Canada Energy Regulator | Régie de l'énergie du Canada

Canada

2020 Remediation Process Guide and CER Remediation Operating Practices Update

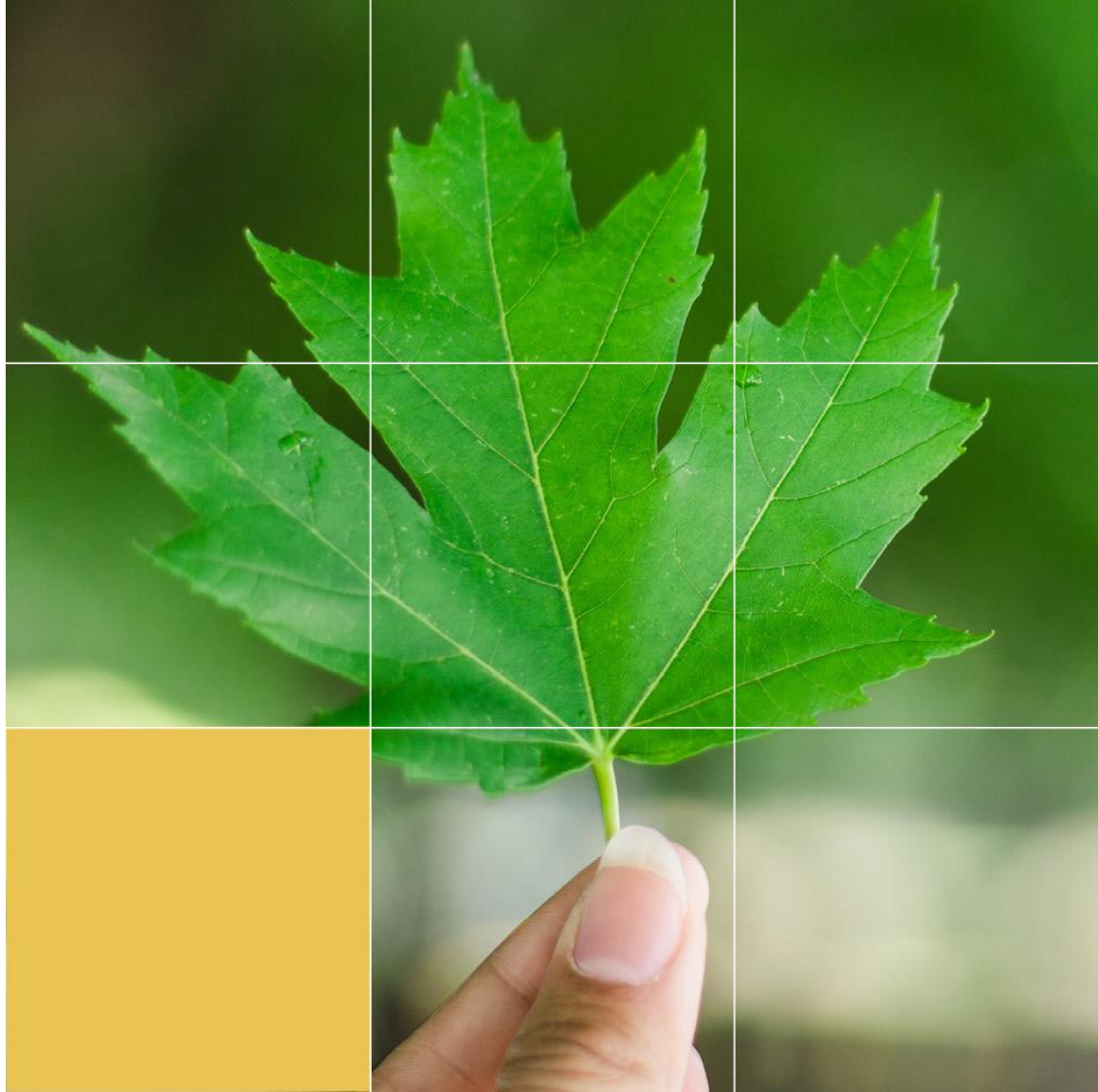
Canada Energy Regulator | Régie de l'énergie du Canada

RemTech East

Holly Kingston
Adele Houston
Patti Dods

Environmental Protection, CER

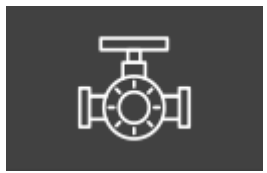
2 June 2022



Outline

- Regulatory Context and Lifecycle Regulation
- Remediation Process and Examples
- Remediation Process Guide

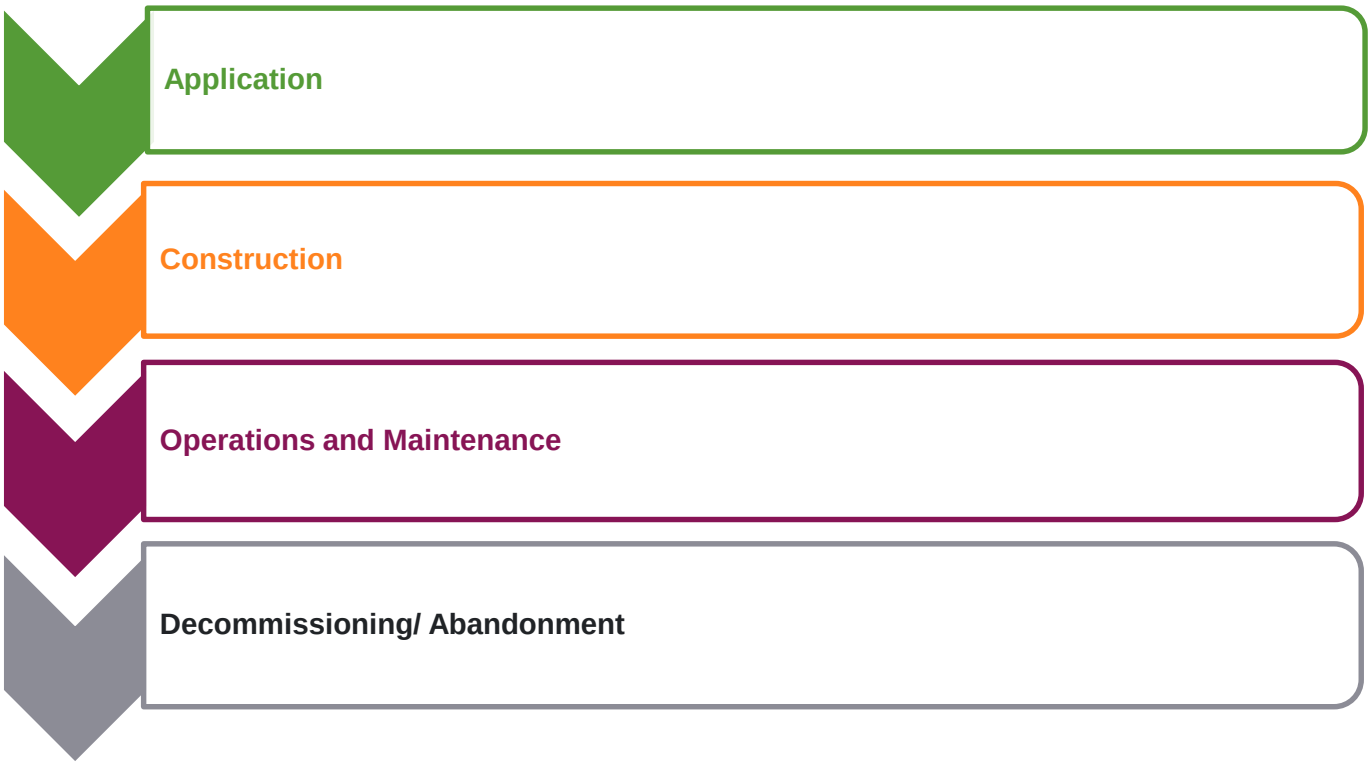
Remediation Process Background





Oil & Gas Pipelines	Electricity Transmission	Imports, Exports & Energy Markets	Exploration and Production	Offshore renewables
Construction, operation, and abandonment of interprovincial and international pipelines and related tolls and tariffs.	Construction and operation of international power lines and designated interprovincial power lines.	Imports and exports of certain energy products; monitoring aspects of energy supply, demand, production, development and trade.	Oil and gas exploration and production activities in the offshore and on frontier lands not covered by an Accord.	Offshore renewable projects and offshore power lines
CER Act, Part 2 and Part 3	CER Act, Part 4	CER Act, Part 7 and Part 1	Canada Oil and Gas Operations Act (COGOA)	CER Act, Part 5

CER Lifecycle Regulation



Our Regulatory Context

CER is responsible for ensuring that pipelines are constructed, operated, and abandoned in a safe and secure manner that protects people, property and the environment

- Canadian Energy Regulator Act (CER Act)
- Canada Oil and Gas Operations Act (COGOA)
- Oil and Gas Operations Act (OGOA)

- The Onshore Pipeline Regulation (OPR) is a performance-based regulation

Our Regulatory Context – Remediation Process

Onshore Pipeline Regulations (OPR) Section 48

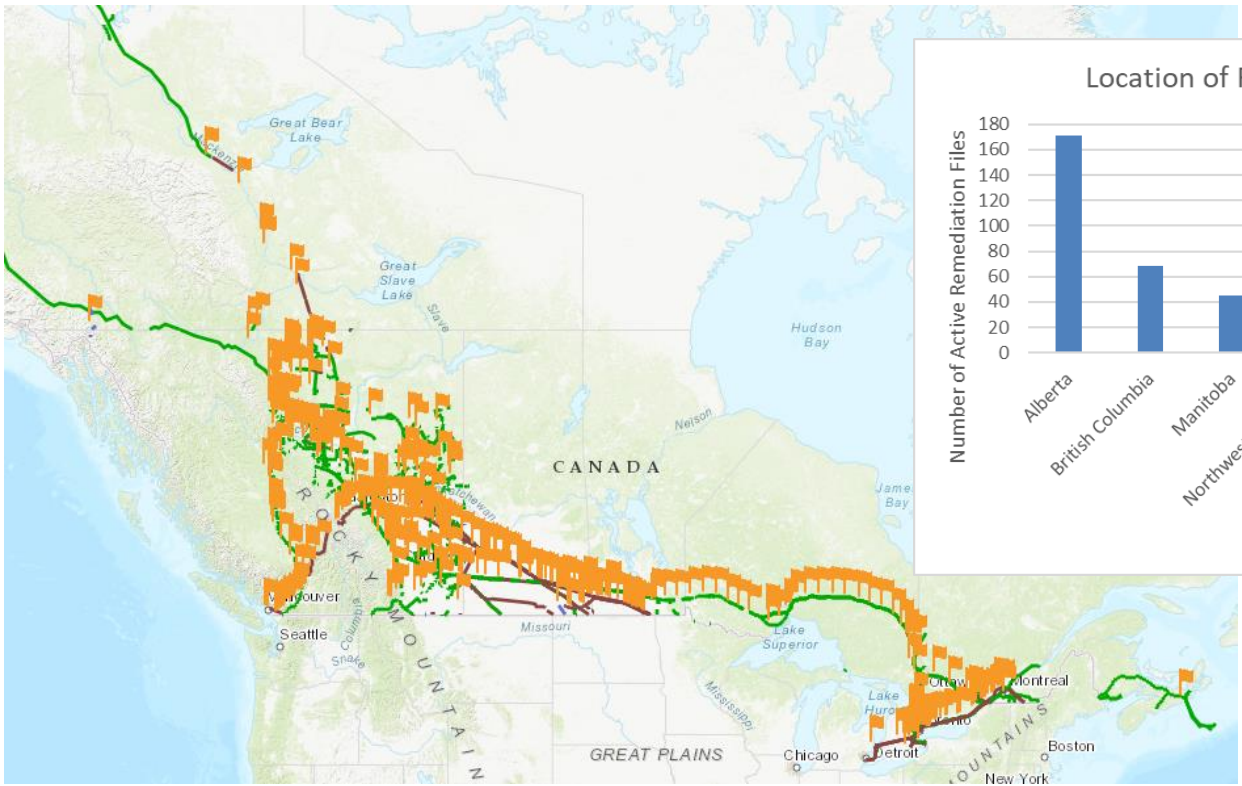
- A company shall develop, implement and maintain an environmental protection program that anticipates, prevents, manages and mitigates conditions that could adversely affect the environment

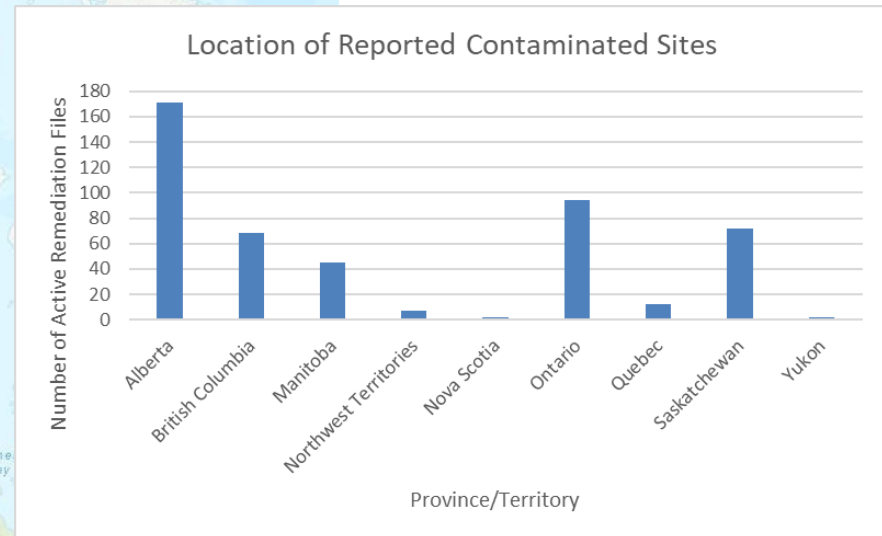
Our Regulatory Context – Remediation Process

Important to have performance-based regulation accompanied by technical guidance

Remediation Process Guide provides the framework by which companies can demonstrate that they are meeting CER requirements for environmental protection related to contamination

Contamination Reported to the CER



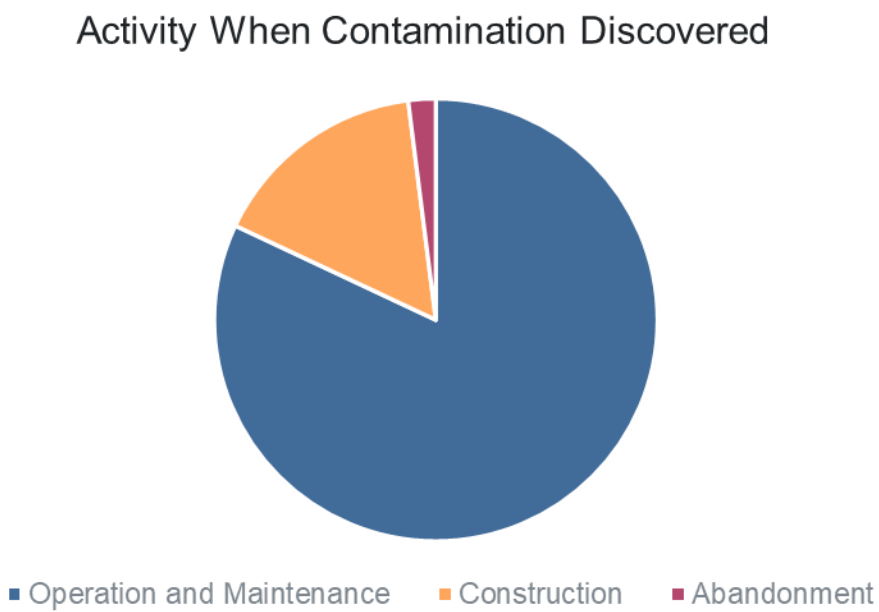


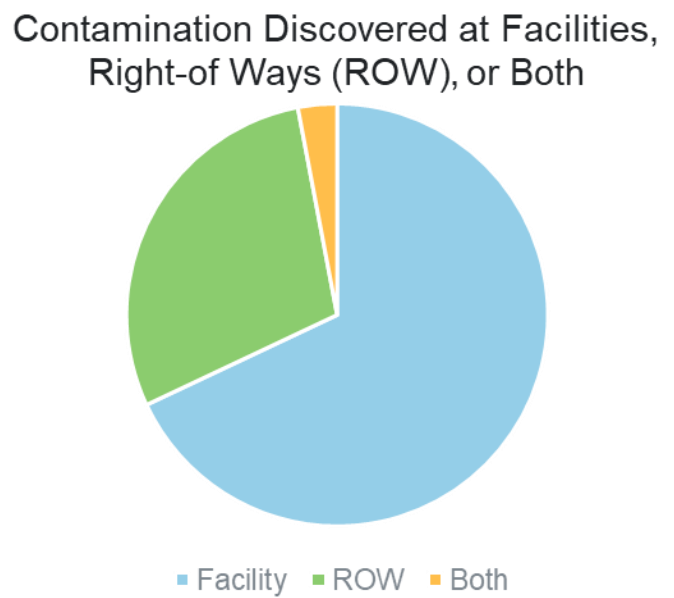
Contamination Reported to the CER

Active Contaminated Sites Reported per 1,000 km of Pipeline

Pipeline Contents	Contaminated Sites per 1,000 km of Pipeline (Number / 1,000 km)
Oil	15
Gas	4

Contamination Reported to the CER





(% of reported sites, mid-2018 to current day)

Remediation Process

How the process begins:

- Contamination is reported to the CER in a notice of contamination (NOC) in the online event reporting system (OERS).

*2018 and newer NOCs are posted publicly on the CER website (RegDocs)

Two circumstances for submitting an NOC:

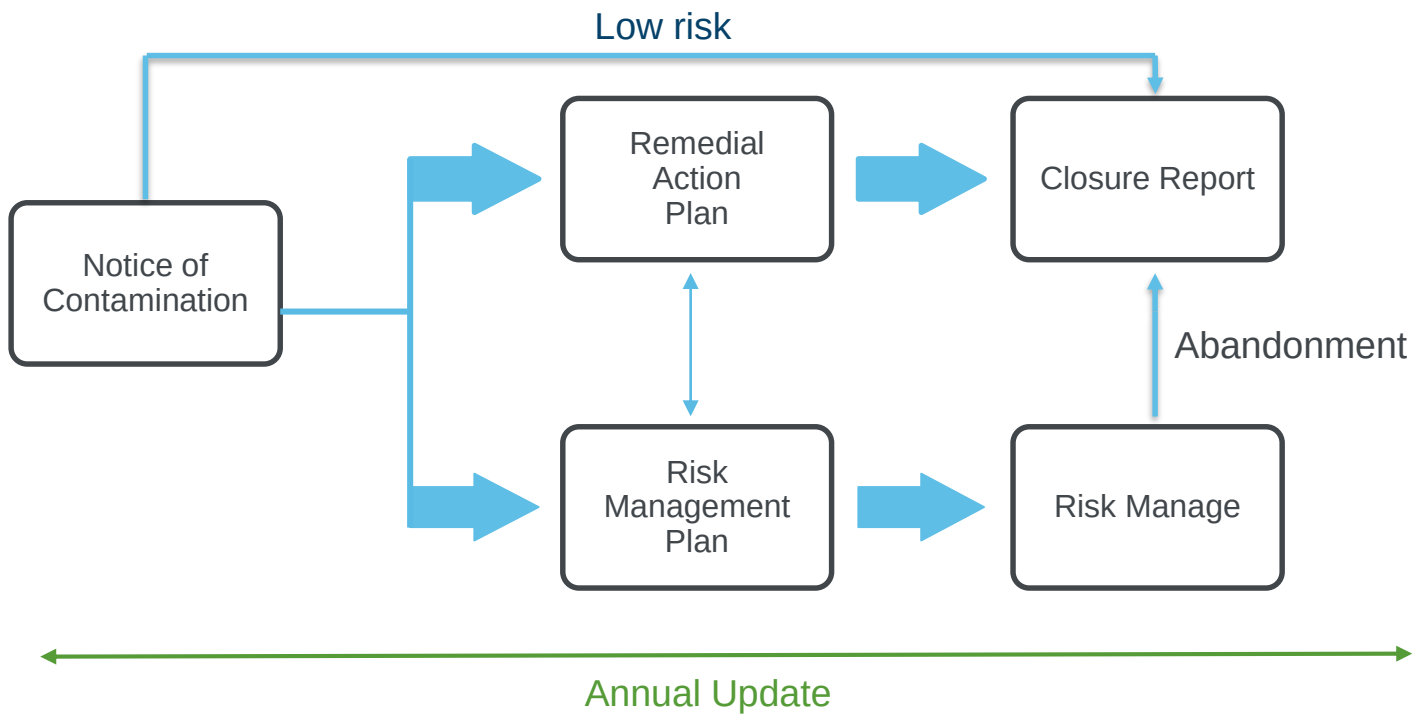
- Contamination is identified/encountered and confirmed by analytical testing
- Contamination associated with an incident cannot be remediated with 12 weeks of incident being reported

Remediation Process

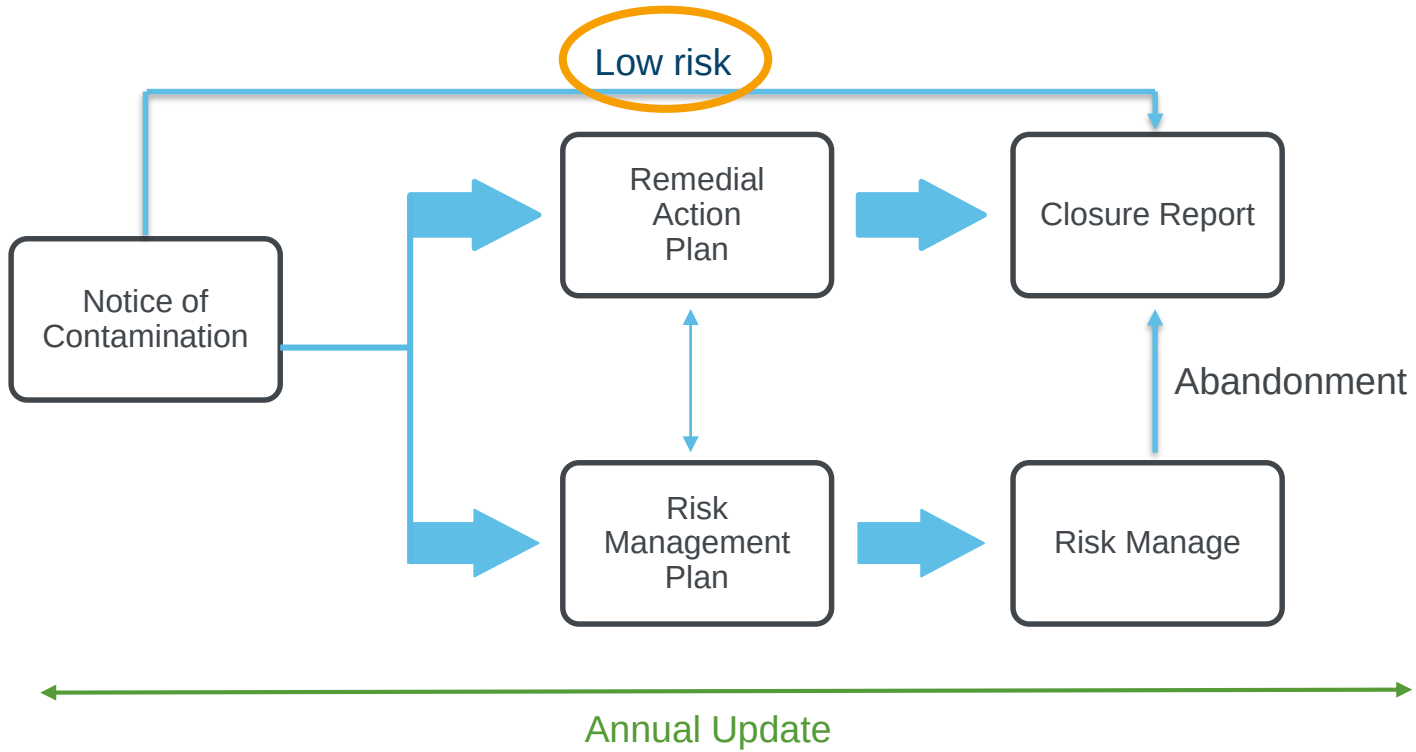
Reported contamination

- Company notifies and engages with potentially affected persons and communities
- Assigned a remediation event number (REM)
- Environmental Analyst appointed

Remediation Process



Remediation Process



Example Lifecycle of a 'Low Risk' site

- Hydrocarbon contamination (BTEX, F1-F4 & PAHs*) discovered during an integrity dig (operations and maintenance work) *within a facility* and reported to the CER (Notice of Contamination)

- Impacted soils largely removed during the operational work, but confirmatory results indicated exceedances of F2-F4 hydrocarbons remain

*benzene, toluene, ethylbenzene and xylenes, petroleum hydrocarbon fractions F1 through F4, polycyclic aromatic hydrocarbons

Example Lifecycle of a 'Low Risk' site

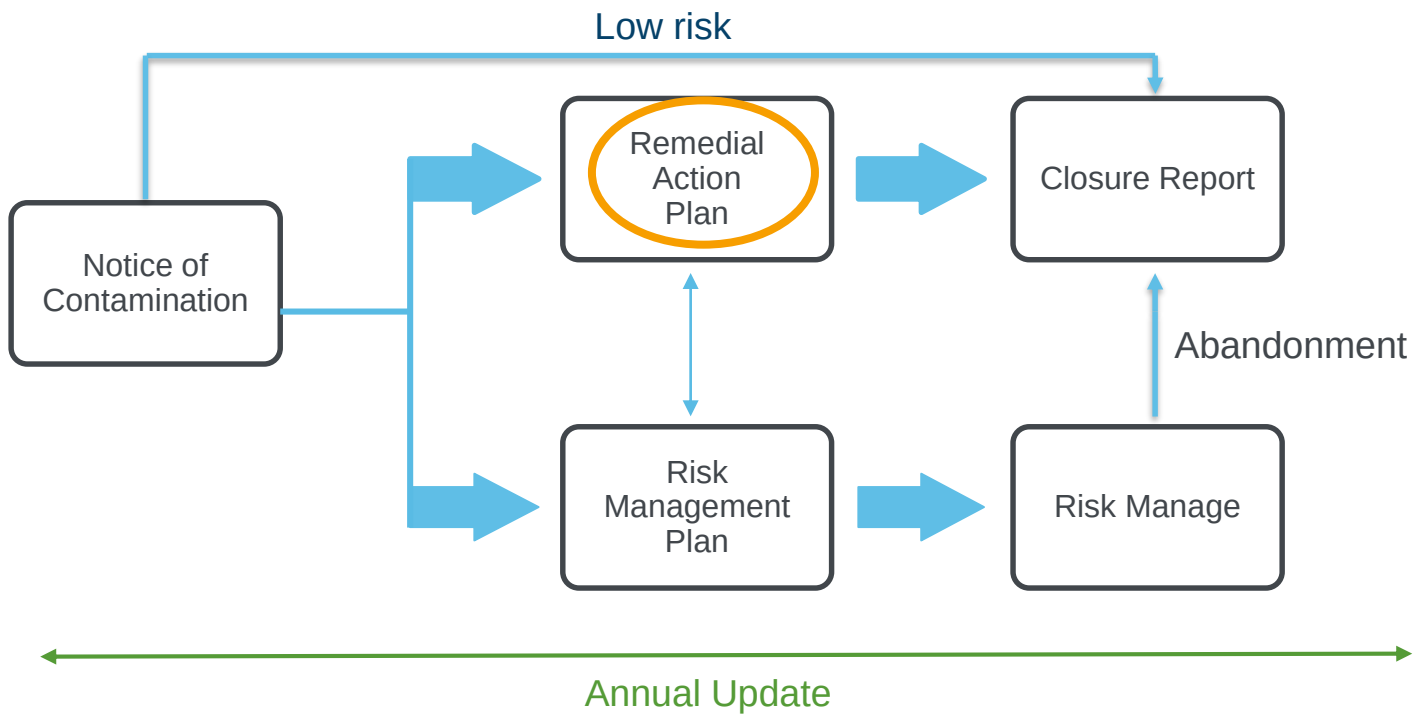
Annual Updates to the CER report that:

- Phase II environmental site assessment was conducted to delineate the remaining impacts and inform the excavation
- Company notified and engaged with potentially affected persons and communities while planning their remedial approach
- Remaining impacted soils excavated to generic guidelines with all pathways protected (no pathway exclusion)

Closure Report submitted to the CER summarizing the investigations & evidence that remediation was completed

Lower level of complexity and environmental risk = less CER oversight required

Remediation Process



Example Lifecycle of a Site with *Required* Remedial Action Plan

- BTEX, F1-F4 & PAHs exceedances discovered during an integrity dig on *a pipeline right-of-way* and reported to the CER
- Impacted soils largely removed during the operational work, but confirmatory results indicated exceedances of F2-F4 hydrocarbons remain

Example Lifecycle of a Site with *Required* Remedial Action Plan

- Annual Updates to the CER report that:
- *Receptors of potential concern identified (human, ecological)*
- Contamination is within 500 m of a residence and a fish bearing creek
- Company submits a Remedial Action Plan (RAP)
- CER reviews the RAP, issues an information request for clarification, then accepts the RAP

Table 18.3: Worksheet That Indicates a RAP May be Required

Need for a Remedial Action Plan	Response		Notes
	Yes	No	
Questions			
1. Will the site be remediated to Remediation Criteria other than to generic Remediation Criteria based on contaminant type, land use and soil grain size?	☐	☐	
2. Are the soil laboratory results 10× higher than the most stringent applicable generic Remediation Criteria?	☐	☐	
3. Does the Contamination pose a significant Risk to human health or safety?	☐	☐	
4. Is there a potable surface water or groundwater source within 300 metres? Is the site underlain by a usable drinking water aquifer?	☐	☐	
5. Is the Contamination within 500 m of residential or commercial land use?	☐	☐	
6. Does the Contamination pose a significant Risk to ecological Receptors (e.g. vegetation, wildlife, crops, watercourse, etc.)?	☐	☐	
7. Does the Remediation pose a Risk	☐	☐	

Example Lifecycle of a Site with *Required* Remedial Action Plan

- Closure Report submitted to the CER summarizing the investigations & evidence that remediation was completed as per the accepted RAP and associated Remediation Criteria.
- CER issues another information request
- CER issues Closure Acceptance Letter, and the site is closed

Notable Changes to the 2020 Guide (vs. 2011)

- CER approach to transparency
- Management system requirements
- The Guide now applies to abandonment
- Engagement requirements
- Third party contamination
- Company off-site contamination

Notable Changes to the 2020 Guide (vs. 2011)

- Expectations for risk management
- Expectations for management of contamination on company owned lands
- Imperative language rather than suggestive
- Definitions edited to leave less legal interpretation

Canada Energy Regulator | Régie de l'énergie du Canada

Thanks to Lianne Germaine, Andrew Benson for assistance with data compilation

Questions?

remediation@cer-rec.gc.ca