Review of Onshore Pipeline Regulations and Filing Manuals Review
D. Filing Manuals – Environmental Protection Topic Paper

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Disclaimer

BACKGROUND

The Canadian Energy Regulator (CER) is seeking feedback on potential modifications to the Emergency Management section of the Filing Manuals. The CER's primary focus is to enhance its oversight of Emergency Management, specifically as it relates 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
- Inclusion of International Standards Organization (ISO) standards related to environment.

Below are the responses to the questions posed within the topic paper.

Subtopic 1- Duty to Report and Manage Contamination

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

If the objectives for improvement are to report contamination to the CER for the ***full lifecycle*** of the pipeline; and manage contamination and any potential risks in a manner that is timely and protects human health, property, and the environment, then the ***proposed options are too vague***. The CER needs to work put timelines by each deliverable and not use vague wording (e.g. “as soon as practicable”, “immediately”, etc.). Without providing clear and easy to understand timelines the language is open to interpretation.

How are Indigenous Peoples and Indigenous communities going to be notified? By whom and when?

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

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

While these requirements enhance environmental protection and clarify the CER’s expectations in reclamation and vegetation management, there are still areas that could be strengthened.

Potential Areas for Improvement

Strengthening Cumulative Effects Considerations:
Current Issue: Current reclamation plans often focus on site-specific restoration but do not fully address cumulative effects (e.g., multiple projects fragmenting landscapes).

Improvement: Require proponents to assess regional-scale vegetation connectivity and integrate reclamation into broader landscape restoration plans.

Set Minimum Native Vegetation Restoration Targets
Current Issue: While native species use is encouraged, no clear restoration success benchmarks exist.
Improvement: Define minimum native species cover thresholds (e.g., 70% native plant recovery within 5 years).

Expand Indigenous-Led Reclamation Programs
Current Issue: While Indigenous Knowledge is encouraged, Indigenous communities should have a larger role in managing vegetation and reclamation efforts.
Improvement: Require Indigenous-led land stewardship agreements for projects affecting traditional territories.

Improve Long-Term Monitoring & Funding Mechanisms
Current Issue: Some projects fail to meet reclamation goals due to insufficient long-term monitoring.
Improvement:

- Require 10+ years of post-reclamation monitoring to track ecosystem success (potentially for the life of the Project through to abandonment).
- Establish financial security funds to ensure reclamation costs are covered even if a company ceases operations.

When a pipeline is abandoned in place, there is still a requirement to patrol and monitor it. How would restoration goals be balanced with this requirement?

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

The goals of restoring land to a condition like the surrounding environment and consistent with pre-disturbance land use are generally appropriate, but they may not be sufficient in all cases. While this approach aligns with standard ecological restoration principles, there are situations where a more flexible or enhanced restoration goal may be needed.

Why These Goals Are Appropriate

Ecological Integrity & Functionality

- Restoring land to be like the surrounding environment helps maintain ecosystem connectivity, biodiversity, and resilience.
- Ensures native vegetation, soil stability, and water flow are re-established.

Supports Traditional & Local Land Uses

- Restoring pre-disturbance land use is important for agriculture, Indigenous traditional practices, and recreational access.
- Ensures that lands remain productive and usable for local communities.

Regulatory & Industry Alignment

- Aligns with CER expectations, industry best practices, and provincial reclamation requirements.

Where These Goals May Not Be Sufficient

Climate Change & Future Land Resilience

Current Issue: Pre-disturbance conditions may not be viable due to climate change (e.g., shifts in precipitation, increased fire risk).

Solution:

- Set climate-adaptive restoration goals, such as using drought-resistant native plants or restoring wetlands for carbon sequestration.
- Instead of "restoring the past," focus on building resilient ecosystems for the future.

Cumulative Effects & Regional Planning

Current Issue: If multiple projects disturb the same area, restoring each site in isolation may not address landscape-scale impacts (e.g., fragmentation of wildlife corridors).

Solution:

- Incorporate regional restoration planning rather than site-by-site reclamation.
- Example: Instead of restoring a forest patch-by-patch, implement large-scale reforestation corridors to enhance biodiversity.

Indigenous-Led Restoration & Land Stewardship

Current Issue: Restoration goals often focus on ecological function alone, without fully considering Indigenous land use and cultural values.

Solution:

- Restoration should incorporate Indigenous Knowledge (IK) and be co-developed with Indigenous communities.
- Example: Instead of simply replanting, restore traditional harvesting areas for medicinal plants or wildlife habitat important to Indigenous groups.

Enhancing vs. Simply Replacing Ecosystem Function

Current Issue: Restoring a site to pre-disturbance conditions may not maximize ecosystem benefits**.**

Solution:

- Set enhancement goals, such as:
    - Restoring larger, more connected habitats than existed pre-disturbance.
    - Enhancing soil health & carbon storage rather than simply replacing lost vegetation.
    - Rewilding degraded areas by introducing keystone species.

Recommended Expanded Goals for Restoration

Current Goal	Potential Improved Goal
Restore the land to a condition like surrounding areas	Restore the land to a self-sustaining state that enhances biodiversity and ecosystem resilience
Restore the land to pre-disturbance land use	Restore the land to support traditional, cultural, and community priorities (Indigenous land use, food security, biodiversity conservation, climate resilience, etc.)
Focus on individual project sites	Integrate restoration into regional-scale land-use planning to avoid cumulative fragmentation

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

- Consulting with potentially impacted parties when setting restoration goals is essential for ensuring ecological, cultural, and socio-economic success.
- How does the CER envision balancing 'restoration of sensitive areas/critical habitat during operations and vegetation management to allow patrolling and monitoring activities for safe operations of pipeline?
- Restoring to previous state will require thorough inclusion and consideration of Indigenous field assessments/TLU findings

KLFN appreciates the proposed delineation between reclamation and restoration. Does the CER have any appetite to lean into the Land Use Studies submitted by companies as a part of Land Matters Consultation Initiative to help inform restoration goals and objectives?

Subtopic 3 – Section 21 of the OPR – Participation in the Development of Environmental Monitoring by Indigenous Peoples

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.

Indigenous involvement in monitoring should be ***meaningful, long-term, and embedded in every phase*** *of the pipeline lifecycle*—from pre-construction baseline studies to decommissioning and reclamation**.** Best practices emphasize Indigenous governance, capacity building, and knowledge integration in environmental protection and socio-economic oversight.

Key Components of Indigenous Involvement in Pipeline Monitoring

Indigenous-Led Monitoring Programs

Establish dedicated Indigenous Guardian Programs where Indigenous monitors work alongside or independently of industry regulators to oversee pipeline impacts. Example:

- The Mikisew Cree First Nation Guardian Program monitors industrial impacts on the Peace-Athabasca Delta and applies Traditional Knowledge (IK) to assess environmental health.

Co-Development of Monitoring Plans

Indigenous groups should co-develop monitoring protocols, ensuring their values, priorities, and land-use practices are reflected. Example:

- In British Columbia, some Indigenous nations have worked with regulators to define indicators of ecological health based on Indigenous Knowledge (e.g., fish spawning success, moose migration patterns).

Indigenous Employment in Monitoring Roles

Pipelines should have full-time, paid Indigenous monitors embedded within the project team, ensuring continuous oversight. Example:

- The Coastal GasLink project incorporated Indigenous Environmental Monitors (IEMs) who conducted site visits, tested water quality, and ensured regulatory compliance.
- The Nova Gas Transmission Ltd. (NGTL) 2021 NGTL Expansion and Edson Mainline Expansion Projects incorporated the Indigenous Construction Participation Program (ICPP) where participants were present at site during construction and participated in several activities/duties daily. Participants learned not only how NGTL constructs pipelines but why NGTL does the things they do. Participants provided daily reports and were encouraged to present what they learned to their Indigenous community when they returned after each shift.

Joint Decision-Making & Authority

Move beyond participation to shared authority in decision-making. Indigenous groups should have formal roles in regulatory compliance and enforcement. Example:

- The Joint Monitoring Program between the Alberta Energy Regulator and Indigenous communities provides shared oversight of oil sands impacts.

Use of Indigenous Knowledge & Western Science Together

Monitoring should integrate both scientific methods (e.g., remote sensing, water sampling) and Traditional Knowledge (e.g., tracking animal behaviors, seasonal changes). Example:

- Indigenous monitors in the Yukon have identified changes in fish populations before scientific studies confirmed environmental stressors.

Transparent Reporting & Community Accountability

Indigenous monitors should have direct reporting channels to their communities, ensuring transparency and accountability beyond corporate or regulatory bodies. Example:

- Indigenous-led independent reports on pipeline conditions can provide alternative perspectives to industry-driven environmental assessments.

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 of best practices.

To meet the CER's expectations**,** independent Indigenous monitoring and reporting must be formalized, well-resourced, and ***integrated*** *into regulatory oversight*. This ensures Indigenous monitors are not solely reliant on industry and have decision-making power and direct reporting channels to regulators and their communities.

However, several challenges must be addressed, including legal authority, funding security, **data transparency**, and industry cooperation if independent monitoring is going to be successful and safely achieved**.** KLFN, as are many other Indigenous communities, is exploring the adoption of the OCAP Principles[1] in an effort to protect its data sovereignty.

Key Components of Independent Indigenous Monitoring

Legal Recognition & Authority

Indigenous monitors should be formally recognized as independent regulatory actors under CER requirements. Example:

- The Environmental Monitoring Agreements (EMAs) between Enbridge and Indigenous nations give monitors formal roles in oversight and reporting.
- Alberta's Joint Oil Sands Monitoring Program provides Indigenous-led regulatory reviews.

Secure & Sustainable Funding

Funding should be long-term and independent of industry influence, ensuring monitors are not financially dependent on companies they regulate. Example:

- Co-management agreements in the Northwest Territories provide government-funded Indigenous-led monitoring for natural resource projects.
- A CER-administered Indigenous Monitoring Fund could be created, like Canada's Indigenous Guardians Program.

[1] [1] OCAP (Ownership, Control, Access and Possession): is a set of principles developed by First Nations in Canada to guide the governance of their information and data, ensuring they have control over how their data is collected, used, and shared. https://fnigc.ca/ocap-training

Full Access to Environmental Data

Indigenous monitors must have direct, real-time access to pipeline integrity data, environmental quality readings, and compliance reports. Example:

- In British Columbia, some Indigenous nations have negotiated agreements requiring companies to share real-time water quality data.
- The Heiltsuk Nation's Response Team used community-led data collection during an oil spill, providing alternative analysis to industry claims.

Community-Controlled Reporting & Transparency

Reports should be issued independently to CER, communities, and the public—without corporate interference. Example:

- The Athabasca Chipewyan First Nation (ACFN) publishes independent environmental assessments of oil sands projects.
- A CER Indigenous Monitoring Portal could allow monitors to submit directly to CER without company mediation.

Integration of Indigenous Knowledge (IK) & Western Science

Monitoring should combine scientific methods (e.g., water sampling, remote sensing) and Indigenous Knowledge (e.g., wildlife behavior, seasonal shifts). Example:

- The Tsleil-Waututh Nation's environmental monitoring program uses IK to assess marine health alongside scientific testing.

Challenges to Independent Indigenous Monitoring & Solutions

Challenge	Potential Solutions	Best Practice Example
Lack of legal authority Indigenous monitors may not have formal regulatory powers.	Legal agreements with CER and industry to recognize Indigenous monitors as compliance officers.	The Yukon Environmental & Socio-economic Assessment Board (YESAB) includes Indigenous decision-making.
Funding instability Industry-controlled funding could undermine independence.	CER-administered Indigenous Monitoring Fund with multi-year funding for Indigenous-led monitoring.	The Indigenous Guardians Program provides stable government funding for environmental monitoring.
Data access barriers Companies may restrict access to pipeline monitoring data.	Require real-time data sharing agreements with Indigenous groups.	Some First Nations in BC negotiated real-time water quality data access from industry.
Industry resistance	Establish clear regulatory requirements for Indigenous oversight.	Enbridge's Environmental Monitoring Agreements (EMAs) with Indigenous nations.

Challenge	Potential Solutions	Best Practice Example
Some companies may see Indigenous monitors as a threat.		
Community safety risks Monitors working in isolated areas may face risks.	Training, protective equipment, and satellite communication tools for field monitors.	The Heiltsuk Nation's Marine Response Team has emergency response protocols.

D 7. Would the proposed processes in Subtopic 1 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 for guidance required specific for monitoring?

The proposed processes in ***Subtopic 1 of the Rights and Interests, Socio-Economic Effects, and Engagement Topic Paper*** provide a strong foundation for including Indigenous Peoples in environmental monitoring activities. However, additional requirements and guidance are needed to ensure Indigenous involvement is not just consultative but ***embedded in decision-making, implementation, and oversight***.

Where Additional Requirements & Guidance Are Required

Legal & Regulatory Recognition of Indigenous Monitoring

The proposed processes may not formally recognize Indigenous monitors as independent regulatory actors under CER oversight.
Solution: Require legal agreements or co-management structures ensuring Indigenous monitors have authority in compliance oversight (not just advisory roles). Example:

- The Mikisew Cree First Nation Guardian Program has formal agreements for land monitoring.

Guaranteed, Long-Term Funding

If funding is project-based or industry-controlled**,** Indigenous monitoring programs may not be financially independent**.**
Solution: Establish a CER-administered Indigenous Monitoring Fund to provide multi-year financial support for Indigenous-led programs.

Example: Canada's Indigenous Guardians Program offers long-term funding for Indigenous environmental stewardship.

Mandatory Indigenous-Led Reporting

Indigenous monitoring reports may be filtered through industry or regulators, limiting transparency.
Solution: Require direct, unedited Indigenous-led reporting to the CER and affected Indigenous communities.
Example: The Heiltsuk Nation Response Team issued an independent environmental impact assessment after the Nathan E. Stewart spill.

Data Access & Control

Indigenous monitors may lack real-time access to environmental data collected by regulated companies.
Solution: Require mandatory data-sharing agreements, granting Indigenous **monitors** direct access to pipeline integrity, water quality, and wildlife monitoring data**.**
Example: Some First Nations in BC negotiated real-time water quality data access from industry.

Indigenous-Led Oversight Mechanisms

The proposed processes may not include Indigenous representation in regulatory compliance decisions.
Solution: Establish Indigenous Environmental Oversight Committees that review monitoring findings and recommend enforcement actions**.**
Example: The Joint Oil Sands Monitoring Program in Alberta includes Indigenous-led environmental assessments.

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

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?

Requiring an Environmental Protection (EP) Plan that is scalable for all construction, operations, and maintenance activities has several benefits, but also some potential costs.

Benefits of a Scalable EP Plan Requirement

Improved Environmental Protection & Compliance

- Ensures that all activities—big or small—follow clear environmental safeguards, reducing risks of spills, habitat destruction, and contamination.
- Helps meet the CER's regulatory expectations consistently across all project phases. Enhances adaptive management**,** allowing for quick adjustments to EP measures as conditions change.

Example: A pipeline maintenance project near a waterbody would require a focused but effective EP Plan, preventing unnecessary harm to sensitive areas.

Increased Transparency & Accountability

- Requires companies to document and justify their environmental protection measures**,** ensuring clearer regulatory oversight**.**
- Strengthens public trust and relationships with Indigenous and local communities by demonstrating a commitment to environmental stewardship.

Example: If a company is performing routine inspections, an EP Plan ensures documented procedures are in place to minimize disruption to local ecosystems.

Efficiency & Cost Savings Over Time

- A scalable approach prevents companies from overcommitting resources for low-risk work while ensuring robust protections for higher-impact activities.
- Reduces unexpected delays and regulatory challenges by providing a clear, pre-approved process for managing environmental risks.

Example: Instead of submitting separate, complex EP Plans for minor repairs, a scalable plan automatically adjusts the requirements**,** streamlining approvals.

Stronger Indigenous & Community Engagement

- Provides a framework for Indigenous monitors and local stakeholders to review how environmental risks will be managed.
- Aligns with Indigenous-led environmental stewardship by incorporating Traditional Knowledge (IK) in a structured way.

Example: Indigenous communities near a pipeline right-of-way could review site-specific EP Plans before maintenance activities occur in culturally significant areas.

Potential Costs or Challenges

Increased Administrative & Compliance Burdens

- Companies would need to develop multiple versions of EP Plans to cover different types of work, potentially increasing administrative workload.
- Small-scale maintenance activities might become overly bureaucratic, leading to inefficiencies.

Potential Mitigation: Use a tiered EP Plan approach where low-risk activities have simplified requirements, while major construction projects require detailed plans.

Additional Costs for Industry & Regulators

- Initial setup costs for developing scalable EP Plan templates could be high.
- Regulatory bodies (e.g., the CER) may need more resources to review and enforce compliance.

Potential Mitigation:

- Allow companies to submit standard templates for recurring activities, reducing administrative workload.
- Use digital reporting tools for real-time submission and tracking of EP compliance.

Potential Resistance from Industry

- Some companies may see this as an unnecessary regulatory burden, especially for low-risk work.
- Resistance to data-sharing and transparency requirements if EP Plans become publicly accessible.

Potential Mitigation:

- Clearly define when a full EP Plan is required vs. when a simplified version is acceptable.
- Align requirements with existing industry best practices, avoiding redundant reporting.

Cost-Benefit Summary

Factor	Benefits	Costs/Challenges	Mitigation Strategies
Environmental Protection	Better safeguards for land, water, and wildlife	Possible over-regulation of small-scale activities	Use a tiered EP Plan approach based on risk
Regulatory Compliance	Improves consistency and oversight	More regulatory workload to review plans	Use digital tracking tools for efficiency
Industry Costs	Long-term cost savings through standardization	Upfront costs for developing templates	Allow pre-approved EP Plan frameworks to reduce effort
Indigenous & Public Engagement	Strengthens trust, aligns with Indigenous Knowledge	Companies may resist additional transparency	Require community access to site-specific EP Plans

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?

While a scalable Environmental Protection (EP) Plan is a strong tool for ensuring environmental protection, there are alternative or complementary approaches that could achieve the same objectives while reducing administrative burdens and improving efficiency**.**

Tiered Environmental Risk Assessment (ERA) System

Instead of a full EP Plan for every activity, companies could complete a risk-based Environmental Risk Assessment (ERA) before any construction, operations, or maintenance activity. The ERA categorizes activities into low, medium, and high-risk tiers**,** determining the level of environmental protection measures required.

Benefits:

- Reduces unnecessary paperwork for low-risk activities while ensuring robust measures for high-risk projects.
- Ensures proportional environmental safeguards**,** reducing compliance burden for minor maintenance.
- Aligns with regulators' risk-based approach, improving efficiency.

Challenges:

- Requires clear risk assessment criteria to ensure consistency.
- Could be seen as less transparent if not standardized.

Best Practice Example: The BC Environmental Assessment Office (EAO) Risk-Based Review Process scales environmental requirements based on project size and impact.

Indigenous-Led Environmental Monitoring Programs

Instead of relying solely on company-prepared EP Plans, Indigenous environmental monitors conduct site assessments, compliance checks, and adaptive management. Findings are reported directly to regulators and communities for transparency.

Benefits:

- Enhances Indigenous inclusion and aligns with reconciliation efforts.
- Provides real-time, on-the-ground environmental oversight beyond static planning documents.
- Builds public trust by ensuring third-party monitoring.

Challenges:

- Requires **funding and capacity building** for Indigenous monitors.
- Needs **formal agreements** with companies to ensure cooperation.

Best Practice Example: The Heiltsuk Nation's Marine Response Team conducts independent environmental monitoring and spill response assessments.

Digital Environmental Compliance & Reporting Tools

Instead of requiring static EP Plans, a digital environmental compliance system could allow companies to log real-time environmental protection measures before and during activities.
Field personnel input environmental risk factors, mitigation actions, and compliance checks into a mobile app or web portal.

Benefits:

- Reduces paperwork and administrative delays.
- Ensures real-time tracking of environmental measures, improving accountability.
- Allows automated regulatory reporting, reducing manual errors.

Challenges:

- Requires initial investment in technology and training.
- Companies may resist sharing real-time data with regulators or Indigenous groups.

Best Practice Example: The Alberta Energy Regulator (AER) Digital Data Submission System streamlines compliance reporting through an online platform.

Standardized Environmental Best Practices Guidebook

Instead of site-specific EP Plans, companies could be required to follow a pre-approved, industry-wide Environmental Best Practices Guidebook, developed in consultation with regulators, Indigenous groups, and environmental experts. The guidebook would outline mandatory procedures for common construction, operations, and maintenance activities.

Benefits:

- Ensures consistent environmental protection without the need for custom EP Plans for every activity.
- Reduces regulatory review time by setting clear, standard expectations.
- Easier for field personnel to implement without needing to refer to complex, site-specific documents.

Challenges:

- May not be flexible enough to address site-specific environmental concerns.
- Requires periodic updates to incorporate new scientific findings and best practices.

Best Practice Example: The Canadian Association of Petroleum Producers (CAPP) Environmental Operating Practices Guide provides a standardized framework for environmental management in the oil and gas sector.

Environmental Training & Certification Program for Field Staff

Instead of requiring detailed EP Plans for every activity, all construction and operations personnel must complete mandatory environmental training and be certified in environmental protection protocols. Certified workers apply standardized environmental protection measures on-site without needing a separate EP Plan for each activity.

Benefits:

- Improves on-the-ground environmental compliance by ensuring field personnel are trained in best practices.
- Reduces administrative burden while still ensuring environmental protection.
- Empowers workers to identify and mitigate environmental risks in real-time.

Challenges:

- Requires ongoing training and certification renewals.
- Some companies may resist mandatory certification requirements.

Best Practice Example: The Indigenous Environmental Technician Training Program in Ontario trains Indigenous youth in environmental monitoring and compliance.

Third-Party Environmental Audits Instead of Pre-Approved Plans

Instead of requiring a pre-approved EP Plan, companies would be subject to third-party environmental audits at random intervals to assess whether environmental protection measures are being followed. Audits could be conducted by Indigenous environmental groups, NGOs, or government agencies.

Benefits:

- Encourages proactive environmental protection since companies do not know when they will be audited.
- Reduces front-end regulatory burden while maintaining strong oversight.
- Increases public confidence through independent assessments.

Challenges:

- Companies may push back against unexpected audits.
- Requires certified third-party auditors with authority to enforce compliance.

Best Practice Example: The Forest Stewardship Council (FSC) Certification System uses third-party audits to ensure companies follow sustainable forestry practices.

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 Plains and the Environmental Protection Programs incorporate measures to prevent and address impacts to the Rights and Interests of Indigenous Peoples?

The proposed requirements in ***Subtopics 1 and 3*** *of the* Rights and Interests, Socio-Economic Effects, and Engagement Topic Paper provide a foundation for ensuring Environmental Protection (EP) Plans and Environmental Protection Programs (EPPs) incorporate measures to prevent and address impacts to the Rights and Interests of Indigenous Peoples. However, to fully achieve this goal**,** the proposed requirements may need additional clarity, enforceability, and stronger Indigenous participation mechanisms.

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

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?

KLFN's understanding is that companies use a variety of mechanisms to ensure that all information gathered, commitments made, and input received during the regulatory hearing process is transferred to operational personnel throughout the lifecycle of the project**.** However, the effectiveness of these mechanisms depends on their enforceability, consistency, and integration into corporate and regulatory frameworks**.** Unfortunately, KLFN does not have a direct line of sight into what each company is currently doing as KLFN does not sit in the company offices and is currently not involved in any of the post hearing meetings, discussions, and/or correspondence.

Recommendations for Strengthening Information Transfer

Publicly Accessible Commitment Tracking Systems: Require companies to maintain an online, regulator-accessible commitment tracking database.

Indigenous Co-Management of EPPs & Compliance: Establish Indigenous-led oversight committees with decision-making authority over implementation.

Annual Indigenous & Environmental Training for Field Staff: Mandate ongoing training programs to ensure knowledge is not lost over time.

Real-Time Compliance Monitoring & Data Sharing: Require companies to share live environmental & compliance data with regulators & Indigenous partners.

Third-Party & Indigenous-Led Environmental Audits: Implement regular independent audits to verify that commitments are being met in practice.

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?

If strong compliance mechanisms already exist, adding a transition plan may not be necessary. However, for high-risk or large-scale projects, a transition plan can significantly improve accountability and long-term environmental protection.

Subtopic 6 – Climate Resiliency

D 13. While events such as floods and forest fires could be considered hazards under the 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 the 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 the process to manage and mitigate these risks?

Benefits of Requiring Continual Climate Risk Assessment & Resilient Infrastructure

Increased Safety & Environmental Protection

Climate-related hazards (e.g., wildfires, floods, landslides) pose major risks to pipeline integrity, storage facilities, and operational safety. Continuous assessment helps companies identify, prepare for, and mitigate these risks before they become catastrophic failures.

The 2021 British Columbia floods caused significant damage to Trans Mountain pipeline infrastructure, leading to shutdowns and repairs. Continuous risk assessment could have prevented or minimized impacts.

Regulatory & Legal Compliance Alignment

Climate risk assessment is becoming a global regulatory norm under frameworks like:

- Canada's Climate Resiliency Strategy
- Task Force on Climate-Related Financial Disclosures (TCFD)
- International Energy Agency (IEA) Resilient Infrastructure Guidelines

Ensuring proactive compliance with future regulations prevents companies from facing penalties or legal challenges.

The U.S. Federal Energy Regulatory Commission (FERC) is considering requiring climate resilience plans for energy infrastructure to align with climate adaptation policies.

Reduced Infrastructure Downtime & Costly Repairs

Reactive repairs after climate disasters cost significantly more than proactive adaptation. Ongoing assessment prevents costly shutdowns and unplanned maintenance.

After Hurricane Harvey (2017), some Texas refineries and pipelines suffered billions in losses due to unanticipated flooding—retrofitting costs would have been significantly lower than post-disaster recovery.

Improved Financial & Insurance Stability

Infrastructure resilience leads to lower insurance premiums and greater investor confidence. Many insurers and financial institutions are raising premiums or denying coverage for assets not demonstrating climate resilience.

The Bank of Canada flagged climate risks as a financial stability concern—companies demonstrating resilience will likely attract more investment.

Strengthened Indigenous & Community Relations

Indigenous communities, municipalities, and stakeholders expect companies to actively mitigate environmental risks that could impact local ecosystems. ***Proactive resilience planning builds trust and credibility.*** The Heiltsuk Nation in British Columbia has emphasized the need for climate-adaptive oil spill response plans for marine transport infrastructure.

Costs of Requiring Continual Climate Risk Assessment & Resilient Infrastructure

Increased Compliance & Administrative Burden

Conducting continual climate risk assessments requires additional staffing, reporting, and regulatory oversight. Companies may view increased CER requirements as excessive bureaucracy.

Cost Consideration: Hiring climate risk specialists could cost hundreds of thousands annually.

High Initial Infrastructure Adaptation Costs

Retrofitting existing pipelines, compressor stations, and terminals for climate resilience requires significant capital investment. Hardening infrastructure to withstand floods, wildfires, and permafrost thaw can be expensive upfront.

Cost Consideration: A pipeline operator adapting to permafrost thaw may need to invest millions in geotechnical stabilization measures.

Potential Resistance from Industry & Shareholders

Some companies and investors may resist increased short-term spending, even if long-term savings are expected. Shareholders focused on cost-cutting strategies might push back on additional climate-related expenditures.

Some U.S. energy companies have faced shareholder resistance to mandatory climate risk disclosure rules, arguing they increase regulatory burdens without clear financial benefits.

Challenges in Forecasting Climate Risks Accurately

Climate models are improving but still contain uncertainty—over-adapting to low-probability events could lead to unnecessary spending. Infrastructure designed for one set of climate projections may not fully address unanticipated future changes.

There is potential that a pipeline in a low-risk wildfire area might be over-fortified, while infrastructure located in a high-risk flood zone might not receive adequate attention due to inaccurate projections.

If companies fail to implement climate resilience measures, the long-term costs (disasters, shutdowns, legal liabilities) will far exceed the upfront investment.

A scalable, risk-based approach may balance economic feasibility with safety and regulatory goals.

Cost-Benefit Summary

Factor	Benefit	Cost
Environmental & Public Safety	Prevents major failures due to climate risks	Requires ongoing assessment & reporting
Regulatory Compliance & Legal Risk	Aligns with emerging climate policies	Adds regulatory complexity for companies
Infrastructure Resilience & Business Continuity	Reduces unexpected failures & costs	Requires upfront investment in retrofits
Financial Stability & Investor Confidence	Reduces insurance costs & increases investment	Some investors may resist short-term spending
Community & Indigenous Relations	Builds trust & credibility	Some communities may demand higher-than-feasible adaptation efforts

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

There are alternative options that may achieve the objective of continual climate risk assessment and resilient infrastructure in a more effective, flexible, and cost-efficient manner. Below are some alternative approaches that balance regulatory oversight, industry feasibility, and proactive climate adaptation.

Alternative Options to Achieve Climate Resilience Objectives

Scalable, Risk-Based Assessment Requirements

Instead of one-size-fits-all continual assessments, require risk-based, scalable assessments based on geographic location, infrastructure type, and climate exposure.

- High-risk infrastructure (e.g., floodplains, wildfire-prone areas, permafrost zones) → Annual climate risk assessments
- Moderate-risk infrastructure → Every 3 years
- Low-risk infrastructure (e.g., areas with historically stable climate conditions) → Every 5 years

Benefits:

- Focuses resources where they are most needed, avoiding unnecessary costs for low-risk areas.
- Improves regulatory efficiency by targeting critical climate hazards.

Third-Party Climate Risk Audits Instead of Continuous Self-Assessment

Require companies to undergo independent third-party climate risk audits at regular intervals (e.g., every 3-5 years). Auditors would assess compliance with climate resilience standards and recommend necessary infrastructure adaptations.

Benefits:

- Ensures credible, unbiased evaluations rather than self-reported risk assessments.
- Reduces regulatory burden while maintaining accountability and compliance.
- Aligns with best practices in financial, environmental, and engineering industries.

Performance-Based Regulations Instead of Prescriptive Rules

Instead of requiring continual risk assessments, set climate resilience performance targets that companies must meet. Allow companies flexibility in how they achieve those targets, such as:

- Increasing infrastructure fortification
- Improving early warning and monitoring systems
- Implementing emergency response and adaptation strategies

Benefits:

- Encourages innovation in climate adaptation rather than rigid compliance with assessment schedules.
- Companies can customize their approach to climate risk management based on specific project conditions.

Incentivized Climate Resilience Programs Instead of Mandates

Provide financial incentives, grants, or tax benefits for companies that implement proactive climate adaptation measures. Incentives could apply to:

  - Upgrading infrastructure to withstand extreme weather
  - Developing real-time climate monitoring technology
  - Collaborating with Indigenous communities on climate adaptation strategies

Benefits:

- Encourages voluntary industry leadership in climate resilience.
- Reduces resistance from industry stakeholders by making adaptation financially attractive rather than a regulatory burden.
- Helps companies spread out capital investment costs over time rather than facing immediate compliance costs.

Consider providing hazard mitigation grants to companies that invest in upgrading current infrastructure to withstand extreme weather, or potential other prevention items (e.g. real-time climate monitoring technology).

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.

KLFN believes that the CER should consider incorporating ISO 14001 and related ISO Standards by reference into the OPR or any associated technical guidance with Conditions. If incorporated, ISO 14001 should be used as a guide rather than a strict regulatory requirement. KLFN believes the best approach would be to:

- Reference ISO 14001 as an accepted framework but allow flexibility for compliance.
- Develop supplemental CER technical guidelines to ensure pipeline-specific environmental risk management.
- Encourage (but not require) third-party ISO audits for high-risk projects.

D16. Are there any 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?

The is a lack of specific integration between the EPP and Management Systems (6.1-6.6). The OPR requires an Environmental Protection Program (EPP)**,** but it does not explicitly require that the EPP be fully integrated into the company's overarching management system (Sections 6.1 – 6.6). This could result in EPPs being siloed rather than part of a continuous improvement cycle under Section 6.5. The CER should require the EPP to be an embedded component of the company's overall risk management and operational control systems (6.3, 6.4, 6.5)**.**

There are unclear requirements for continual environmental risk assessments. Section 6.3 requires hazard identification and risk assessment, but it does not explicitly mandate continual environmental risk reviews as part of the EPP under Section 48. Climate-related risks (e.g., flooding, permafrost thaw, wildfires) are increasingly dynamic—a static risk assessment process may not be sufficient. The CER should require companies to regularly update their environmental risk assessments under both Sections 6.3 (Risk Assessment) and 48 (EPP) to reflect climate adaptation needs.

There is a lack of performance metrics and targets for environmental protection. Section 6.2 requires goals, objectives, and targets, but does not define specific environmental performance indicators for pipeline operators. The EPP (Section 48) does not mandate tracking and reporting of key environmental performance metrics such as:

- Greenhouse gas (GHG) emissions
- Habitat restoration progress
- Spill prevention effectiveness

The CER should require companies to develop, track, and publicly report key environmental performance indicators (KPIs) as part of their EPP and management system reviews (6.5).

There is no explicit requirement for third-party environmental audits. The OPR does not explicitly require independent audits of the EPP. While companies conduct internal reviews (6.5 – Management Review & Continuous Improvement), self-audits may lack transparency or accountability. The CER should require third-party audits of environmental management system effectiveness, like ISO 14001 certification audits.

There is a lack of clear guidance on Indigenous participation in environmental monitoring. Section 48 (EPP) requires environmental protection but does not specify how Indigenous Knowledge or community-based monitoring should be integrated. Without clear requirements, companies may inconsistently engage Indigenous communities in environmental protection planning. The CER should mandate that Indigenous monitoring programs be an explicit component of the EPP under Section 48.

ISO 14001 is an internationally recognized Environmental Management System (EMS) standard but incorporating it entirely into the OPR may be excessive**.** Instead, key principles and sections can be referenced to fill regulatory gaps while maintaining flexibility. The CER should partially incorporate ISO 14001 by referencing key sections in the OPR or associated technical guidance, while maintaining industry-specific flexibility**.**

Potential ISO 14001 Components That Should Be Incorporated

ISO 14001 Section	Incorporate	Reason
4.1 – Context of the Organization	Guidance Only	Ensures companies consider external environmental risks, including climate change impacts.
6.1 – Environmental Risk Identification & Continual Assessment	Mandatory	Addresses the gap in continual environmental risk assessments under OPR 6.3 and 48.
6.2 – Environmental Objectives & Performance Metrics	Mandatory	Helps establish clear, measurable environmental targets under OPR 6.2 and 48.
7.4 – Communication & Stakeholder Engagement	Mandatory	Would strengthen requirements for Indigenous and community involvement in environmental monitoring.
9.2 – Internal & External Audits	Mandatory for High-Risk Projects	Addresses the lack of third-party environmental audits under OPR 6.5.
10.2 – Continual Improvement	Mandatory	Would ensure EPPs evolve over time, reducing the risk of outdated environmental protection strategies.