assets Transition Plans

The CER is aware that there are instances when environmental information collected by companies during the application stage is not always transferred to the companies' operations personnel or to the company the asset has been sold to.

In the first phase of engagement on the OPR Review, the CER heard that the OPR should have clear processes for information sharing between individuals designing and implementing the EP Plans (typically for construction projects) and Environmental Protection Programs.

In response to this feedback, the CER wishes to obtain further information regarding the need for new processes applicable to the effective transfer of relevant information.

Objectives for Improvement

The objective of new requirements will be to help ensure that companies avoid gaps in transferring environmental information between the construction and operations phase of the pipeline and upon the sale or transfer of an asset.

Proposed Options

To meet the objective outlined above, the CER is considering adding a requirement to establish and implement a process for the transfer of relevant information between employees and other persons working with or on behalf of the company, from the design and construction stages to the operations stage, and upon sale or transfer of an asset.

Discussion Questions

d.11) What mechanisms are companies currently using to ensure that all the information gathered, commitments made, and input received during the hearing is transferred to operational personnel for the lifecycle of the project?

Response:

Section 56 of the OPR requires companies to retain records in accordance with CSA standards referenced in section 4 of the OPR. Additionally, section 6.5(1)(p) of the OPR requires companies to establish and implement a process for maintaining records in relation to the management system and program areas in OPR section 55.

It is a standard requirement of a master services agreement for contractors to provide records to a company that relate to the contracted construction activity. In terms of transfer of documentation from construction to operations personnel, the company is responsible for defining roles and responsibilities, the point of custody transfer, establishment of validation processes to ensure the records are complete and establish repositories to store the information. Trans Mountain believes this process does not require further amendments or regulation.

d.12) If a mechanism already exists, what are the benefits and costs of a requirement stating that a construction to operations transition plan is required?

Response:

To the extent that the CER prescribes additional requirements for construction to operations plans beyond that currently listed in section 55 of the OPR, the benefits may be limited as companies may be required to document a more robust plan than required resulting in increased administration and costs to the company.

Subtopic 6: Climate resiliency

As part of its mandate to protect people, property and the environment, the CER focuses on energy innovation, security, competitiveness, and safe and reliable energy transmission infrastructure that is resilient to the effects of climate change.

In the first phase of engagement on the OPR Review, the CER heard:

- New projects must be built to standards that address the new risks from climate change. The planning of new pipelines must include risk assessments based on increased risk of accident and spills from the impacts of climate change. The risk assessments must examine all aspects of the lifetime of a pipeline including the design, construction, operation or abandonment of a pipeline, and related facilities such as pump stations and storage facilities. The design of new projects must be built to withstand the new climate regime and accident, and safety planning must be designed with a climate impact lens. Given these emerging threats, the OPR should also require existing pipeline projects to review their risk from a perspective of climate resilience and be required to adapt operations in response.
- Climate change has disproportionate negative impacts on Indigenous Peoples.

In response to this feedback, the CER wishes to obtain further information regarding a potential new requirement that companies incorporate climate resiliency into their evaluation of risks and risk mitigation throughout the full lifecycle.

Objectives for Improvement

The objective of new requirements will be to help ensure that companies can anticipate, prepare, and respond to the impacts of hazardous events, trends, or disturbances related to climate.

Proposed Options

To meet the objective outlined above, the CER is considering adding a requirement that companies must incorporate climate resiliency into their evaluation of risks and risk mitigation.

Discussion Questions

d.13) While events such as floods and forest fires could be considered hazards under OPR paragraph 6.5(1)(c), due to the increasing frequency of climate related events and the potential impact on all Canadians, the CER is considering a requirement that companies assess these climate related risks on a continual basis, and that infrastructure be resilient to these risks. What are the benefits and costs of a requirement related to continual assessment of climate risks and the implementation of a process to manage and mitigate these risks?

Response:

Climate resiliency is a broad term that covers all parts of climate risk management, which are generally separated into mitigation versus adaptation. Aspects of climate change resiliency are spread throughout all facets of a business (i.e., geohazard design, emergency preparedness and response, financial planning and environmental, social and governance (ESG) measures, etc.). Responsible companies currently consider climate hazards in assessments pertaining to operations and projects to protect the safety of the public and infrastructure as well as to satisfy insurers.

Section 6.5(1)(c) of the OPR requires companies to establish and implement a process for identifying and analyzing ***all*** hazards and potential hazards, which includes those attributable to climate risk. For this reason, a requirement for companies to assess climate change risks on a continual basis, and to implement plans to manage and mitigate these risks is duplicative to the existing requirements of the OPR and therefore not needed.

d.14) Are there other options that may achieve the objective in a more effective manner? If so, please explain.

Response:

Please see the response to d.13), above. Trans Mountain acknowledges this is an area gaining increased awareness given recent natural hazard events, and there may be value in the CER investing in education and awareness of operators who may have not interfaced with climate change hazards to fortify their assessments of the hazards to better incorporate climate resiliency in their risk management programs.

Subtopic 7: Incorporation of ISO environmental standards

During the first phase of engagement on the OPR, the CER received a suggestion to replace the Environmental Protection Program, contained in section 48 of the OPR, with a requirement for an environmental management system as described in ISO 14001:16. The CER notes that sections 6.1 - 6.6 of the OPR (Management System requirements) already apply to the protection programs, of which the Environmental Protection Program is one. Nevertheless, the CER is seeking feedback as to whether there are opportunities to incorporate some or all of the elements from ISO 14001 and related standards into the OPR or associated technical guidance to enhance environmental protection

Objectives for Improvement

The objectives of new requirements will be to help ensure that:

- companies are clear about the CER's expectations regarding management systems and the environmental program; and
- gaps that might exist in relation to the management system requirements and environmental protection are addressed.

Proposed Options

The CER is considering incorporating elements, or the entirety of ISO 14001 into the OPR or related guidance.

Discussion Questions

d.15) Should the CER consider incorporating ISO 14001 and related ISO standards by reference into the OPR or any associated technical guidance? Please explain.

Response:

Since the management system requirements of the OPR were introduced in 2013, the CER upheld the requirement for companies to have ***one*** management system that serves as a governance layer to all OPR section 55 programs. At the time, companies, including Trans Mountain, who used multiple management systems in place restructured these systems to comply with the "one-system" requirements under sections 6.1-6.5 of the OPR. This involved a tremendous effort on the part of industry and many years to fully implement and establish.

Adopting ISO 14001 as an OPR requirement would require a separate or duplicative management system for environment only which would deviate from all other section 55 programs and may result in separate requirements or thresholds for assessments of hazards and implementation of mitigation, effectiveness reviews, management of records, training, and accountability.

Encouraging companies to look to standards such as ISO 14001 and related ISO standards in the administration of their Environmental Protection Program as a means of a best practice or technical guidance is positive but should not be a requirement. The incorporation of ISO 14001 and related ISO standards into the OPR introduces risk of conflict OPR management system requirements, and in Trans Mountain's view, offers no benefit over what the OPR already requires. The OPR management system

requirements as applied to the environmental protection program requires identification of environmental hazards, an assessment of their risk, and implementation of mitigation.

d.16) Are there any potential regulatory gaps in relation to the management system requirements contained in sections 6.1 - 6.6 of the OPR and its applicability to the Environmental Protection Program required by section 48? If so, should ISO 14001 be incorporated by reference in whole or in part into the OPR or associated technical guidance to address those gaps? If in part, which standards or parts of those standards should be incorporated?

Response:

Please see the response to request d.15), above. The management system requirements of the OPR are robust, but also flexible to the ever-changing environment within which pipelines operate. For example, when the management system requirements of the OPR were implemented in 2013, climate change was an emerging issue that companies were beginning to assess for impacts to the pipeline infrastructure. Since that time, the hazards are better understood resulting in increased resources deployed to understand the risks and establishment of plans to address. This was done without any change to the management system requirements of the OPR as the structure was already set up to account for this hazard.