

Chapter 11 Pipeline Activity

11. Pipeline Activity

The pipeline activity section of this manual provides operating guidelines for regulatory requirements throughout the operations life cycle of the permitted activity. Construction activities are discussed in Section 4 of this manual. Associated oil and gas activities, if required in addition to the oil and gas activity permit, are touched on in Section 3.1 of this manual.

Please Note:

This manual is written as a whole and provided to industry in sections to allow permit holders to access activity chapters. It is prudent of the permit holder to review the manual in its entirety and be aware of the content in other sections of the manual.

11.1 Pipeline Permitted Activities

All permit holders are ultimately responsible for ensuring they understand and meet all legal and regulatory requirements of the permit, including all conditions attached to the permit. If an exemption is requested from regulatory requirements, an exemption must be prepared at the time of application. Permit holders must contact the Commission prior to commencing construction or operations if the adherence to the permitted activity cannot be met. The Commission may be able to provide further guidance and clarification.

11.1.1 Pipelines Defined

Pipelines are an oil and gas activity as defined in the [Oil and Gas Activities Act](#) as:

Piping through which any of the following is conveyed:

- a) Petroleum or natural gas.
- b) 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.
- c) Solids.
- d) Substances prescribed in Section 133(2)(v) of the [Petroleum and Natural Gas Act](#).
- e) Other prescribed substances.

And includes installations and facilities associated with the piping, but does not include:

- f) 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.
- g) Well head.
- h) Anything else prescribed.

Additionally, the following substances are prescribed in OGAA for the purposes of paragraph (e) above:

- Water or steam used for geothermal activities or oil and gas activities.
- Carbon dioxide.
- Liquid hydrocarbons.

And the following is prescribed for the purposes of paragraph (h) above

- Pipelines used in a gas distribution main, as defined in regulations under the [Safety Standards Act](#).

Temporary Above-ground Lines

Temporary above-ground lines designed to transport fresh water are not within the definition of a pipeline and authorized by the Commission as associated oil and gas activity; therefore, not discussed in this section.

National Energy Board Pipelines

Land Act authorizations related to pipelines are regulated under the [National Energy Board \(NEB\) Act](#). The authorizations differ as they are not related to an OGAA activity. To maintain this distinction, separate application types have been created for NEB related authorizations and detailed in the Commission's [Oil and Gas Activity Application Manual](#). NEB Pipeline operations are not discussed in this section.

11.1.2 Regulatory Requirements

Pipelines must meet the design and operational requirements outlined in the [Oil and Gas Activities Act](#) (OGAA), the [Pipeline Regulation](#) and the [Environmental Protection and Management Regulation](#) (EPMR).

Of particular note, as required under Section 3 of the [Pipeline Regulation](#):

- Every permit holder designing, constructing, operating, maintaining or abandoning pipeline infrastructure in British Columbia must follow the most current version of CSA Z662, including Annex N.

11.1.3 Guidance Requirements

Pipeline activities should meet guidance recommendations in the following documents:

- [Environmental Protection and Management Guideline](#).
- British Columbia [Common Ground Alliance's Recommended Practice for Damage Prevention Programs](#).
- [BC One Call website](#).

11.2 Pipeline Construction Requirements

Permit holders must complete a Notice of Construction Start and specific construction requirements as detailed in Chapter 4 of this manual.

Prior to beginning construction submit a Notice of Construction Start in [KERMIT](#). Notices must be submitted prior to commencement of land clearing and/or the set-up of equipment on location and at least two days before construction is to begin.

11.2.1 Pipeline Crossing Distances

The permit holder must not carry out a prescribed activity within 30 m of a pipeline unless carried out in accordance with the Pipeline Crossings Regulation. BC One Call must be contacted in order to confirm if there are one or more pipelines within 30 m of the proposed ground disturbance. If confirmed, each pipeline permit holder must be contacted to establish the pipeline/s is at least 10 m away from the proposed site of the activity.

If the pipeline operator confirms the proposed activity is within 10 m of the pipeline, the pipeline operator can provide specific written permission regarding the ground activity and rules to abide to if the activity is permitted to proceed. The pipeline operator may establish permissions that extend beyond 10 m from the pipeline.

More information is available in [Land Owner's Information Guide](#) on the Commission's website.

11.2.2 Crossing Public Rights of Way

Where a pipeline is to be constructed across a public right of way, the permit holder must give notice to the owner or authority responsible for the public right of way at least five days prior to beginning construction or other work. Further, the permit holder must make all reasonable efforts to restore any infrastructure damaged or removed during pipeline construction.

11.2.3 Notice of Pressure Test for Pipelines

Section 4(1) of the [Pipeline Regulation](#) states:

- A notice of pressure test must be submitted to the Commission two days prior to the start of a pipeline pressure test.

The Commission uses the information in the notice of pressure test to coordinate oversight of pressure testing by a Commission Inspector, if required. All pipeline pressure tests, including those without an associated application or amendment requires notification to the Commission.

Notice of pressure test may be either a shop and/or a field test as follows:

- Shop tests are pressure tests conducted in the shop, usually used during repairs or modifications of short segments. Generally, shop tests are used for pre-testing pipe.
- Field tests are pressure tests conducted on site during construction or maintenance activities.

Notices of pressure test must be submitted online using [KERMIT](#).

Changes to Pressure Test Plans

Notify the Commission by email (OGCPipelines.Facilities@bcogc.ca) of any changes to the approved/amended pressure test plan. This includes changes to the medium, hold times, and/or changing the type of test (shop/field). Include a detailed reason for the change(s). An amendment may be required.

Pneumatic Testing

Pneumatic testing must be approved as part of the application or an amendment. If pneumatic testing is not part of the permit, then justification for a variance must be submitted to the Commission prior to a notice of pressure test. Submit an explanation of why pneumatic testing is required, calculations and the full pneumatic test procedure specific to the segment. Submission is by email to the Commission's Pipeline Engineer OGCPipelines.Facilities@bcogc.ca.

Other changes to pressure test plans (e.g. minimum pressure) may also require approval by the Commission. Contact the Commission's Pipeline Engineering department for clarification.

11.2.4 Restoration of Land

Section 5 of the [Pipeline Regulation](#) states:

- Land disturbed during pipeline construction must be restored as soon as practicable during pipeline construction.
- Land not restored during construction must be restored post construction as soon as possible.

Section 3.11 of this manual provides further information and links on land restoration.

11.2.5 Survey Plan Submission

Section 24 of Oil and Gas Activities Act states:

- A pipeline permit holder must submit to the Commission a survey plan for all portions of pipeline right of way on crown land within 16 months of completion of construction.

The survey plan is used to issue a statutory right of way tenure over the pipeline right of way. The Commission's [Permit Operations Administration](#) manual provides details on the statutory right of way process.

11.2.6 Pipeline Changes During Construction

During construction should engineering changes deviate from the pipeline permit, an amendment must be submitted prior to construction of any portion of the pipeline affected. This is required by Section 21 of OGAA.

Alternatively, changes deviating from the permit and identified with an as-built (and not an amendment) may include:

- Changes of length less than 50 metres, provided no new land is required, and end points are as applied for.
- Changes to material standards provided they meet CSAZ662 standards.
- Change in CO² content.

- Small changes in design temperature, provided the temperature is within the coating limits.
- Aboveground changes in piping components such as adding/removing valves and fittings are acceptable provided the scope of the pipeline change doesn't impact anything referenced in the permit and the materials are specified in the appurtenance designed.
- Changes in material up to one grade different and up to a ten per cent difference in wall thickness as long as the per cent stress at MOP does not increase.

11.3 Pipeline Pre-Operational Requirements

11.3.1 Emergency Management Program Response Plans

Permit holders must prepare and maintain an emergency response program and a response contingency plan as prescribed in the [Emergency Management Regulation](#) (EMR). In addition to the requirements and processes described in the EMR and the Commission's [Emergency Management Manual](#), response plans for pipelines should include incident reporting requirements in accordance with the Spill Reporting Regulation.

Incident Reporting

In addition to the incident reporting guidelines in Section 3.3 of this manual, when filing for a repair or replacement after an incident, a permit holder can do the following:

- Submit an NOI of Repair/Replace Pipeline (in-kind) for repairing and replacing a pipeline with the same material specification.
- Submit a Pipeline Amendment for Repair/Replace pipeline with different material specification (not in-kind).

11.3.2 Asset Integrity Management

Pipeline Integrity Management Programs (IMPs) provide a systematic approach for assuring pipeline integrity throughout the entire pipeline life cycle including planning, design, construction, operation, maintenance and abandonment.

As required under Section 7 of the [Pipeline Regulation](#) (PR), every permit holder planning, designing, constructing, operating, maintaining or abandoning pipeline infrastructure within the province of British Columbia must have fully developed and implemented IMPs. To facilitate compliance assurance, all permit holders must act in accordance with the most current version of CSA Z662 standard.

The Commission's compliance assurance protocol is based on CSA Z662 and the guidelines outlined in Annex N. The Commission's [Compliance Assurance Protocol Integrity Management Programs for Pipeline Systems](#) and the [Oil and Gas Activity Application Manual](#) provides more information on integrity management programs for pipelines.

11.3.3 Notice of Leave to Open

The Notice of Leave to Open affirms the pipeline has been constructed as permitted and to CSA standards, and all technical information contained in the notice is accurate and complete.

The Notice of Leave to Open also notifies the Commission of its intention to operate a pipeline, prior to beginning operations.

The Notice of Leave to Open must be submitted prior to commissioning any pipeline project or segment. To avoid delays at the leave to open stage, As-Built plans are not required until three (3) months after the Leave To Open. All NDI, including tie-in welds, must be completed and the Emergency Response Plan filed prior to submitting the Leave to Open. Results of pressure tests must be submitted with LTO.

The Leave to Open is submitted through [KERMIT](#). The operation of the pipeline may commence as soon as the Leave to Open is submitted in KERMIT.

11.3.4 As-built Submission Requirements for Pipelines

As-built specifications, data and drawings **must** be submitted within three months (3 months) of construction completion.

The As-built submission provides the Commission with information about the technical aspects of the constructed pipeline as is a requirement of the permit.

Submit within the 3 month mark through [KERMIT](#).

Information required in As-built Submissions

All As-built submissions require inclusion of original process and instrumentation diagrams (P&ID), plot plans and flow schematics. P&IDs must be signed and sealed by a Professional Engineer and submitted with the As-built form. "Typical" drawings are not acceptable. As-built submissions should include the following attachments:

- Index (optional).
- Legend (may be included within the P&ID package).
- P&ID (see Appendix E for minimum P&ID expectations):
 - Include schematics of all mid-point risers, with the exact location of the riser listed on the schematic.
 - Include the start and end points of each segment, properly labeled.
 - Must be signed and sealed by a professional engineer licensed or registered under the Engineers and Geoscientists Act.
- Plot plan (optional).
- Flow schematic (optional).
- Tie-in Schematics of emergency shutdown (ESD) valves with set points.
- Tie-in to all pressure control devices must be shown.
- System map showing isolation valve, rectifiers, and CP test site locations.

Submissions are reviewed for completeness and may be declined for the following reasons:

- Incomplete line specification details.
- Missing engineer seal and signature or engineer is not registered within the province of B.C.
- Missing legend indicating the symbols used.
- Missing attachments.
- Incomplete or missing endpoints/ segment splits.
- Incomplete appurtenances or missing information/details on said appurtenances.
- Incomplete or missing location.
- Incomplete or incorrect labels.
- Unclear lines within As-Built or unapparent which lines are the ones to review.
- Clarification required (for example sour pig barrel not showing release going to flare, but appears to go to atmosphere).
- Missing isolation valve, pressure control, or ESD valves from system map.
- Mis-matched as-Built from permitted application, with the exception of those changes indicated as acceptable as part of an As-Built above.

11.4 Pipeline Reporting Requirements

Regulatory Reporting: KERMIT

All reporting functions for pipelines are completed through [KERMIT](#). Access to KERMIT and documentation for using the KERMIT system is found on the Online Services page of the Commission's website.

11.5 Notice of Intent

The Notice of Intent allows for the reporting of operational changes and modifications or repairs to existing pipelines requiring no new acquisition of land, or additional surface tenures, and no modifications to the pipeline permit.

For any Notice of Intent requiring an engineering assessment, engineering assessments must be performed and documented to the standards outlined in CSA Z662. Engineering Assessments are considered engineering documents and, as per Section 20(9) of the [Engineers and Geoscientists Act](#), must be sealed by a professional engineer licensed in the province of British Columbia.

A pipeline Notice of Intent matrix is located in Section 11.5.11 of this manual, and shows all pipeline activities which are submitted through the Notice of Intent process. It also indicates all other required submissions through to completion of the activity.

The Notice of Intent types and requirements are defined below.

11.5.1 NOI: Change CSA Z662 Class Location

Changing the class location is required when a pipeline; originally designed for a specific CSA class location, experiences demographical changes such as dwelling encroachments and/or development that will reclassify the pipeline. For definitions and explanations of class locations refer to CSA Z662 Clause 4.3.2 through 4.3.4.

Attachments to this type of NOI should include a rationale supporting the suitability of the pipe to operate at the proposed class location without modifications, and an Engineering Assessment if required by CSA Z662 clause 10.7.1.

11.5.2 NOI: Decrease Maximum Operating Pressure (upstream)

Decreasing the maximum operating pressure (MOP) will not change the design pressure, but will reduce the maximum operating pressure of the line. It may be used when: a) the current maximum operating pressure can no longer be safely sustained, b) field pressures have changed and the permit holder wants to decrease the maximum operating pressure to match the field pressures, or c) a reduction is necessary to ensure the Emergency Planning Zone remains within a specific distance.

If a permit holder wants to raise the MOP on lines after a decrease, a pipeline permit engineering amendment is required see Section 11.6 of this manual for more information.

Attachments to this NOI type should include documentation of the reasons for maximum operating pressure decrease.

11.5.3 NOI: Decrease Maximum Operating Pressure (downstream)

Decreasing the maximum operating pressure will not change the design pressure but will reduce the maximum operating pressure of the line. It is also used when the pipeline is being taken to pressures that are below the Commission's jurisdictional pressure of 700kPa.

If a permit holder wants to raise the MOP on lines after a decrease, a pipeline permit engineering amendment and a full engineering assessment is required as outlined in Section 11.6 of this manual.

Attachments to this NOI type should include documentation of the reasons for maximum operating pressure decrease.

11.5.4 Repair or Replace pipeline (in-kind)

A repair to, or replacement of, a pipeline (segment) is a procedure which maintains integrity, and does not change design. The material replacing the existing segment may be one grade different and may have up to a ten per cent difference in wall thickness as long as the per cent stress at MOP does not increase.

A repair replace in Kind NOI is required if the pipeline will be physically cut into. Routine maintenance, pig runs or inspection digs which will not result in cut outs do not require a repair or replace in kind NOI. In addition, repair and replacement of pipeline installations (like for like) will not require an NOI. A Notice of Construction Start, Notice of Pressure Test and a Leave to Open are also required if pressure welding and/or pressure testing is conducted.

Attachments to this type of NOI should include the work locations addresses (UTM NAD 83 CSRS), and a description of all work including, descriptions of modifications and/or repairs and replacing material.

Please Note:

NOIs for a repair or replacement pipeline must indicate whether the repair or replacement is due to maintenance or an incident. If it is due to an incident, the DGIR number (Provincial Emergency Program tracking number) given when the incident was reported must be included. If the NOI is for maintenance purposes, the preventative maintenance results indicating the need for repair or replacement must be included. For both incident and maintenance NOIs, a schematic showing where along the segment the work will take place must be included. If this information is missing, the submission will be declined.

11.5.5 Install/replace/remove farm tap

A farm tap is an installation which taps natural gas from a pipeline regulated by the Commission, it does not require any right of way, and uses a single or double regulating unit to reduce pressure below 700 kPa before transmitting natural gas to consumers. Typically a farm tap ties into a single domestic gas line, less than 50 metre in length and less than 35 mm outer diameter. For lines outside these specifications, written permission is required from a pipelines engineer at the Commission to apply as a farm tap.

Farm taps are now considered 'Pipeline Installations in [KERMIT](#). However, unlike other installations they can still be added, deleted or modified via an NOI. The addition, repair, replacement, or removal of a Farm Tap are all downstream Notices of Intent.

Attachments to this type of NOI should include all relevant schematics and a map showing the location of the farm tap.

11.5.6 NOI: Deactivate a Pipeline

The Notice of Intent to deactivate a pipeline may be submitted either in advance of work or immediately following. Section 9 of the [Pipeline Regulation](#) requires that the Commission be notified upon completion of deactivation. Submission of this notice should begin immediately after deactivation, normally within two weeks.

The Notice of Intent for deactivating a pipeline must include documentation providing a detailed scope of work and the following information:

- Reason for pipeline deactivation.
- Method of isolation.
- Pressure left on the pipeline.
- Medium used to fill the pipeline and the effects of the medium on the integrity of the pipeline.
- Method being used for internal and external corrosion monitoring and mitigation.
- Planned length of deactivation.
- Planned maintenance activities on the pipeline during the deactivation time frame.
- Maintenance schedule list, which may be included as part of the scope of work attachment.
- Completed field survey listing the wells and pipelines in the area and which are active, suspended/deactivated and abandoned. This information provides

the Commission with an overview of the field and helps determine the potential future of the pipe.

- Other documentation to clarify the application and then finalize the notice.

11.5.7 NOI: Resuming Production

The NOI for Repairing or Replacing a Pipeline (in-kind) may also be used to submit plans for resuming production in lines that have been suspended for less than 18 months, but have not been formally deactivated, as required by Section 9 of the [Pipeline Regulation](#). To resume production in lines that have been formally deactivated, an NOI to re-activate is required. An engineering assessment is required with a plan to resume production submission.

11.5.8 NOI: Reactivate a Pipeline

To reactivate a project, pipeline or segment(s) from a deactivated state, a permit holder must follow the requirements of the latest edition of CSA Z662 and submit an NOI to reactivate.

If the pipeline will be resuming production, an engineering assessment is required, and a pressure test may be required as part of the assessment. If a pressure test is required, a pressure test plan may be submitted with the NOI to reactivate.

11.5.9 NOI: Abandon a Pipeline

Pipelines may be abandoned in place if they are properly de-activated in accordance with CSA Z662; are cut and capped below grade; and include identification markers. Abandonment applies to abandoned, in the ground pipelines or pipelines being removed.

A Notice of Deactivation must be submitted in KERMIT before submitting an NOI to abandon. The permit holder must also contact the BC Assessment Branch in reference to removal from the tax roll.

For lines being abandoned in the ground, the abandoned line must remain registered with BC One Call and above ground marker posts must be maintained. The company remains liable for the environmental impacts of the pipeline remaining in the ground. An updated drawing must be submitted showing the portions of the pipeline abandoned in place.

For abandoned lines removed in their entirety, the description page must include the removal and the date of the removal. Registration with BC One Call is not required if the line is being removed, but the permit holder is responsible for restoring the land after the removal.

Documentation supporting the rationale for abandoning in place or removing (as required by CSA Z662 clause 10.16.1) may be requested for this application.

When abandoning a line, a permit holder will be required to agree that all installations exclusive to the pipeline segment being abandoned will be removed. As part of data transition, installations which did not have a known segment was assigned to segment 1. If equipment is part of another segment, the permit holder should request that the Commission move the installation(s) to the correct segment prior to abandoning the pipeline. This can be done through a Modify Data NOI.

11.5.10 NOI: Modify Data

Any discrepancies in pipeline specifications or details in KERMIT can be corrected or completed through the Modify Data Notice of Intent.

This does not apply to data changes that affect the permit approval, or any data change that should be addressed with an amendment.

Modify data NOI should be submitted to remove the approved risers and any other pipeline installations from the pipeline segment. Modify data NOI to remove the installations should include a P&ID.

11.5.11 Notice of Intent Matrix

Table 11A below reflects required submissions for Notices of Intent. Unusual circumstances may result in changes to these requirements.

Table 11A Notice of Intent Matrix

	Notice of Intent	Pre-Construction	During Construction		Post Construction
		Notice of Construction Start	Notice of Pressure Test	Leave to Open	As-Built
Decrease MOP (upstream)	Y	N	N	Y	N
Decrease MOP (downstream)	Y	N	N	Y	N
Modify Data	Y	M	M	M	M
Repair/Replace (in-kind)	Y	Y	M	Y	N
Install Farm Tap	Y	Y	Y	Y	Y
Deactivate Pipeline	Y	N	N	N	Y*
Reactivate Pipeline	Y	N	M	Y	Y*
Abandon Pipeline	Y	N	N	N	N
Change Class Location	Y	N	N	N	N

Legend: Y=Required submission Y*=if not previously submitted N=Not required M=May be required if any work was done to allow for task.

11.6 Pipeline Amendments

Pipeline amendments are requests to change the operating parameters of the original permit; therefore, the Commission is required to make a determination on the amendment application. All permit amendments are submitted through the AMS, refer to the [Oil and Gas Activity Application Manual](#).

Changes that require a pipeline amendment are:

- Increase in maximum operating pressure.
- Modify pipeline.
- Repair/ replace (not in-kind).
- Add installations.
- Change of service.
- Pipeline flow reversal.
- Splitting segments.

Changes which would normally be submitted as Notices of Intent, or as Administrative Changes may be included in the scope of the amendment to avoid multiple submissions. However, amendment scope may not be included in Notices of Intent. Administrative changes include amendments to pipeline permits that do not require changes to the pipeline in the field (for example, splitting the segment into two segments when there is no work required just a paper update of the permit).

Amendment Matrix

Table 11B below reflects the normally required post application submissions for pipeline amendments. Unusual circumstances may result in changes to these requirements.

Table 11B Amendment Matrix

	Amendment	Pre-Construction	During Construction				Post Construction
		Notice of Construction Start	Facility Amendment	Facility Notice of Intent	Notice of Pressure Test	Leave to Open	As-Built
Increase MOP	Y	N	N	N	Y	Y	M
Modify Pipeline	Y	Y	N	N	Y	Y	Y
Repair/Replace (not in-kind)	Y	Y	N	N	Y	Y	Y
Change of Service	Y	N	M	M	M	Y	M
Pipeline Flow Reversal	Y	N	N	Y	N	Y	M
Splitting Segments	Y	N	N	N	N	N	Y
Add Installations	Y	Y	N	N	Y	Y	Y

Historical Pipeline Entry

The pipeline historical entry is intended to get missing data into KERMIT, including dates for NCS, NPT, LTO and as built for pipelines approved before January 1st 2007. Specific details for historical pipeline entries can be found in the [Oil and Gas Activity Application Manual](#).