Pipeline Performance Summary

2024 Annual Report

BRITISH COLUMBIA **ENERGY REGULATOR**

Cover photo: Section 8 of the Coastal GasLink Pipeline near the Hirsch Creek crossing, looking east (August 2024)

Vision, Mission and Values

Vision

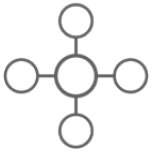
A resilient energy future where B.C.'s energy resource activities are safe, environmentally leading and socially responsible.

Mission

We regulate the life cycle of energy resource activities in B.C., from site planning to restoration, ensuring activities are undertaken in a manner that:

Protects public safety and the environment

Supports reconciliation with Indigenous peoples and the transition to low-carbon energy



Conserves energy resources

Fosters a sound economy and social well-being

Values

Respect is our commitment to listen, accept and value diverse perspectives.

Integrity is our commitment to the principles of fairness, trust and accountability.

Transparency is our commitment to be open and provide clear information on decisions, operations and actions.

Innovation is our commitment to learn, adapt, act and grow.

Responsiveness is our commitment to listening and timely and meaningful action.

Role of the BC Energy Regulator (BCER)

The British Columbia Energy Regulator (BCER) oversees the full life cycle of energy resource activities in B.C., from site planning to restoration. We ensure activities are undertaken in a manner that protects public safety and the environment, supports reconciliation with Indigenous peoples, conserves energy resources and fosters a sound economy and social well-being. Our role includes the regulatory oversight of natural gas, oil, hydrogen, ammonia, methanol, aspects of geothermal resources and carbon capture and storage (CCS).

We regulate energy resources through the Energy Resource Activities Act (ERAA) and other associated laws related to heritage conservation, roads, land and water use, forestry, and other natural resources. We work closely with landowners, rights holders, local government, industry, academia and other regulators to gather skills, knowledge and multiple perspectives to evolve our regulatory model.

We respect Indigenous values and seek learning opportunities as we co-develop new processes that we put into practice in all facets of our business and decision-making. We are focused on advancing reconciliation and building trust and apply this in our work with First Nations and Indigenous communities as partners in building B.C.'s energy resource future.

We currently have almost 300 employees operating out of seven locations: Fort Nelson, Fort St. John, Dawson Creek, Terrace, Prince George, Kelowna and Victoria. The largest number of employees are in the Fort St. John office.

BCER Office Locations Throughout B.C.

With over 25 years' dedicated service, we're committed to ensuring safe and responsible energy resource management for British Columbia.

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Photo:
Pipeline ultrasonic thickness inspection.

Introduction

Purpose of Report

British Columbia's energy resource industry depends on pipelines for the distribution of products such as natural gas, water and oil. Pipelines are recognized as a safe and efficient mode of transportation and secure operation is essential to protecting public safety and the environment.

This report provides an overview of pipelines regulated by the BCER in the 2024 calendar year. It includes data on types of pipelines, lengths, uses and pipeline incident rates. The multi-stage life cycle of a pipeline is explained and incident response protocols are outlined. It also summarizes the Integrity Management Program, a documented framework outlining the practices by which the BCER ensures permit holders inspect and maintain pipelines to mitigate potential integrity issues.

Previous annual pipeline performance summaries can be found on the BCER's website at bc-er.ca/data-reports/reports/.

Pipeline Regulation

The BC Energy Regulator's jurisdiction extends to the majority of pipelines in British Columbia, as defined in legislation by the Energy Resource Activities Act (ERAA). Activities regulated by the BCER extend throughout the life cycle of a pipeline and include pre-activity consultation and notification, permitting, construction, operation, maintenance and abandonment.

Pipelines outside the BCER's jurisdiction include those crossing provincial and/or national borders and low-pressure pipelines owned by a utility company that are downstream of a city gate. City gates are facilities where high pressure natural gas from transmission lines is metered and reduced to a lower pressure for consumers and distributed through pipelines. Pipelines not under the BCER's jurisdiction are not addressed in this report.

Pipelines are regulated under the Pipeline Regulation, which states they must be operated and maintained in accordance with CSA Z662 – Oil and Gas Pipeline Systems. CSA Z662 is a national standard developed and maintained by the CSA Group (CSA) and covers the design, construction, operation and maintenance of oil and gas industry pipeline systems.

Permit holders are required to comply with other applicable regulations including the Environmental Protection and Management Regulation, Requirements for Consultation and Notification Regulation, Pipeline Crossings Regulation and Emergency Management Regulation.

The BC Energy Regulator is also responsible for provincial authorizations involving the Land Act, Water Sustainability Act and the Forest Act for pipeline rights-of-way, roads, land clearing and other minor works.

The Legislation page of the BCER's website provides a list of acts and regulations governing energy resource activities in the province.

Pipeline Inventory

54,270 Kilometres

Despite an increase in the total pipeline length inventory, there was a decrease in the number of actively operating pipelines as a result of permit holders' continued efforts to appropriately deactivate and abandon older pipelines.

Pipelines transport refined and unrefined products including natural gas, sour natural gas, liquid hydrocarbons (such as crude oil), water and other gases or liquids. Over 79 per cent of the total active pipeline kilometres regulated by the BCER transport natural gas, while 10 per cent carry liquid hydrocarbons. The remainder carry water or other gases or liquids. Pipeline definitions and product classifications are available in the Glossary on page 16.

PIPELINE TYPE	TOTAL	ACTIVE	DEACTIVATED	ABANDONED
SOUR NATURAL GAS	**18,358**	10,654	3,400	4,304
NATURAL GAS	**23,788**	18,303	2,097	3,388
LIQUID HYDROCARBONS	**6,129**	3,528	1,431	1,170
WATER	**4,991**	3,760	498	733
OTHER	**1,004**	593	192	219
2024 GRAND TOTAL	**54,270**	36,838	7,618	9,814

PIPELINE TYPE	TOTAL	ACTIVE	DEACTIVATED	ABANDONED
SOUR NATURAL GAS	**18,173**	10,933	3,387	3,853
NATURAL GAS	**23,563**	18,498	2,041	3,024
LIQUID HYDROCARBONS	**5,882**	3,406	1,492	984
WATER	**4,847**	3,692	534	621
OTHER	**912**	533	206	173
2023 GRAND TOTAL	**53,377**	37,062	7,660	8,655

Table 1: Total Lengths (km) of Pipelines by Type and Status, 2024 and 2023.

Table 1 comparison of 2024 to 2023:

The total length of pipelines in 2024 was 54,270 km. This is a net addition of 893 km of total registered pipelines over the previous year.

Active pipelines decreased by 224 km. This indicates more deactivations and abandonments than permitting, construction and activation of new lines.

Deactivated pipelines decreased by 42 km.

Abandoned pipelines increased by 1,159 km. As pipelines reach the end of their service life and are fully decommissioned, the total length of abandoned pipelines will increase over time.

Pipeline Life Cycle

Multi-Stage Planning

From the development of surface maps and creation of a preliminary pipeline plan, through construction and inspections, to deactivation and final site restoration, the steps described here depict the multiple stages of a typical pipeline life cycle.

At the outset, the BC Energy Regulator's staff conduct a comprehensive review of each pipeline application for engineering standards, legal requirements and for environmental and public safety considerations. The BCER ensures proponents have conducted consultations with landowners and other rights holders on pipeline projects that will directly affect them. The BCER is responsible for undertaking consultation with First Nations, consistent with the Crown's legal duty to consult and avoid, mitigate and accommodate any impacts to First Nations rights. The BCER also requires permit holders to engage affected First Nations on permit applications prior to submitting an application for review.

The BCER is committed to respecting Indigenous knowledge and advancing reconciliation. If a pipeline application is approved, the BCER's staff may set permit conditions, as necessary, to protect Indigenous rights and key environmental assets, such as water, wildlife and forest values.

The BCER verifies pipelines are constructed and operated in accordance with applicable regulations and monitors the project throughout its life cycle. Should any deficiencies be identified at a site, the BCER may order the permit holder to cease activities, as necessary, until appropriate actions are performed to safely resume operations.

As detailed in the BCER's mandate and considering the many stages of a pipeline's life cycle, the protection of public safety and the environment is top priority. Permit holders are required to report to the BCER before, during and upon completion of their energy resource activities.

Photo: Endako River crossing reclamation.

Pipelines are operated under a framework designed to help prevent spills. The pipeline Integrity Management Program (IMP) is a required part of this framework, described on page 9.

Integrity Management Program

Compliance Assurance

To ensure public safety, environmental protection and operational reliability, the Pipeline Regulation requires all pipeline permit holders in the province to implement an Integrity Management Program (IMP). A pipeline IMP is a preventative and documented framework, specifying the processes and practices used by pipeline permit holders to anticipate hazards and analyze and manage risks throughout the entire life cycle of pipelines. The IMP incorporates a management system approach.

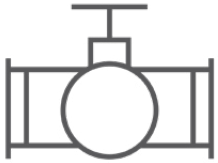
Section 7 of the Pipeline Regulation states every pipeline permit holder planning, designing, constructing, operating, maintaining and abandoning pipeline infrastructure, must have an implemented IMP program. A compliance assurance protocol is available to permit holders, outlining the BCER's Compliance Assurance Integrity Management Program expectations and operating requirements expected of permit holders and provides guidance for developing, implementing and maintaining effective IMPs.

Details of the compliance assurance process and scope of the protocol can be viewed on the BCER's website. The BCER also publishes an annual Pipelines and Facilities Integrity Management Program Audit Summary.

The BC Energy Regulator has been evaluating the compliance of permit holders' IMP programs to regulations and expectations since 2011, through auditing. The auditing process occurs using a standardized IMP compliance assurance process. Compliance Assurance Protocol documentation for both pipelines and facilities is available on the BCER IMP webpage.

Permit holders are selected for audit based on the BCER's criteria, and are notified and requested to submit IMP workbooks and records for the audit. The next phase consists of audits involving systematic review of permit holders' IMP processes, records and documents in order to verify compliance and generate audit findings. The final phase allows for corrective action plans and follow-ups to address any non-compliance findings identified through the audits.

Where non-compliances are identified, permit holders are required to develop and implement corrective actions to address the deficiencies within a timeframe specified and agreed to by the BCER. Each corrective action is monitored and assessed to ensure all findings of non-compliance are fully resolved through a structured oversight process.



The BCER will continue to undertake IMP audits for all pipeline permit holders to ensure a systematic IMP is applied throughout the entire pipeline life cycle.

Incident Response and Enforcement Actions

An incident is defined as a present or imminent event or circumstance, resulting from an energy resource activity that is outside the scope of normal operations and may or may not be an emergency.

Permit holders must communicate all reportable incidents to the BC Energy Regulator. Minor incidents must be reported within 24 hours, while incidents with a higher risk assessment must be reported immediately (within one hour). The BCER's Incident Classification Matrix outlines spill reporting criteria and how incident levels are assessed, determined and reported.

Any person aware spillage is occurring or believes there is the potential for spillage, can provide assistance by calling the operating company listed on the on-site signage and identifying the location of the pipeline or by calling the BCER's 24/7 emergency number at 1-877-500-BCER (2237).

The BCER responds to all incidents, establishing communication with the permit holder, confirming the incident level and assessing the permit holder's response. BCER staff further determine what remedial actions must be taken, whether a pipeline can continue to operate safely and whether compliance or enforcement actions are required.

Subsequent incident investigations allow the BCER to confirm the cause and any contributing factors and whether repairs or solutions should be broadly communicated to all other permit holders to prevent similar incidents from occurring. Inspections may also be triggered by public enquiries and incidents reported to the BCER.

When required, orders, tickets and/or penalties are issued to the permit holder. The BCER posts its enforcement actions in a timely manner on its Compliance and Enforcement webpage.

Photo:
Pipeline aerial water crossing near Coquihalla Highway.

Orders - issued if a permit holder fails to comply with ERAA, associated regulations, permits or authorizations, a previous order or to deal with issues of public safety or protection of the environment.

Tickets - issued under the authority of provincial acts, including the Water Sustainability Act.

Administrative Penalties - levied in the event of a contravention of ERAA.

Charges - recommended to Crown counsel for prosecution and possible court conviction.

Pipeline Incidents and Emergency Response Programs

To coordinate and prepare for incidents in advance, permit holders must develop and maintain Emergency Response Programs (ERPs) and emergency response plans, as directed in the Emergency Management Regulation (EMR) under ERAA.

ERPs guide the creation, management and implementation of a permit holder's emergency response plan, allowing for quick access to critical information, coordination of multiple-responder activities and identification of predetermined equipment and services available for deployment in an emergency.

They equip incident responders with hands-on training and emergency response exercises, ensuring personnel understand their incident command structure, communication methods and responsibilities in an emergency event.

The BCER reviews ERPs to ensure consistent compliance with the EMR and oversees and may participate in permit holder emergency response exercises. Should a permit holder's emergency protocols fail to meet requirements, the BCER may utilize compliance and enforcement actions, which can include issuing orders, penalties or shutting-in a pipeline system.

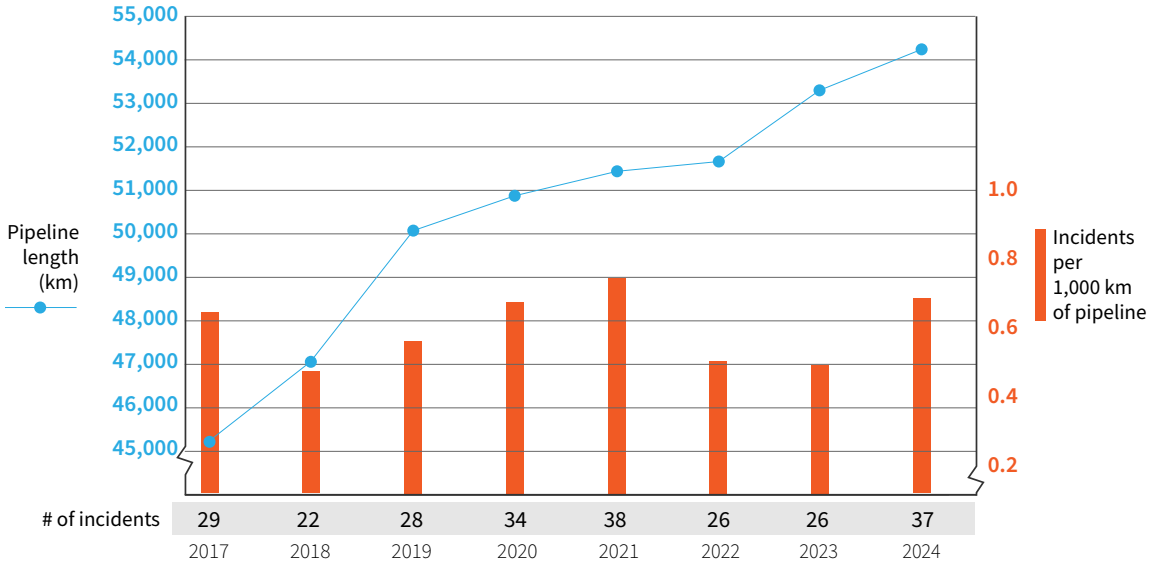
The requirements in the EMR are designed to create a framework for the protection of the public, emergency responders, property and the environment from incidents occurring due to energy resource activities. Although emergency preparation, equipment and protocols help reduce the rate of incidents, the BCER strives to continually improve emergency management measures.

In 2024, there were 37 incidents on pipelines regulated by the BCER; however, not all led to the release of a product. Figure 1 shows an overall incident frequency of 0.68 for every 1,000 km of pipelines, an increase from 0.49 in 2023.

As stated, not all incidents result in a spill or release of a product. In 2010, the implementation of OGAA (later ERAA) led to broader reporting criteria, meaning all incidents – including those that have the potential to affect the integrity of a pipeline but did not cause spillage – must be reported.

Additional information regarding emergency response and management, including guidelines and forms, is available on the BCER's Emergency Response & Safety webpage.

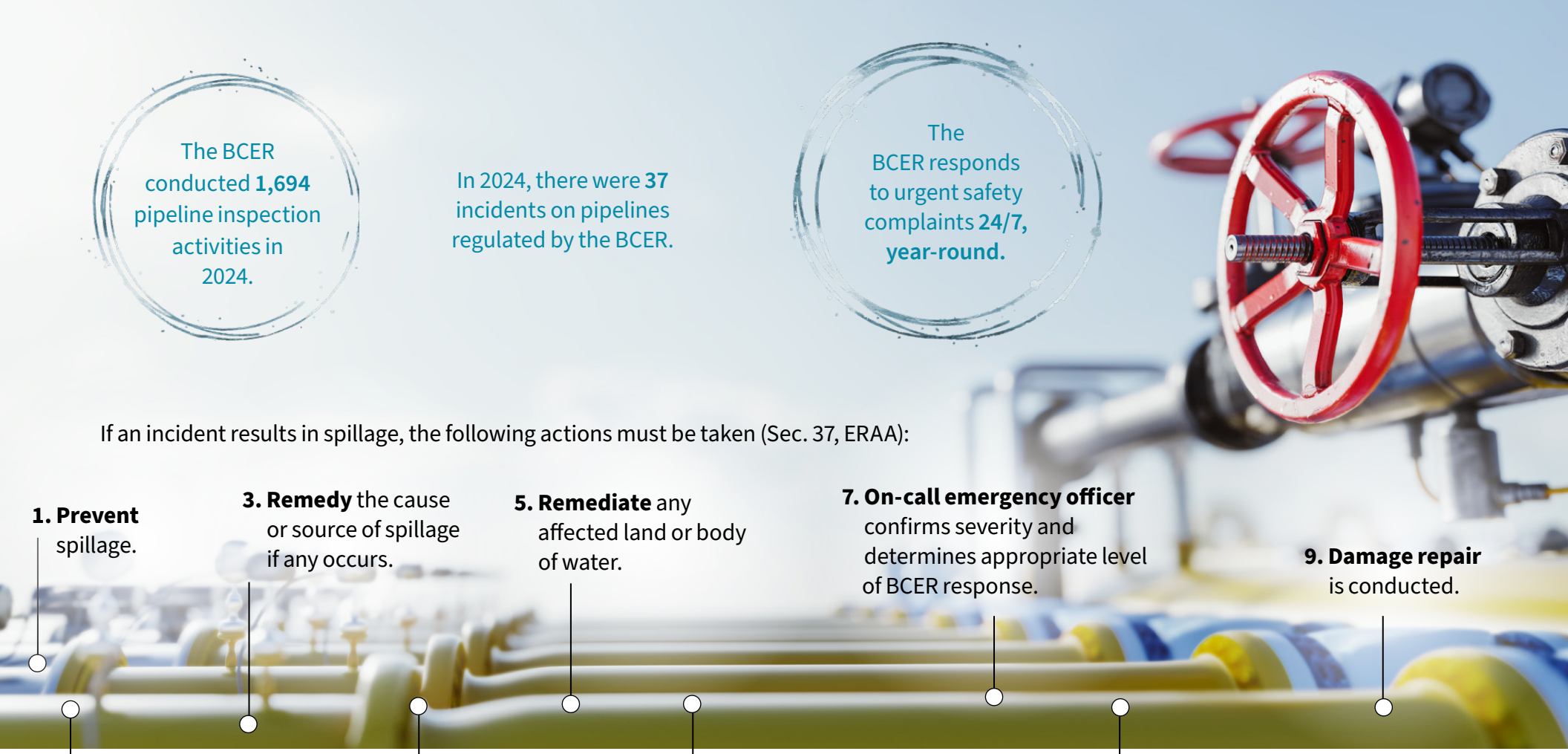
Figure 1: Year-to-Year Incident Frequency vs. Total Pipeline Inventory



The BCER conducted **1,694** pipeline inspection activities in 2024.

In 2024, there were **37** incidents on pipelines regulated by the BCER.

The BCER responds to urgent safety complaints **24/7, year-round.**



If an incident results in spillage, the following actions must be taken (Sec. 37, ERAA):

1. **Prevent** spillage.
2. **Promptly report** any damage or malfunction that could cause spillage.
3. **Remedy** the cause or source of spillage if any occurs.
4. **Contain and eliminate** the spillage.
5. **Remediate** any affected land or body of water.
6. **Report location and severity** of spillage and any contributing damage or malfunction.
7. **On-call emergency officer** confirms severity and determines appropriate level of BCER response.
8. **BCER inspectors may attend** onsite during the response, depending on the nature of the incident.
9. **Damage repair** is conducted.

The number of reported incidents in 2024 was **0.68** for every 1,000 km of pipeline.

Site Cleanup and Remediation must be approved by the BCER, and incident causes investigated and resolved prior to pipeline operations resuming.

Post-Incident Reports must be submitted by the operator within 60 days identifying the root cause of the failure and any corrective actions required to prevent future incidents.

Releases and Spills

2024 Statistics

Of the 37 incidents on pipelines in 2024, 25 resulted in a release or spill, one more than in 2023.

For incidents involving a release or spill, Table 2 shows the highest number of releases occurred on pipelines categorized as 'liquid hydrocarbons' which had 11 incidents.

In the event of a pipeline gas release or liquid spill, the BCER oversees all corrective actions to ensure safe operation is completed before operations resume. The BCER also oversees cleanup activities associated with liquid spills to ensure contaminated sites are adequately remediated.

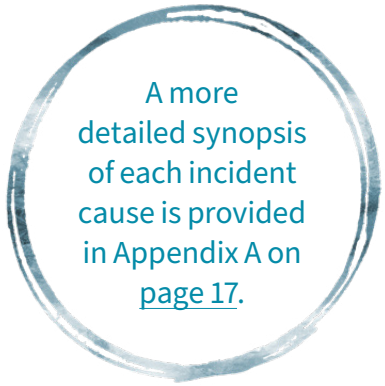
PIPELINE TYPE	# of Incidents with Release	Length of Pipeline (km)	Frequency (per 1,000 km)
SOUR NATURAL GAS	3	18,358	0.16
NATURAL GAS	5	23,788	0.21
LIQUID HYDROCARBONS	11	6,129	1.79
WATER	6	4,991	1.00
OTHER	0	1,004	0.00
TOTAL	**25**	**54,270**	**0.44**

Table 2: Total Number of Incidents with Release per 1,000 km by Type of Pipeline in 2024

Incident Causes

Table 3 on page 15 summarizes incidents by failure cause. In 2024, metal loss (corrosion) continued to be the leading cause of pipeline incidents, contributing to 13 events. The BCER continues to monitor incident causes to identify opportunities to further drive reductions in incident frequency and severity.

The interactive web-based BCER Pipeline Incident Map provides the location of pipeline incidents dating back to 2009. It includes data on pipeline spills, releases and damage to active and discontinued pipelines.



Moving Forward

The BC Energy Regulator's priority is continual improvement in safety standards and reduction of incidents to serve the public and the environment, while fostering responsible development.

As tools are developed and operationalized to elevate pipeline performance, spill preparedness, and emergency response capabilities, learnings will continue to be shared across the BCER and with stakeholders and experts throughout industry to successfully meet the demands of a strong safety culture.

Photo:
Haisla ALP member conducting joint inspection with BCER Compliance and Enforcement team, near top of Cable Crane Hill.

Table 3: Classification of Pipeline Failures

INCIDENT CAUSE	DEFINITION	2024	2023	2022	2021	2020
METAL LOSS	WALL THICKNESS REDUCTION DUE TO CORROSION OR OTHER CAUSES	**13**	**13**	**8**	**11**	**19**
PIPELINE/EQUIPMENT FAILURE						
CRACKING IN PIPE	MECHANICALLY DRIVEN OR ENVIRONMENTALLY ASSISTED CRACKING	2	1	2	3	0
PIPE FITTINGS/JOINT FAILURE	FAILURE IN VALVE, WELD, FLANGE, ETC.	8	5	5	4	2
TOTAL PIPELINE/EQUIPMENT FAILURE		**10**	**6**	**7**	**7**	**2**
EXTERNAL INTERFERENCE						
THIRD PARTY INTERFERENCE	INTERFERENCE BY SOMEONE OTHER THAN OPERATING COMPANY OR ITS EMPLOYEES/CONTRACTORS	1	1	1	2	1
COMPANY	INTERFERENCE BY OPERATING COMPANY OR ITS EMPLOYEES/ CONTRACTORS	2	1	3	4	3
VANDALISM	INTERFERENCE CAUSED WILLFULLY	0	0	0	1	0
TOTAL EXTERNAL INTERFERENCE		**3**	**2**	**4**	**7**	**4**
OTHER CAUSES						
MATERIAL MANUFACTURING OR CONSTRUCTION	DEFECTS IN THE FITTING, CONSTRUCTION, OR COMPONENTS	1	2	1	0	1
GEOTECHNICAL FAILURE	LOSS OF INTEGRITY DUE TO GEOTECHNICAL EFFECT, FOR EXAMPLE, SLOPE MOVEMENT	1	0	1	0	1
EXTERNAL FACTORS	EVENTS WITH POTENTIAL TO CAUSE LOSS OF INTEGRITY INCLUDING PIPELINE EXPOSURES, LANDSLIDES, ETC., WITHOUT FAILURE	7	1	2	10	2
IMPROPER OPERATION	DECISION ERROR MADE BY OPERATING COMPANY DURING SERVICE	2	2	2	2	4
OVERPRESSURE	FAILURE CAUSED DUE TO OVERPRESSURE OF PIPE	0	0	1	1	1
TOTAL OTHER CAUSES		**11**	**5**	**7**	**13**	**9**
TOTAL INCIDENTS		**37**	**26**	**26**	**38**	**34**
TOTAL LENGTH OF PIPELINE (KMS)		54,270	53,377	51,628	51,454	50,813
FREQUENCY (PER 1,000 KMS)		0.68	0.49	0.50	0.74	0.67

Glossary

Pipeline: pipelines regulated by the BCER are defined in ERAA (except in Section 9) as piping through which any of the following is conveyed or transported:

- Petroleum or natural gas.
- Water produced in relation to the production of petroleum or natural gas or conveyed to or from a facility for disposal into a pool or storage reservoir.
- Solids.
- Substances prescribed under Section 133 (2)(v) of the Petroleum and Natural Gas Act.
- Other prescribed substances.

The scope of the definition also includes installations and facilities associated with the piping, but does not include:

- Piping used to transmit natural gas at less than 700 kilopascals (kPa) to consumers by a gas utility as defined in the Gas Utility Act.
- A well head.
- Anything else that is prescribed.

Abandoned Pipeline: pipelines removed from service and not maintained for a later return to service.

Active Pipeline: pipelines actively used for the transport of fluids related to energy resource operations and piping that has been suspended from service for less than 18 months but not formally deactivated.

Deactivated Pipeline: pipelines removed from service but maintained for a later return to service.

Crude Oil and Sour Crude Oil: Crude oil is the raw, unprocessed oil from a well. Crude oil is sent to refineries to be converted (refined) into petroleum products used as fuel.

m^3: a measure of volume - cubic metres: 1m x 1m x 1m: 1,000 litres.

Natural Gas: includes natural gas, sweet gas and fuel gas. Consisting mostly of methane, natural gas is a colourless, odourless, flammable gaseous hydrocarbon. Mercaptans (organic components of hydrocarbons with sulphur) are added to natural gas for consumer use, allowing for detection of natural gas leaks by the 'rotten egg' smell.

Other: miscellaneous gases and liquids such as oil emulsion and effluent.

Pipeline Permit: a permit that includes permission to construct, maintain and operate a pipeline.

Reportable Incident: for the purpose of this report, a present or imminent event or circumstance, resulting from an energy resource activity that is outside the scope of normal operations and may or may not be an emergency.

Shut-In: the isolation or closure of a well zone, a pipeline or a facility. For example, the temporary shut-in of a well allows for the analysis of such factors as a well's productive capacity, pressure and permeability.

Sour Natural Gas: natural gas with a hydrogen sulphide (H_2S) partial pressure greater than 0.3 kilopascals.

Spill: as defined in ERAA; petroleum, natural gas, oil, solids or other substances escaping, leaking or spilling from a pipeline, well, shot hole, flow line or facility (or any source apparently associated with any of those substances).

Water: fresh water, produced water and sour water. Produced water is water that comes out of an oil and gas well during the production process. Produced water is often re-injected underground for safe disposal or treated for reuse or discharge.

Appendix A - Incident Cause Descriptions

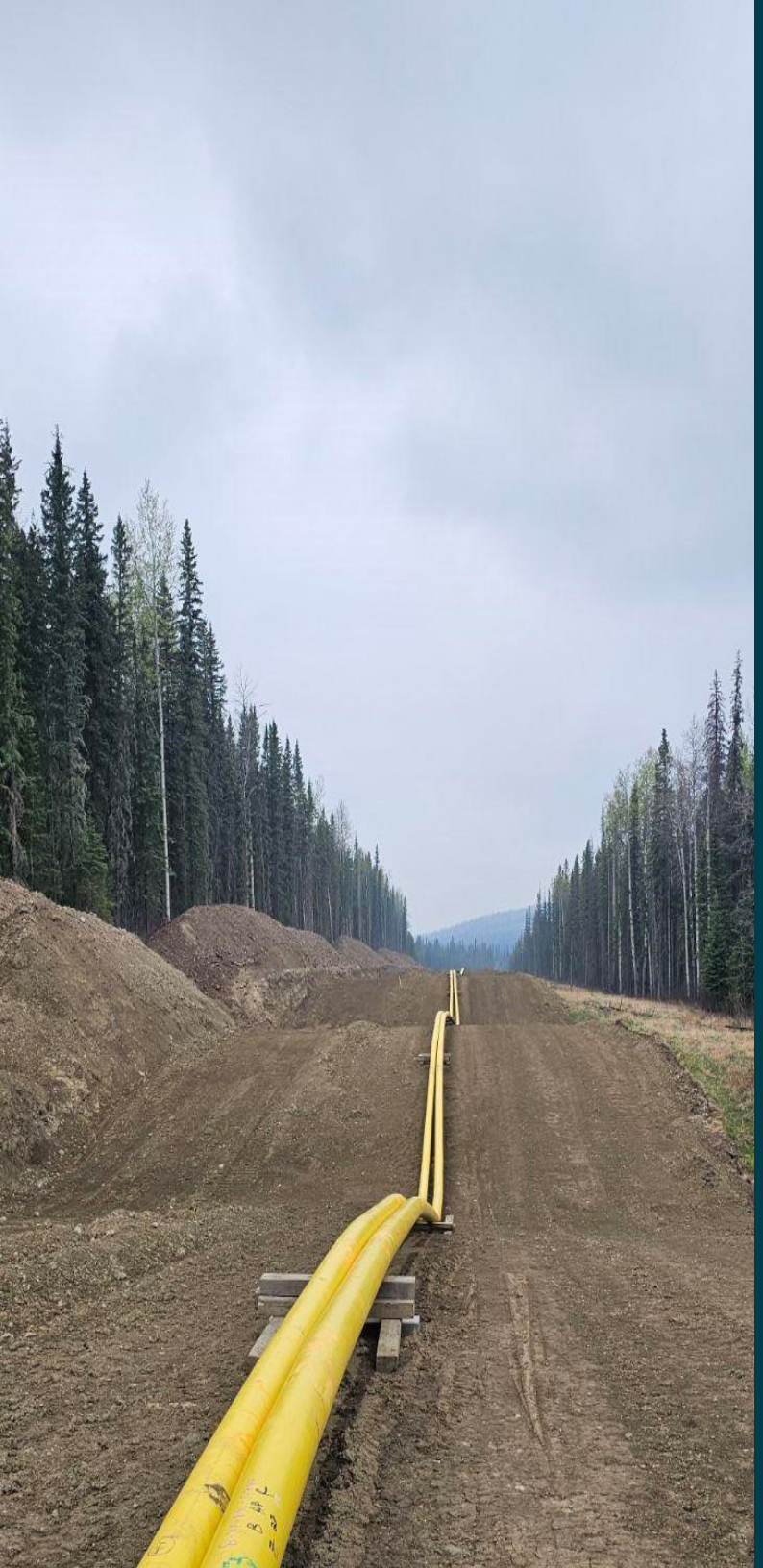
INCIDENT CAUSE	INCIDENT ID	SITE TYPE	PERMIT HOLDER	INCIDENT DATE	SPILL Y/N	PRODUCT SPILLED	INCIDENT CAUSE DESCRIPTION
METAL LOSS	080277876-001	Riser (Pipeline)	Murphy Oil Company Ltd.	12-Feb-24	Yes	Produced Water	Pipeline spool failed due to internal corrosion caused by inadequate application of internal coating.
	080356140-001	Riser (Pipeline)	Murphy Oil Company Ltd.	7-Mar-24	No	Not Applicable	Pipeline pig receiver failed due to internal corrosion caused by accumulation of product near drain valve location.
	080358419-001	Pipeline	Canadian Natural Resources Ltd. (CNRL)	9-Mar-24	Yes	Sour Natural Gas	Pipeline failed due to internal corrosion.
	080379074-001	Pipeline	Bench Creek Resources Ltd.	24-Mar-24	Yes	Natural Gas	Pipeline failed due to internal corrosion.
	080494093-001	Riser (Pipeline)	Tourmaline Oil Corp.	1-Apr-24	Yes	Produced Water	Pipeline spool failed due to internal corrosion caused by inadequate application of internal coating.
	080515940-001	Pipeline	CNRL	12-Apr-24	Yes	Liquid Hydrocarbons	During abandonment activities pipeline was found to have failed. Assumed to be caused by internal corrosion.
	080516744-001	Pipeline	CNRL	12-Apr-24	Yes	Liquid Hydrocarbons	During abandonment activities pipeline was found to have failed. Assumed to be caused by internal corrosion.
	080684554-001	Pipeline	Whitecap Resources Inc.	17-May-24	Yes	Liquid Hydrocarbons	Pipeline failed due to internal corrosion.
	080684294-001	Pipeline	Saba Oil & Gas Ltd.	22-May-24	Yes	Liquid Hydrocarbons	Pipeline failed due to internal corrosion.
	080686784-001	Pipeline	Murphy Oil Company Ltd.	2-Jun-24	Yes	Produced Water	Pipeline leak caused by crevice corrosion from product seeping under flange face gasket.
	2024-0071	Pipeline	Cardinal Energy Ltd.	9-Nov-24	Yes	Liquid Hydrocarbons	Patrol of pipeline identified pipeline failure. Investigation determined failure caused by internal corrosion.
	2024-0115	Riser (Pipeline)	CNRL	17-Dec-24	Yes	Sour Natural Gas	Pipeline riser found to be leaking from pinhole. Assumed to be caused by internal corrosion.
	2024-0126	Pipeline	Whitecap Resources Inc.	28-Dec-24	Yes	Liquid Hydrocarbons	Pipeline found to be leaking. Assumed to be caused by metal loss.

Continued on next page.

INCIDENT CAUSE	INCIDENT ID	SITE TYPE	PERMIT HOLDER	INCIDENT DATE	SPILL Y/N	PRODUCT SPILLED	INCIDENT CAUSE DESCRIPTION
CRACKING	080730998-001	Riser (Pipeline)	CNRL	27-Jun-24	Yes	Liquid Hydrocarbons	Deactivated fuel gas pipeline riser failed by axial cracking indicative of hoops stress exceedance. Assumed historical failure as pipeline was not in service. Spill was residuals.
	080934874-001	Pipeline	Plateau Pipe Line Ltd.	2-Sep-24	Yes	Liquid Hydrocarbons	Pipeline found to be seeping product from the long seam, assumed to be associated with cracking.
FITTING FAILURE	080200831-001	Pipeline	Trans Mountain Pipeline ULC	16-Jan-24	Yes	Liquid Hydrocarbons	Drain valve failed due to accumulation of water inside freezing, expanding and damaging valve.
	080206140-001	Riser (Pipeline)	Tourmaline Oil Corp.	19-Jan-24	Yes	Sour Natural Gas	Pipeline pigging receiver was found to be leaking due to o-ring not sealing.
	080779403-001	Pipeline	Plateau Pipe Line Ltd.	4-Jul-24	No	Not Applicable	Repair sleeve found to have failed at weld seam resulting in seepage.
	080858812-001	Riser (Pipeline)	Murphy Oil Company Ltd.	8-Aug-24	Yes	Produced Water	Pipeline pigging launcher was found to be leaking due to o-ring not sealing.
	2024-0043	Pipeline	Secure Energy Services Inc.	21-Sep-24	No	Not Applicable	Pipeline liner vent inspection identified failed internal pipeline liner. Cause unknown.
	2024-0081	Riser (Pipeline)	Shell Canada Limited	20-Nov-24	Yes	Produced Water	Automatic bleed valve did not function properly resulting in overfill of scrubber at riser location.
	2024-0090	Riser (Pipeline)	ARC Resources Ltd.	26-Nov-24	Yes	Produced Water	Drain valve on pigging receiver failed internally resulting in leak.
	2024-0107	Riser (Pipeline)	CNRL	9-Dec-24	Yes	Sour Natural Gas	Bleed valve on pipeline riser failed to fully close resulting in leak.
EXTERNAL INTERFERENCE	2024-0016	Pipeline	PETRONAS Energy Canada Ltd.	27-Sep-24	No	Not Applicable	Excavation equipment contacted pipeline damaging exterior pipeline insulation.
	2024-0020	Riser (Pipeline)	Pacific Northern Gas Ltd.	3-Oct-24	Yes	Natural Gas	Third party vehicle impacted pipeline riser resulting in release.
	2024-0091	Pipeline	PETRONAS Energy Canada Ltd.	25-Nov-24	No	Not Applicable	Attachment on excavation equipment fell onto pipeline causing damage to the pipe.

Continued on next page.

INCIDENT CAUSE	INCIDENT ID	SITE TYPE	PERMIT HOLDER	INCIDENT DATE	SPILL Y/N	PRODUCT SPILLED	INCIDENT CAUSE DESCRIPTION
CONSTRUCTION DEFECT	080381830-001	Riser (Pipeline)	Coastal GasLink Pipeline Ltd.	26-Mar-24	Yes	Natural Gas	1/2 inch check valve found to be leaking due to construction debris.
GEOTECHNICAL	080366865-001	Riser (Pipeline)	PETRONAS Energy Canada Ltd.	17-Mar-24	Yes	Sour Natural Gas	Settling of soils around pipeline riser caused strain on welded connection resulting in kinking and separation of the connection.
IMPROPER OPERATION	080599416-001	Pipeline	Ovintiv Canada ULC	2-May-24	Yes	Liquid Hydrocarbons	Drain valve on pigging receiver was inadvertently left in open position resulting in a release.
	2025-0002	Riser (Pipeline)	CNRL	24-Dec-24	Yes	Liquid Hydrocarbons	Valve on pipeline pigging launcher inadvertently left open resulting in spill.
EXTERNAL FACTORS	080700435-001	Pipeline	NTE Energy Canada Ltd.	29-May-24	No	Not Applicable	Fiberglass pipeline damaged by wildfire.
	080699810-001	Pipeline	NTE Energy Canada Ltd.	11-Jun-24	No	Not Applicable	Fiberglass pipeline damaged by wildfire.
	080792741-001	Pipeline	FortisBC Energy Inc.	16-Jul-24	No	Not Applicable	Weather event caused exposure of pipeline at railway crossing. No damage.
	080860314-001	Pipeline	FortisBC Energy Inc.	9-Aug-24	No	Not Applicable	Abandoned 2 inch pipeline found exposed in creek.
	080881794-001	Pipeline	FortisBC Energy Inc.	22-Aug-24	No	Not Applicable	Pipeline exposure in right-of-way. No damage.
	2024-0007	Pipeline	FortisBC Energy Inc.	24-Sep-24	No	Not Applicable	Pipeline exposure in water crossing. No damage.
	2024-0058	Pipeline	FortisBC Energy Inc.	29-Oct-24	No	Not Applicable	Patrol of pipeline identified exposure of abandoned pipeline at river crossing.



BRITISH COLUMBIA **ENERGY REGULATOR**

This report was published in
April 2025 and is updated annually.