

Notice of Proposed Directive Amendments

Directive PNG034: Saskatchewan Pipelines Code

Background

The Ministry of Energy and Resources (ER) is consulting with the oil and gas industry on an amended version of *Directive PNG034: Saskatchewan Pipelines Code* (the amended Directive). The amended Directive aims to enhance ER's oversight regarding the discontinuation and abandonment of pipelines that are subject to *The Pipelines Act, 1998*.

The Process

ER is launching industry consultations on the amended Directive from November 3-24, 2021. Once this consultation period has concluded, ER will review feedback received in the preparation of a final draft of the amended Directive to be brought forward for approval. The amended Directive is expected to come into effect in the first half of 2022.

Summary of Proposed Changes

The amended Directive features measures to strengthen ER's regulatory compliance program regarding pipeline discontinuation and abandonment activities. At present, industry is only required to submit a report through the Integrated Resource Information System (IRIS) within 90 days of completing pipeline abandonment or discontinuation work. The amended Directive features measures to support ER's risk-based approach to compliance verification, including requirements:

- to apply to ER for prior authorization for the abandonment of a pipeline; and
- to notify ER two business days prior to the commencement of pipeline discontinuation and abandonment work.

"Non-routine" pipeline abandonment applications may include those in sensitive areas such as water crossings and heritage sites, which may be screened by ER for further review and oversight to ensure that high-risk abandonment work is done in accordance with applicable regulatory standards. Most pipeline abandonment applications are expected to be "routine" and may be carried out with minimal ER involvement.

Similarly, prior notification to ER of scheduled pipeline discontinuation or abandonment operations may also result in added regulatory oversight depending on its level of environmental risk to ensure that it is being carried out properly.

Miscellaneous Items of Note

- New pressure-testing criteria, including advanced notification to ER through IRIS and, where necessary to the appropriate ER Field Office two business days prior to a scheduled pressure test;
- A requirement to provide repair reports via IRIS relating to failed pressure tests on pipelines;
- Ability for ER to request any work necessary to ensure pipeline integrity; and
- A requirement to submit within IRIS new or updated licence- or segment-level pipeline data within 90 days of it becoming available.

Review of Amended Directive

ER is seeking written comments on the amended Directive. Key amendments are outlined in a side-by-side, which is attached to this notice as Appendix A. A draft of the amended Directive is also attached as Appendix B. Please direct any comments or questions about the proposed amendments to:

ER.servicedesk@gov.sk.ca

Attn: Chad Lang, Field Services
Energy Regulation Division

The deadline for submitting written comments is November 24, 2021.

APPENDIX A: Key Changes to Directive PNG034: Saskatchewan Pipelines Code

Existing Section/Wording	New Section and Wording	Explanation of Proposed Changes
<p>1.4 Pipeline and Flowline Determination Pipeline, as defined in the PA, (i) means a pipe or system of pipes for the transportation of: (A) liquid hydrocarbons, including crude oil, multiphase fluids containing hydrocarbons, oil and water emulsions, condensate, liquid petroleum products, natural gas liquids and liquefied petroleum gas; (B) gaseous hydrocarbons, including natural gas, manufactured gas and synthetic gas; (C) water, steam or any other substance where the water, steam or other substance is incidental to or used in the production of crude oil or natural gas; or (D) carbon dioxide; and (ii) includes any of the following that are incidental to or used in connection with the pipeline: (A) tanks, tank batteries, pumps, compressors and racks; (B) storage facilities, loading facilities, terminal facilities and other similar facilities.</p>	<p>1.4 Pipeline and Flowline Determination Pipeline, as defined in the PA: (i) means a pipe or system of pipes for the transportation of: (A) liquid hydrocarbons, including crude oil, multiphase fluids containing hydrocarbons, oil and water emulsions, condensate, liquid petroleum products, natural gas liquids and liquefied petroleum gas; (B) gaseous hydrocarbons, including natural gas, manufactured gas and synthetic gas; (C) water, steam or any other substance where the water, steam or other substance is incidental to or used in the production of crude oil or natural gas; or (D) carbon dioxide; and (ii) includes any of the following that are incidental to or used in connection with the pipeline: (A) tanks, tank batteries, pumps, compressors and racks; (B) storage facilities, loading facilities, terminal facilities and other similar facilities.</p> <p>NOTE: The term 'hydrocarbons' referenced above includes hydrocarbon derivatives, including but not limited to ethanol, methanol, etc. As such, a pipe or system of pipe transporting hydrocarbon derivatives are</p>	<p>Addition of notation to the end of this section that "hydrocarbon derivatives" are also to be considered a regulated substance under the amended Directive.</p>

Existing Section/Wording	New Section and Wording	Explanation of Proposed Changes
	also subject to classification as a 'pipeline' or 'flowline' defined in the directives.	
<p>1.5 Other Regulatory Requirements A pipeline licence or any other approval issued by ER is approval for matters that fall within the jurisdiction of the PA. Applicants for a pipeline licence are advised to contact the following agencies or government ministries to determine other regulatory requirements related to the design, construction and operation of a proposed pipeline:</p> <ul style="list-style-type: none"> • all municipalities that the pipeline crosses or is located within; • the Ministry of Environment; • if the pipeline is located within 2.5 kilometres of the boundaries of an urban municipality, the Ministry of Government Relations; • if there are any archeological sites along the pipeline right of way; the Ministry of Parks, Culture and Sport; • if a pipeline is located within 90 metres of the surveyed limit of a provincial highway or within 30 metres of the survey limit of a road other than a provincial highway; • if the pipeline is located within 30 metres of a utility or pipeline, the operator of that utility or pipeline; • if the pipeline is for fresh water transportation, the Saskatchewan Water Security Agency; 	<p>1.5 Other Regulatory Requirements A pipeline licence or any other approval issued by ER is approval for matters that fall within the jurisdiction of the PA. Applicants for a pipeline licence are advised to contact other the following agencies or government ministries to determine if other regulatory requirements related to the design, construction and operation of a proposed pipeline apply:</p> <ul style="list-style-type: none"> • all municipalities that the pipeline crosses or is located within; • the Ministry of Environment; • if the pipeline is located within 2.5 kilometres of the boundaries of an urban municipality, the Ministry of Government Relations; • if there are any archeological sites along the pipeline right of way; the Ministry of Parks, Culture and Sport; • if a pipeline is located within 90 metres of the surveyed limit of a provincial highway or within 30 metres of the survey limit of a road other than a provincial highway; • if the pipeline is located within 30 metres of a utility or pipeline, the operator of that utility or pipeline; • if the pipeline is for fresh water transportation, the Saskatchewan Water Security Agency; 	<p>This section is being simplified by removing the bullet list and specifying more generally that pipeline operators/licensees are solely responsible for understanding and complying with regulatory requirements of other government ministries/agencies, whatever those may be.</p>

Existing Section/Wording	New Section and Wording	Explanation of Proposed Changes
<ul style="list-style-type: none"> if the pipeline crosses crown agricultural land, the Ministry of Agriculture; any other approvals required under Saskatchewan or other applicable laws. 	<ul style="list-style-type: none"> if the pipeline crosses crown agricultural land, the Ministry of Agriculture; any other approvals required under Saskatchewan or other applicable laws. 	
<p>NEW</p> <p>NEW</p> <p>“professional engineer” means a professional engineer whose registration pursuant to <i>The Professional Engineering and Geoscience Professions Act</i> is in good standing.</p> <p>“professional geoscientist” means a professional geoscientist whose registration pursuant to <i>The Professional Engineering and Geoscience Professions Act</i> is in good standing.</p> <p>“temporary pipeline” means a pipeline that is:</p> <ul style="list-style-type: none"> (a) above ground; (b) not located wholly within the boundaries governed by a surface lease or by contiguous surface leases; and (c) will be in use for a period of no more than 180 days. 	<p>1.6 Definitions</p> <p>Bi-directional: means a pipeline system capable of operating and transporting a substance in opposite directions.</p> <p>Business day: means a day other than a Saturday, Sunday, or holiday.</p> <p>Professional engineer: means a professional engineer whose registration pursuant to <i>The Professional Engineering and Geoscience Professions Act</i> is in good standing.</p> <p>Professional geoscientist: means a professional geoscientist whose registration pursuant to <i>The Professional Engineering and Geoscience Professions Act</i> is in good standing.</p> <p>Temporary pipeline: means a pipeline that is:</p> <ul style="list-style-type: none"> (a) above ground; (b) not located wholly within the boundaries governed by a surface lease or by contiguous surface leases; and (b) not located wholly within the boundaries governed by a surface lease of a single well battery as defined in <i>The Oil and Gas Conservation Regulations, 2012</i>. (c) will be in use for a period of no more than 180 days. 	<p>Adding definition to clarify which pipeline systems are to be considered “bi-directional”.</p> <p>The “business day” definition supports notification requirements stated elsewhere in this Directive.</p> <p>Incorrectly referenced Act (deleted the word “professional”)</p> <p>Ibid.</p> <p>Through deleting the existing clause (b), the definition of temporary pipeline will include temporary pipelines entirely within surface lease boundaries. A new clause (b) adds that a temporary pipeline may also be one that extends outside a surface lease for a single well battery.</p>

Existing Section/Wording	New Section and Wording	Explanation of Proposed Changes
<p>2.4 Pipeline Design A professional engineer shall seal the design of a pipeline other than a flowline in accordance with the standards mentioned in section 2.1.</p> <p>A typical design standard sealed by a professional engineer can be used for flowlines.</p>	<p>2.4 Pipeline Design A professional engineer shall sign and seal the design of a pipeline other than a flowline in accordance with the standards mentioned in section 2.1.</p> <p>A typical design standard signed and sealed by a professional engineer can be used for flowlines.</p>	<p>Added wording to reflect requirements of the Association of Professional Engineers and Geoscientists.</p>
<p>2.5.1 Pressure Testing Required No operator shall commence operation of a pipeline until all sections of the pipeline have been pressure tested in accordance with CSA Z662 unless otherwise specified by the CSA Z662.</p> <p>Pressure testing of a pipeline performing reactivation will be at the discretion of the licence holder, based on the best method in accordance with CSA Z662 to ensure the integrity of the pipeline. If a pressure test is not completed for reactivation, the licence holder shall submit an application through IRIS with appropriate justification and documentation to support that the pipeline is fit for service.</p> <p>The operator of a pipeline other than a flowline for which a licence has been issued shall submit to IRIS the results of a pressure test conducted pursuant to this section.</p>	<p>2.5.1 Pressure Testing Required No operator shall commence operation of a pipeline until all sections of the pipeline have been pressure tested in accordance with CSA Z662 unless otherwise specified by the CSA Z662 or ER.</p> <p>Pressure testing of a pipeline performing prior to reactivation will be at the discretion of the licence holder, based on the best method in accordance with CSA Z662 to ensure the integrity of the pipeline. If a pressure test is not completed for reactivation, the licence holder shall submit an application through IRIS with appropriate justification and documentation to support that the pipeline is fit for service.</p> <p>The operator of a pipeline other than a flowline for which a licence has been issued shall submit to IRIS the results of a pressure test conducted pursuant to this section. At any time, ER may require additional</p>	<p>This section features an amendment to allow ER to request additional information from the operator regarding a pressure test, including the procedure undertaken to do the test.</p>

Existing Section/Wording	New Section and Wording	Explanation of Proposed Changes
<p>2.5.2 Notice of Pressure Test A licence holder shall notify ER through IRIS a minimum of 48 hours prior to the scheduled date of any pressure test that:</p> <ul style="list-style-type: none"> • Is conducted for the purpose of obtaining a leave to open; or • Exceeds the maximum operating pressure (MOP). 	<p>2.5.2 Notice of Pressure Test A licence holder shall notify ER through IRIS a minimum of 48 hours two business days prior to the scheduled date of any pressure test that:</p> <ul style="list-style-type: none"> • Is conducted for the purpose of obtaining a leave to open; or • exceeds the maximum operating pressure (MOP). <p>Where required by IRIS, prior notification of at least two business days must be provided to the appropriate ER Field Office before the scheduled date of any pressure test. The following information is required when providing notification to the appropriate ER Field Office:</p> <ul style="list-style-type: none"> • pipeline licence and segment ID; • name and contact information of the responsible field representative; • pressure test procedures; • date and time the pressure test will commence; • legal land description of test location; • intended test pressures; • test medium; and • duration of test. <p>For notifications involving an ER Field Office, any delay to a scheduled pressure test that is greater than one hour must be immediately</p>	<p>Prior notification of two business days added here to allow ER field staff enough time to coordinate inspections. A large number of work items generated for ER field staff are occurring on weekends when resources are not always available.</p> <p>Also, a requirement is being added for prior notification to the appropriate ER Field Office two business days prior to the scheduled date of any pressure test, including a listing of information to provide as part of this notification. If the planned testing work meets certain risk criteria, a licensee will need to contact the nearest ER Field Office to allow ER an opportunity to witness the test.</p> <p>Further, if an ER Field Office is notified and a delay in the testing work greater than one hour is encountered, a licensee must report it to that Field Office so that a communications loop is established.</p>

Existing Section/Wording	New Section and Wording	Explanation of Proposed Changes
	<p>reported to the appropriate ER Field Office via telephone.</p> <p>A pressure test resulting from a failed pressure test must not proceed until approval has been granted by the appropriate ER Field Office.</p> <p>Appendix 5 shows a flow chart of the notification processes described above.</p>	
<p>2.5.3 Minimum Test Pressure Notwithstanding CSA Z662, if a gas pipeline is conveying more than 1 per cent hydrogen sulfide (H₂S), the pipeline must be pressure tested to a minimum of 1.4 times the maximum operating pressure and not greater than the maximum test pressure prescribed in CSA Z662.</p>	<p>2.5.3 Minimum Test Pressure Notwithstanding CSA Z662, if natural gas pipeline is conveying more than 1 per cent hydrogen sulfide (H₂S), the strength test for the pipeline must be conducted to a minimum of 1.4 times the maximum operating pressure and but not greater than the maximum test pressure prescribed in CSA Z662.</p>	<p>Features edits to further define the type of pipeline carrying H₂S and to include a requirement specific to a “strength” test.</p>
<p>NEW</p>	<p>2.5.5 Pressure Test Duration Notwithstanding pressure test durations specified in CSA Z662, a licensee may only conduct a one-hour pressure test for fully exposed piping less than 100 meters in length.</p>	<p>This section has been added to clarify the minimum duration of a pressure test for a 100-meter section of exposed pipe.</p>
<p>NEW</p>	<p>2.5.6 Pressure Test Conditions A pipeline that is to be buried under operation shall be pressure tested under such conditions.</p>	<p>Supports new section 2.5.5. A pipeline that is buried shall be pressure-tested in its buried state.</p>
<p>NEW</p>	<p>2.5.7 Pressure Test Safety Pipeline pressure tests shall be continuously monitored over the duration of the test in a manner that ensures the protection of the public, property, and environment.</p>	<p>This section added to ensure that protection of the public, property and environment is being considered at all states of a pipeline pressure test.</p>

Existing Section/Wording	New Section and Wording	Explanation of Proposed Changes
<p>3.1 Pipeline to be Located</p> <p>An operator shall locate a pipeline within 72 hours, excluding weekends and holidays, when requested to do so by anyone intending to undertake a ground disturbance.</p>	<p>3.1 Pipeline to be Located</p> <p>An operator shall locate a pipeline within 72 hours, excluding weekends and holidays, three business days when requested to do so by anyone intending to undertake a ground disturbance.</p>	<p>The amendment to this section refers to the “business day” terminology for consistency with similar amendments to other sections.</p>
<p>3.3 Construction Notification</p> <p>A licence holder shall notify ER through IRIS, a minimum of 24 hours prior to the scheduled commencement date of pipeline construction including any following activities, whichever occurs first:</p> <ul style="list-style-type: none"> • stripping the right of way; • laying down a pipe; • pipe stringing, bending; or • welding and facility installation <p>Construction activities associated with discontinuation and abandonment of a pipeline are exempt from notification requirements.</p>	<p>3.3 Construction Notification</p> <p>A licence holder shall notify ER through IRIS, a minimum of 24 hours two business days prior to the scheduled commencement date of pipeline construction including any of the following activities, whichever occurs first:</p> <ul style="list-style-type: none"> • new construction, including stripping the right-of-way and laying down a pipe; • laying down a pipe; • pipeline re-route; • pipeline replacement; • pipeline removal; • pipeline reactivation; • liner installation or removal; • pipe stringing and bending; or • welding and facility installation; • pipeline discontinuation; or • pipeline abandonment. <p>Construction activities associated with discontinuation and abandonment of a pipeline are exempt from notification requirements.</p> <p>Where required by IRIS, prior notification of at least two business days must be provided to the appropriate ER Field Office before the</p>	<p>Addition of “business day” terminology promotes consistency with similar amendments to other sections. Also, the bullet list of items has been expanded to reflect the construction activities actually listed in IRIS.</p> <p>The key amendment to this section involves deleting the exemption for the requirement to notify ER of pipeline discontinuation and abandonment work before it starts. A notice of a discontinuation or an abandonment is to be provided via IRIS two business days prior to the start of the scheduled field work. If the planned work meets certain risk criteria, a licensee will need to contact the nearest ER Field Office to allow ER an opportunity to witness the work.</p> <p>Further, if an ER Field Office is notified and a delay in the field work is encountered, a licensee must report it to that Field Office so that a communications loop is established.</p>

Existing Section/Wording	New Section and Wording	Explanation of Proposed Changes
	<p>scheduled date of pipeline construction activities. The following information is required when providing notification to the appropriate ER Field Office:</p> <ul style="list-style-type: none"> • pipeline licence and segment ID; • name and contact information of the responsible field representative; and • start date and expected end date of construction activities. <p>For notifications involving an ER Field Office, any delay to a scheduled construction activity of more than one business day must be reported to the appropriate ER Field Office.</p> <p>Appendix 5 shows a flow chart of the notification processes described above.</p>	
<p>3.5 Pipeline Integrity</p> <p>Operators must actively maintain the integrity of a pipeline in accordance with CSA Z662 and this Directive. If ER has reasonable grounds for concern about the integrity of a pipeline, ER may issue a notice at any time to an operator to carry out:</p> <ul style="list-style-type: none"> • pressure tests on the pipeline or any portion of the pipeline; • special electronic surveys on the pipeline or any portion of the pipelines. <p>The operator shall comply with the request within the period and in the form specified by ER in the notice.</p>	<p>3.5 Pipeline Integrity</p> <p>Operators Licence holders must actively maintain the integrity of a pipeline in accordance with CSA Z662 and this Directive. If ER has reasonable grounds for concern about the integrity of a pipeline, ER may issue a notice at any time to an operator licence holder to carry out any work it deems necessary.</p> <ul style="list-style-type: none"> • pressure tests on the pipeline or any portion of the pipeline; • special electronic surveys on the pipeline or any portion of the pipelines. 	<p>This section features amendments to expand ER's ability to enforce pipeline integrity standards. This will allow for other activities or work that is required or more appropriate to be requested (e.g. engineering assessments, integrity digs, etc.).</p>

Existing Section/Wording	New Section and Wording	Explanation of Proposed Changes
	The operator licence holder shall comply with the request within the period and in the form specified by ER in the notice.	
<p>5.2 Application for Approval Required</p> <p>5.2.1 An application must be submitted through IRIS and application approval must be obtained before performing any of the following activities:</p> <ul style="list-style-type: none"> • constructing a new pipeline; • constructing a new pipeline segment that is to be added to an existing pipeline licence; • free-standing liner installation; • pipeline replacement; • pipeline re-route; • free-standing liner removal; • pipeline removal; • pipeline reactivation; • line split; • flow reversal; • changing the operating parameters of an existing pipeline. <p>5.2.2 A Leave to Open Application must be submitted and approved through IRIS prior to operating a pipeline. This requirement is exempt when operation commences immediately after completing a pipeline repair as defined in this Directive.</p> <p>5.3 Reporting Required</p>	<p>5.2 Application for Approval Required</p> <p>5.2.1 An application must be submitted through IRIS and application approval must be obtained before performing any of the following activities:</p> <ul style="list-style-type: none"> • constructing a new pipeline; • constructing a new pipeline segment that is to be added to an existing pipeline licence; • free-standing liner installation; • pipeline replacement; • pipeline abandonment; • pipeline re-route; • free-standing liner removal; • pipeline removal; • pipeline reactivation; • line split; • flow reversal; • changing the operating parameters of an existing pipeline. <p>5.2.2 A Leave to Open application must be submitted and approved through IRIS prior to operating a pipeline. This requirement is exempt when operation commences immediately after completing a pipeline repair as defined in this Directive.</p> <p>5.3 Reporting Required</p>	<p>For the purposes of simplification, a few subsections have been amalgamated into a single section (5.2) dealing with applications.</p> <p>The key amendment to this section is the addition of “pipeline abandonment” to the bullet list of items for which an application to ER for review and approval is required prior to the start of field work.</p> <p>Deletion of “pipeline abandonment” as shown in the last paragraph of this section supports the amendment to the abovementioned bullet list. The subject matter of section 5.3 has more to do with applications than with reporting so it has been moved into this section.</p>

Existing Section/Wording	New Section and Wording	Explanation of Proposed Changes
Application and approval are not required before pipeline abandonment, pipeline discontinuation and pipeline repair as defined in this Directive.	Application and approval are not required before performing a pipeline abandonment, pipeline discontinuation or a pipeline repair as defined in this Directive.	
<p>5.3 Reporting Required Application and approval are not required before performing pipeline abandonment, pipeline discontinuation and pipeline repair as defined in this Directive.</p> <p>Abandonment and Discontinuation A licence holder shall submit a report using IRIS within 90 days of completion of the work of abandonment or discontinuation of a pipeline.</p> <p>Repair A licence holder shall submit a report to IRIS within 90 days of completion of the work if performing a pipeline repair that meets one or more of the following conditions:</p> <ul style="list-style-type: none"> the repair is the result of an incident reported in accordance with Directive PNG 014; the repair is the result of pipeline exposure due to erosion; the repair is the result of ground movement; the repair is located in a class location greater than 1 as defined in the CSA Z662; 	<p>5.3 Reporting Required Application and approval are not required before performing pipeline abandonment, pipeline discontinuation and pipeline repair as defined in this Directive.</p> <p>Abandonment and Discontinuation A licence holder shall submit a report using IRIS within 90 days of completion of the work of abandonment or discontinuation of a pipeline.</p> <p>Repair A licence holder shall submit a report to IRIS within 90 days of completion of the work if performing a pipeline repair that meets one or more of the following conditions:</p> <ul style="list-style-type: none"> the repair is the result of an incident reported in accordance with Directive PNG014; the repair is the result of pipeline exposure due to erosion; the repair is the result of a failed pressure test; the repair is the result of ground movement; the repair is located in a class location greater than 1 as defined in the CSA Z662; 	<p>This section has been streamlined to deal strictly with reporting requirements under the numerical heading of 5.3.</p> <p>The addition of a requirement to report to ER repair work stemming from failed pressure test will promote awareness of pipeline safety.</p>

Existing Section/Wording	New Section and Wording	Explanation of Proposed Changes
<ul style="list-style-type: none"> the repair is within the setback of permanent watercourse specified in chapter 4; <p>The repair does not use a permanent sleeve and the damaged pipe is not removed.</p>	<ul style="list-style-type: none"> the repair is within the setback of permanent watercourse specified in chapter 4; <p>The repair does not use a permanent sleeve and the damaged pipe is not removed.</p>	
NEW	<p>5.8 Data Amendments Required</p> <p>Licence holders shall maintain accurate and up to date pipeline information in IRIS. Any licence- or segment-level data that becomes available or changes shall be provided in IRIS within 90 days of becoming available.</p>	New section intended to prompt pipeline licence holders to update information in IRIS so that ER continues to receive good quality pipeline-related data.
<p>Appendix 4: Temporary Pipeline</p> <p>Any person who intends to install a temporary pipeline shall obtain approval from the Field Services Branch of the Energy Regulation Division, ER, where the pipeline is located, prior to the installation.</p>	<p>Appendix 4: Temporary Pipeline</p> <p>Any person who intends to install a temporary pipeline shall obtain approval from the Field Services Branch of the Energy Regulation Division, ER appropriate Field Office, where the pipeline is located prior to the installation.</p>	Edits establish that contact with the ER Field Office for the district in which a temporary pipeline is located is required.
NEW	<p>Appendix 5: Field Work Notification Process</p> <pre> graph TD subgraph Pressure_Test_Notification [Pressure Test Notification] P1[Pressure Test Notification] --> P2[Provide test schedule data notification in IRIS] P2 --> P3{Has IRIS data been provided to Field ER Field Office?} P3 -- No --> P4[Proceed with pressure test] P3 -- Yes --> P5[Email appropriate ER Field Office with required information] P5 --> P6{Has scheduled pressure test been delayed by > 1 hour?} P6 -- No --> P4 P6 -- Yes --> P7[Email appropriate ER Field Office with required information] end subgraph Construction_Notification [Construction Notification] C1[Construction Notification] --> C2[Provide test schedule data notification in IRIS] C2 --> C3{Has IRIS data been provided to Field ER Field Office?} C3 -- No --> C4[Proceed with construction] C3 -- Yes --> C5[Email appropriate ER Field Office with required information] C5 --> C6{Has scheduled construction activity been delayed by > 1 business day?} C6 -- No --> C4 C6 -- Yes --> C7[Instruct ER Field Office to delay by required notification] end </pre>	Added to support descriptions of notification requirements in sections 2.5.2 and 3.3. See draft Directive PNG034 v.2.0 in Appendix B for full-size representations of these flow charts.



Saskatchewan Pipelines Code

Directive PNG034

January 2022

Revision 2.0

Governing Legislation:

Act: *The Pipelines Act, 1998*

Regulation: *The Pipelines Administration and Licensing Regulations*

Order: TBA

Record of Change

Revision	Date	Description
0.0		Initial draft
1.0	January 20, 2020	Approved first version
2.0	January 20, 2022	Updated to incorporate requirement to apply for approval for the discontinuation or abandonment of a pipeline and to notify the minister prior to the commencement of pipeline discontinuation or abandonment activity.

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Chapter 1: Introduction

1.1 Purpose

This Directive sets out the Ministry of Energy and Resources (ER)'s technical requirements for the design, construction, operation, modification, discontinuation and abandonment of pipelines.

This Directive also contains application requirements for:

- pipeline applications submitted on or after January 20, 2020;
- registering a legacy licence; and
- retroactive licensing of designated pipelines, including flowlines.

Questions on this Directive can be directed to the ER Service Desk at 1-855-219-9373 or ER.servicedesk@gov.sk.ca.

1.2 Governing Legislation

The requirements outlined in this Directive are based on *The Pipelines Act, 1998* (PA).

This Directive also references the following:

- *The Pipelines Administration and Licensing Regulations* (PALR);
- *American Society of Mechanical Engineers B31.3: Process Piping* (ASME B31.3);
- *The Boiler and Pressure Vessels Act, 1999* (BPVA);
- *The Boiler and Pressure Vessel Regulations, 2017* (BPVR);
- *CSA Group - CSAB51: Boiler, Pressure Vessel, and Pressure Piping Code* (CSA B51);
- *CSA Group - CSAZ662, Oil and Gas Pipeline Systems* (CSA Z662);
- *Directive S-01: Saskatchewan Upstream Petroleum Industry Storage Standards* (Directive S-01);
- *Directive S-20: Saskatchewan Upstream Flaring and Incineration Requirements* (Directive S-20);
- *Directive PNG001: Facility Licence Requirements* (Directive PNG001);
- *Directive PNG017: Measurement Requirements for Oil and Gas Operations* (Directive PNG017); and
- *Directive PNG014: Incident Reporting Requirements* (Directive PNG014).

1.3 Application and Interpretation

This Directive applies to all pipelines that are subject to the jurisdiction of the PA. Appendices 3 and 4 of this Directive provide interpretations of technical requirements for pipelines that are exempt from licensing. Please refer to subsection 3(2) of the PA and Part 4 of the PALR for pipelines that are exempt from licensing.

This Directive sets out standards for the design and construction of pipelines. If a lesser standard was permitted at the time of issuing a legacy licence or at the time of constructing a designated pipeline, that lesser standard is acceptable.

1.4 Pipeline and Flowline Determination

Pipeline, as defined in the PA:

- (i) means a pipe or system of pipes for the transportation of:
 - (A) liquid hydrocarbons, including crude oil, multiphase fluids containing hydrocarbons, oil and water emulsions, condensate, liquid petroleum products, natural gas liquids and liquefied petroleum gas;
 - (B) gaseous hydrocarbons, including natural gas, manufactured gas and synthetic gas;
 - (C) water, steam or any other substance where the water, steam or other substance is incidental to or used in the production of crude oil or natural gas; or
 - (D) carbon dioxide; and
- (ii) includes any of the following that are incidental to or used in connection with the pipeline:
 - (A) tanks, tank batteries, pumps, compressors and racks;
 - (B) storage facilities, loading facilities, terminal facilities and other similar facilities.

Note: The term “hydrocarbons” referenced above includes hydrocarbon derivatives, including but not limited to ethanol, methanol, etc. As such, a pipe or system of pipes transporting hydrocarbon derivatives are subject to classification as a ‘pipeline’ or ‘flowline’.

A flowline, as defined in the PA, means a pipeline connecting a wellhead with an oil battery facility, a fluid injection facility or a gas compression or processing facility, and includes a pipe or system of pipes for the transportation of fluids within any of those facilities.

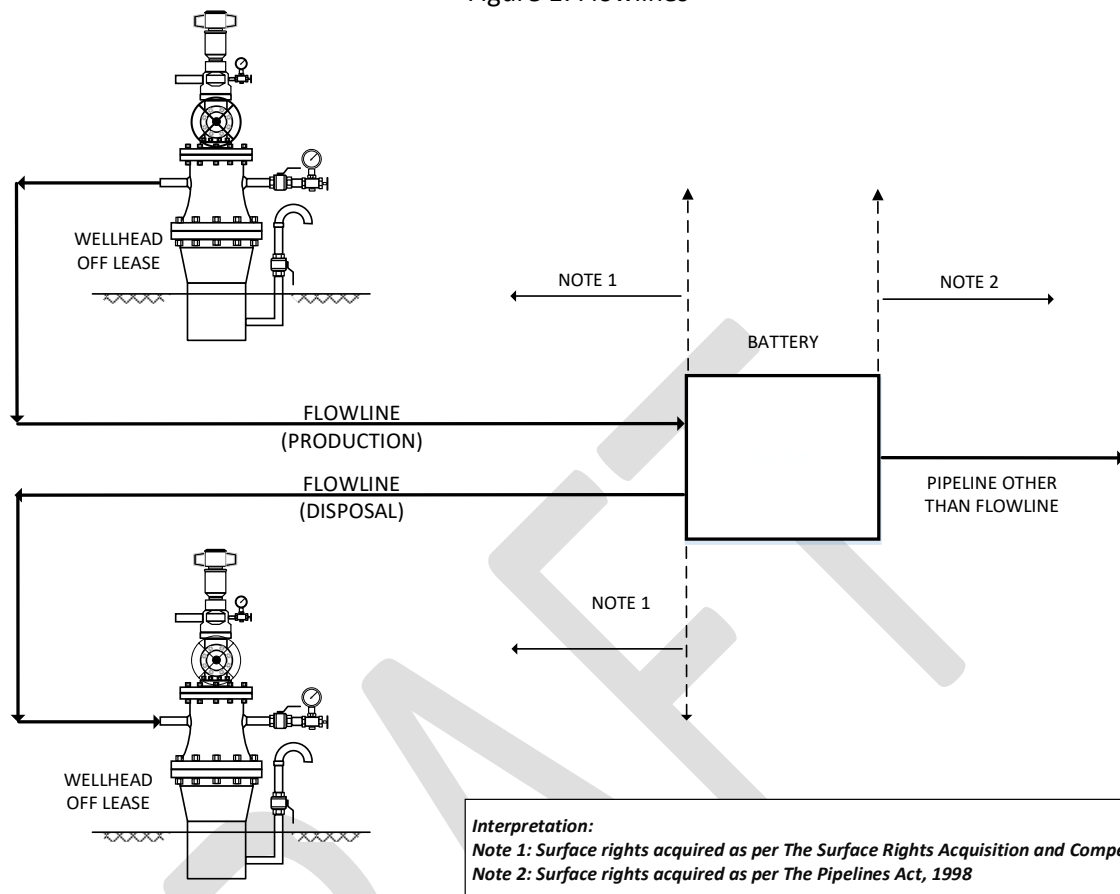
Figure 1 provides an illustration of the application of the flowline definition to pipeline systems.

Note: Group pipelines leaving a satellite and entering a battery facility are considered flowlines. A satellite for the purposes of measuring production is not considered a processing facility.

Flowlines are distinguished from other pipelines based on the application of *The Surface Rights Acquisition and Compensation Act* (SRACA). Surface rights for the purposes of constructing a flowline can be acquired under the SRACA by application to the Surface Rights Board of Arbitration. Rights of entry for all other licensed pipelines may be acquired under the provisions of Part III of the PA.

Unless otherwise specified, a reference to a pipeline in this Directive includes a flowline.

Figure 1: Flowlines



1.5 Other Regulatory Requirements

A pipeline licence or any other approval issued by ER is approval for matters that fall within the jurisdiction of the PA. Applicants for a pipeline licence are advised to contact other agencies and government ministries to determine if other regulatory requirements related to the design, construction and operation of a proposed pipeline apply.

1.6 Definitions

The following definitions apply to the interpretation of other terms that appear in this Directive.

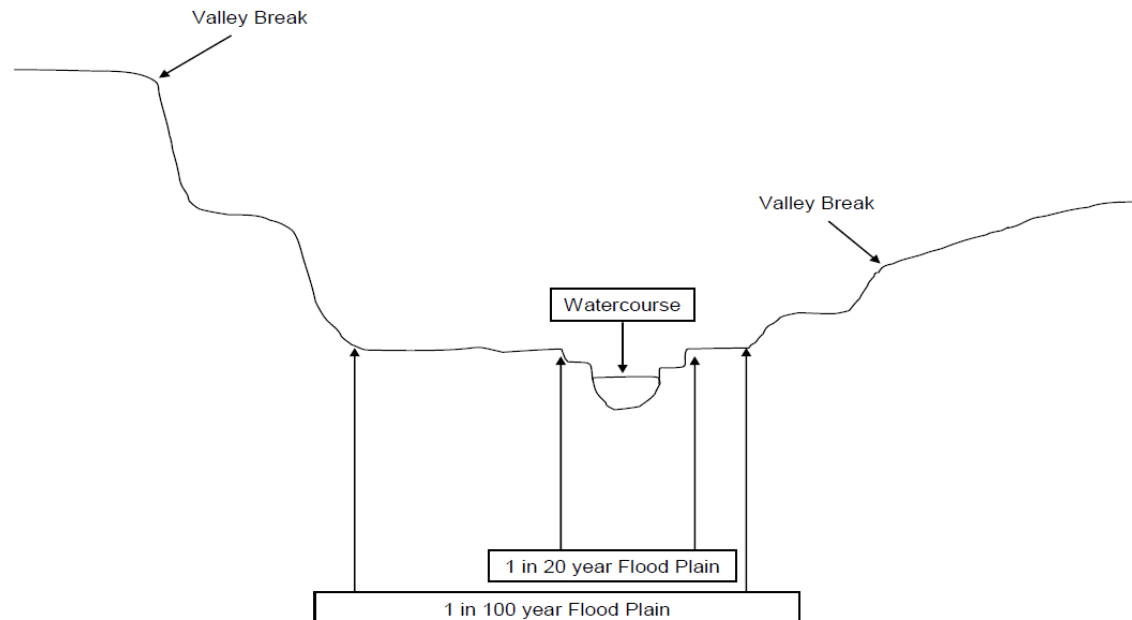
Abandonment: means the permanent deactivation of a pipeline or part of a pipeline, whether or not it is removed.

BA ID: means the business associate identification number assigned to an approved user of IRIS.

Bank: means the rising ground bordering a water body or watercourse that serves to confine the water to the channel or bed.

Bi-directional: means a pipeline system capable of operating and transporting a substance in opposite directions.

Break (valley): means the point where a change in slope of the ground demarks uplands from the fluvial hills dropping into valley bottom, which includes watercourse and coulees.



Business day: means a day other than a Saturday, Sunday or holiday;

Designated pipeline: means any of the following:

- (a) A flowline that
 - (i) was not required to be licensed until of the repeal of section 4 of the PA; and
 - (ii) is in existence before January 20, 2021; or
- (b) A previously exempt pipeline as defined in subsection 5(1) of the PA.

Discontinuation: means the deactivation of a pipeline or part of a pipeline in accordance with CSA Z662, where the licence for that pipeline remains in effect.

Free-standing liner: means a tubular product that is inserted into a buried pipeline to form a separate free-standing pressure-containing pipe.

Infrastructure type: means an entity that represents any type of oil and gas related physical asset, such as a well, battery, facility, terminal, pipeline, etc.

Horizontal directional drilling (HDD): means a trenchless construction method using equipment with a guided drill head to create an underground path for pipe installation by pushing or pulling.

Implementation date: means January 20, 2020.

IRIS: means the Integrated Resource Information System.

No drill zone: means the upper limit of the drill path as determined by a professional engineer. This limit is intended to ensure the drill path is maintained within subsurface soil suitable for directional drilling and to ensure the drill path is below zones where there are slope stability concerns.

Pipeline segment/segments: means a pipeline that is identified using a segment identification under a pipeline licence number.

Professional engineer: means a professional engineer whose registration pursuant to *The Engineering and Geoscience Professions Act* is in good standing.

Professional geoscientist: means a professional geoscientist whose registration pursuant to *The Engineering and Geoscience Professions Act* is in good standing.

Reactivation: means the resumption of a pipeline that has been discontinued or abandoned.

Repair: means a temporary sleeve, permanent sleeve, cut out, or other fix that is a continuous segment less than 100 meters in length within the existing right-of-way.

Replacement: means removing a section pipe greater than 100 meters within the existing right-of-way and laying new pipe in the same location with the same geometry.

Re-route: means routing a new section of pipe around an existing section of pipe (which may or may not remain in the ground) with the re-routed section having different geometry from the old section of pipe.

Shapefile: means an ESRI vector data storage format for storing the location, shape, and attributes of geographic features. It is stored as a set of related files and contains one feature class.

Temporary pipeline: means a pipeline that is:

- (a) above ground; and
- (b) not located wholly within the boundaries governed by a surface lease of a single well battery as defined in *The Oil and Gas Conservation Regulations, 2012*.
- (c) will be in use for a period of no more than 180 days.

Trenchless: means any technique whereby pipe is installed without the excavation of a continuous open ditch (i.e. trench). Plowing is not considered to be a trenchless installation.

Watercourse: means a gully, valley floor, drainage ditch or any other channel, including any artificial channel, in which water flows either permanently or intermittently.

Watercourse intermittent: means small stream channels that small springs are the main source outside periods of spring runoff and heavy rainfall. The channel development of the small stream is distinguishable. The small stream has some bank development and the channel width is less than 1.5 meters.

Chapter 2: Technical Standards and Requirements

2.1 Technical Standards

A reference in this Directive to CSA Z662 means the most recent published version of the standard issued by the CSA Group (CSA).

Unless otherwise approved by the minister, the minimum requirements for the design, construction, operation, modification, discontinuation and abandonment of pipelines must be in accordance with CSA Z662.

Where any conflict arises between this Directive and any requirement in the CSA Z662, the requirement in this Directive prevails unless otherwise approved.

2.2 Exemption from a Standard

If the appropriate CSA standard requires that a pipeline be altered because of a change in the pipeline's surroundings, or due to a revision to the standard, the minister may exempt the pipeline from the required modifications if the operator demonstrates that the pipeline is suitable and safe for continued operation under the original standard.

2.3 Approval of Non-standard Materials or Methods

If an applicant proposes to use pipeline materials, pipeline components, joining methods, construction methods, repair methods or maintenance methods other than those that are included or referenced in CSA Z662, the applicant shall provide sufficient technical information concerning the materials, components or methods to allow the minister to determine whether the materials, components or methods are acceptable for the proposed use. The minister may, if satisfied of their suitability, approve the use of those materials or components.

2.4 Pipeline Design

A professional engineer shall sign and seal the design of a pipeline other than a flowline in accordance with the standards mentioned in section 2.1.

A typical design standard signed and sealed by a professional engineer can be used for flowlines.

2.5 Pressure Testing

2.5.1 Pressure Testing Required

No operator shall commence operation of a pipeline until all sections of the pipeline have been pressure tested in accordance with CSA Z662 unless otherwise specified by CSA Z662 or ER.

Pressure testing of a pipeline prior to reactivation will be at the discretion of the licence holder, based on the best method in accordance with CSA Z662 to ensure the integrity of the pipeline. If a pressure test is not completed for reactivation, the licence holder shall submit an application through IRIS with appropriate justification and documentation to support that the pipeline is fit for service.

The operator of a pipeline other than a flowline for which a licence has been issued shall submit to IRIS the results of a pressure test conducted pursuant to this section. At any time, ER may require additional information regarding the test and the procedure used to conduct the test.

2.5.2 Notice of Pressure Test

A licence holder shall notify ER through IRIS a minimum of two business days prior to the scheduled date of any pressure test that:

- is conducted for the purpose of obtaining a leave to open; or
- exceeds the maximum operating pressure (MOP).

Where required by IRIS, prior notification of at least two business days must be provided to the appropriate ER Field Office before the scheduled date of any pressure test. The following information is required when providing notification to the appropriate ER Field Office:

- pipeline licence and segment ID;
- name and contact information of the responsible field representative;
- pressure test procedures;
- date and time the pressure test will commence;
- legal land description of test location;
- intended test pressures;
- test medium; and
- duration of test.

For notifications involving an ER Field Office, any delay to a scheduled pressure test that is greater than one hour must be immediately reported to the appropriate ER Field Office via telephone.

A pressure test resulting from a failed pressure test must not proceed until approval has been granted by the appropriate ER Field Office.

Appendix 5 shows a flow chart of the notification processes described above.

2.5.3 Minimum Test Pressure

Notwithstanding CSA Z662, if a natural gas pipeline is conveying more than 1 per cent hydrogen sulfide (H₂S), the strength test for the pipeline must be conducted to a minimum of 1.4 times the maximum operating pressure but not greater than the maximum test pressure prescribed in CSA Z662.

2.5.4 Pressure and Temperature Recording Requirements

Pressure and temperature readings must be taken and logged at a minimum interval of 30 minutes with the exception of one-hour pressure tests, where readings must be taken and logged at minimum intervals of 15 minutes.

The instrument used to record the pressure during the pressure test must be selected to enable the pressure reading to occur within 25 per cent and 90 per cent of the full range of the instrument.

2.5.5 Pressure Test Duration

Notwithstanding pressure test durations specified in CSA Z662, a licence holder may only conduct a one-hour pressure test for fully exposed piping less than 100 meters in length.

2.5.6 Pressure Test Conditions

A pipeline that is to be buried under operation shall be pressure tested under such conditions.

2.5.7 Pressure Test Safety

Pipeline pressure tests shall be continuously monitored over the duration of the test in a manner that ensures the protection of the public, property and environment.

2.6 Operating Pressure

2.6.1 Maximum Operating Pressure

No pipeline for which a licence has been issued is to be operated at a pressure exceeding the MOP specified in the approved Leave to Open.

2.6.2 Overpressure Protection

A pressure control system and overpressure protection must be installed at any point in a pipeline where supply from any source makes it possible to increase the pressure in the pipeline above its MOP.

2.6.3 Overpressure Protection for Flowlines Connected to Artificial Lift Systems

Where artificial lift systems make it possible to increase the pressure in the flowline above its MOP, the flowline must have two independently functioning overpressure protection devices installed to protect it from experiencing pressures that exceed the MOP by more than 10 per cent or 35 kPa, whichever is greater. The licence holder must ensure the devices are inspected, tested and meet the requirements of CSA Z662. Alternatively, the operator of the flowline must have:

- a single overpressure protection device installed that will protect the flowline from experiencing pressures that exceed the MOP by more than 10 per cent or 35 kPa, whichever is greater;

- a competent individual inspecting and testing the overpressure protection device on a monthly basis; and
- a competent instrumentation technician conducting annual inspections and tests, with a maximum interval of 18 months between such activities, on the overpressure protection device to ensure that the monthly inspections and tests are conducted correctly and that the device is not defective or malfunctioning. Operators may use an alternative inspection and testing time interval if the suitability of the interval is justified.

If an overpressure protection device is found to be defective or malfunctioning, the flowline must cease operation and the device must be repaired or replaced before resuming operation. Operator must maintain adequate inspection and testing records for the overpressure protection device and must provide records to ER upon request.

Inspection and testing records must document:

- the data and information used in inspecting and testing the device;
- the results of the inspection and tests; and
- the resolution details of a defective or malfunctioning device.

Chapter 3: Ground Disturbance, Incidents and other Requirements

3.1 Pipeline to be Located

An operator shall locate a pipeline within three business days when requested to do so by anyone intending to undertake a ground disturbance.

3.2 Incidents

Pipeline incidents must be managed and reported in accordance with Directive PNG014.

3.3 Construction Notification

A licence holder shall notify ER through IRIS, a minimum of two business days prior to the scheduled commencement date of pipeline construction including any of the following activities, whichever occurs first:

- new construction, including stripping the right-of-way and laying down a pipe;
- pipeline re-route;
- pipeline replacement;
- pipeline removal;
- pipeline reactivation;
- liner installation or removal;
- pipe stringing and bending;
- welding and facility installation;
- pipeline discontinuation; or
- pipeline abandonment.

Where required by IRIS, prior notification of at least two business days must be provided to the appropriate ER Field Office before the scheduled date of pipeline construction activities. The following information is required when providing notification to the appropriate ER Field Office:

- pipeline licence and segment ID;
- name and contact information of the responsible field representative; and
- start date and expected end date of construction activities.

For notifications involving an ER Field Office, any delay to a scheduled construction activity of more than one business day must be reported to the appropriate ER Field Office.

Appendix 5 shows a flow chart of the notification processes described above.

3.4 Local Spill Response Units

Every operator of a licensed pipeline shall be a member in good standing of the spill response cooperative operating in the geographic area in which the pipeline is situated.

3.5 Pipeline Integrity

Licence holders must actively maintain the integrity of a pipeline in accordance with CSA Z662 and this Directive. If ER has reasonable grounds for concern about the integrity of a pipeline or pipelines, ER may issue a notice at any time to a licence holder to carry out any work it deems necessary.

The licence holder shall comply with the request within the period and in the form specified by ER in the notice.

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Chapter 4: Watercourse and Watercourse Crossing

4.1 Large Permanent Watercourses

A large permanent watercourse is a river with permanent water flow with a well-defined flood plain and wide valley bottom with a non-vegetated channel. In southern Saskatchewan, these watercourses include the:

- North and South Saskatchewan Rivers;
- Saskatchewan River;
- Souris River;
- Moose Jaw River;
- Qu-Appelle River;
- Frenchman River; and
- Battle River.

Large permanent watercourses also include any lakes, ponds, marshes or sloughs situated along the course of these rivers.

The standard watercourse crossing design and construction requirement for large permanent watercourses is HDD. Applicants seeking to construct a pipeline across these watercourses shall submit the following documents for approval prior to commencing construction:

- HDD feasibility report;
- A Hydro-fracture analysis;
- HDD Crossing Profile;
- Drilling Execution Plan; and
- Geotechnical report.

The minimum entry and exit set back distances for HDD for a large permanent watercourse are **100 meters**. The minister may alter this requirement if the minister determines that the physical circumstances surrounding a proposed watercourse crossing justify a larger or smaller setback based on technical and engineering analysis.

4.2 Small Permanent Watercourses

A small permanent watercourse is a permanent creek or stream with a well-defined bank and channel. These watercourses may be fish-bearing.

Small permanent watercourses also include any lakes, ponds, marshes or sloughs situated along the course of these watercourses.

The standard watercourse crossing method for small permanent watercourses is HDD. Applicants seeking to construct a pipeline using HDD across a small permanent watercourse shall submit the following documents for approval prior to commencing construction:

- HDD feasibility report;
- Geotechnical report;
- Drilling Execution Plan; and
- HDD Crossing Profile

The minimum entry and exit setback distances for HDD for a small permanent watercourse are **45 meters**. The minister may alter this requirement if the minister determines that the physical circumstances surrounding a proposed watercourse crossing justify a larger or smaller setback based on technical and engineering analysis.

4.3 Additional Information for Permanent Watercourses

Setback distances for permanent watercourses for HDD are to be measured from the top of the:

- valley break; or
- bank, if the valley break is undefined.

The break or bank is determined by the intersection of the slope angle with the upland ground elevation.

Watercourses are highly variable in terms of width, flow rates and geomorphology. Applicants are encouraged to contact the ER Service Desk at an early stage of planning for a determination of watercourse type. ER will provide a site determination for purposes of preparing an application together with the supporting documentation.

4.4 Non-standard Watercourse Crossing Applications

Section 4.1 and 4.2 set out standard installation method requirements for watercourse crossings. The minister may consider other crossing designs or methods of installation that:

- meet the requirements of CSA Z662; or
- provide, in the opinion of the minister, a reasonable level of protection to public safety or the environment.

Applicants seeking a licence for a non-standard watercourse crossing should contact the ER Service Desk before submitting an application to determine documents and technical information that the minister will require in considering the licence application.

4.5 Description of Documents

The following is a description of the technical documents referred to in this chapter and their requirements related to the preparation. All required documents can be combined into a single document for submission.

Drilling Execution Plan

This report must show the drilling execution plan for the HDD.

Geotechnical Report

This report must describe the findings of a geotechnical investigation of the water crossing. The geotechnical investigation is to be conducted for the purpose of HDD design and must include a slope stability assessment.

The geotechnical report must be signed and sealed by a professional geoscientist or professional engineer.

HDD Crossing Profile

An Issued for Construction (IFC) drawing which shows the proposed drill path, the length for all tangent segments, the radius and length of all arc segments, existing ground elevation, the top of bank or top of break, entry and exit angles, "No Drill Zones," the location and stratigraphy of investigative boreholes. The drawing must also be accompanied with construction notes and when applicable, an annular pressure chart.

HDD Feasibility Report

This report must provide an assessment of site conditions and a review of the HDD design and installation, taking into consideration all available geotechnical information. The report must also provide a determination as to whether HDD is feasible and provide any recommendations to mitigate risk.

The HDD feasibility report must be signed and sealed by a professional engineer.

Hydro-fracture Analysis

This analysis must model the expected limiting overburden pressure and expected annular pressures along the drill path, to assess the likelihood of an inadvertent release of drilling fluids. The results of the analysis should also be taken into consideration in the Drilling Execution Plan.

The hydro-fracture analysis must be signed and sealed by a professional engineer.

Chapter 5: Application Requirements

5.1 Licence Expiry

A licence issued for the construction of a pipeline expires two years from the date of issuance if the construction notice has not been received within that period.

5.2 Application for Approval Required

An application must be submitted and approved in IRIS before performing any of the following activities:

- constructing a new pipeline;
- constructing a new pipeline segment that is to be added to an existing pipeline licence;
- free-standing liner installation;
- pipeline replacement;
- pipeline abandonment;
- pipeline re-route;
- free-standing liner removal;
- pipeline removal;
- pipeline reactivation;
- line split;
- flow reversal;
- changing the operating parameters of an existing pipeline.

A Leave to Open application must be submitted and approved through IRIS prior to operating a pipeline. This requirement is exempt when operation commences immediately after completing a pipeline repair as defined in this Directive.

Application and approval are not required before performing a pipeline discontinuation or a pipeline repair as defined in this Directive.

5.3 Reporting Requirements

A licence holder shall submit a report in IRIS within 90 days of completion of the work of abandonment or discontinuation of a pipeline.

A licence holder shall submit a report to IRIS within 90 days of completion of the work if performing a pipeline repair that meets one or more of the following conditions:

- the repair is the result of an incident reported in accordance with Directive PNG014;
- the repair is the result of pipeline exposure due to erosion;
- the repair is the result of a failed pressure test;
- the repair is the result of ground movement;
- the repair is located in a class location greater than 1 as defined in the CSA Z662;
- the repair is within the setback of permanent watercourse specified in chapter 4;
- the repair does not use a permanent sleeve and the damaged pipe is not removed.

5.4 Survey Plan

The applicant must submit a survey plan that meets the requirements of Appendix 2 with the application.

A survey plan is not required with respect to fixing or modifications to a pipeline within the existing right-of-way unless the fixing or modifications require an additional right-of-way.

5.5 Pipeline Spatial Data

The applicant must submit shapefiles containing spatial data on a pipeline that meets the requirements specified in Appendix 1.

A shapefile is not required with respect to fixing or modifying a pipeline within the existing right-of-way unless the fixing or modifying requires additional right-of-way.

5.6 As-Built Survey and Spatial Data

If a proposed pipeline route deviates outside the existing right-of-way during construction procedures, the licence holder shall submit the as-built survey and spatial data of the pipeline through IRIS within 30 days of reporting construction completion.

5.7 Required Data for Licence Application

As part of the application for a licence or adding segments to an existing licence, the applicant must provide licence-level data attributes and segment-level data attributes. Licence-level data cannot be changed when adding segments to an existing licence.

Licence Attributes

The mandatory licence-level data attributes include:

- licence type;
- the substance to be transported by the pipeline
- maximum H₂S concentration; and
- gas-phase indicator determined in accordance with CSA Z662, if the transported substance is liquid.

Segment Attributes

The mandatory segment-level data attributes include:

- length of the segment;
- infrastructure type at the start and end of the segment;
- designated class location in accordance with CSA Z662;
- material used for manufacturing the segment including material type, standard, grade, and category;
- outside diameter;
- wall thickness of the pipe;

- the designed depth that the segment is buried;
- the type of internal and external protective coating to be used on the segment;
- the design pressure;
- the maximum operating pressure that the pipeline is expected to be qualified to by pressure testing;
- effective H₂S partial pressure, if transport liquids without a gas phase;
- indication whether the segment will frequently transport substance in both directions;
- the type of watercourse that the segment crosses; and
- any other information that the minister may require.

5.8 Data Amendments Required

Licensees shall maintain up-to-date pipeline information in IRIS. Any licence- or segment-level data that becomes available shall be provided in IRIS within 90 days of becoming available.

Chapter 6: Legacy Licence

6.1 Legacy Licence

“legacy licence” as defined in Part VI of the PA, means a licence issued:

- (i) before the implementation date; or
- (ii) after the implementation date if an application for the licence was satisfactory to the minister was received by the minister before the implementation date.

A legacy licence will be registered in IRIS by the minister based on the information on file with ER as of the implementation date. Errors and corrections will be made to the registry in accordance with the procedures set out in the PA and PALR.

Licence holders shall prepare shapefiles in accordance with Appendix 1 and submit them into IRIS no later than 24 months following the implementation date. Shapefiles submitted prior to the implementation date that meet ER’s requirements will be recorded in IRIS as of the implementation date.

Chapter 7: Retroactive Licence

7.1 Retroactive Licence Required

Owners of designated pipelines shall apply through IRIS to register a retroactive licence on or after January 20, 2021 and before January 20, 2024 as provided in Part 4, Division 2 of the PALR.

Owners of designated pipelines may apply in IRIS to register a retroactive licence after January 20, 2020 and before January 20, 2021.

7.2 Information Required for a Retroactive Licence

7.2.1 Flowlines

Table 4 sets out the required information that shall be submitted in IRIS in order to obtain a retroactive licence for a flowline.

Table 4: Data Required: Flowlines

Status	Data Element
Operating	<ul style="list-style-type: none"> Owner BA ID Industry Licence Reference Number Segment Count¹ Licence Type Transported Substance Line Number² Segment Status³ From/To Infrastructure Type From/To Latitude (if no shapefile provided) From/To Longitude (if no shapefile provided) MOP
Discontinued or abandoned	<ul style="list-style-type: none"> Owner BA ID Industry Licence Reference Number Segment Count¹ Licence Type Line Number² Segment Status³ From/To Infrastructure Type From/To Latitude (if no shapefile provided) From/To Longitude (if no shapefile provided)

Note:

1. Segment count means an integer field that identifies the number of segments for an individual licence in the Retroactive Licensing Template.
2. Line number means a unique operator generated integer field that is assigned to a segment within the shapefile and in the Segment Tab of the Retroactive Licensing Template in order to associate the segments in the Retroactive Licensing Template to their geometries in the shapefile.
3. Segment status means a status assigned to a segment as determined by a submission into IRIS.

7.2.2 Pipelines other than Flowlines

Table 5 sets out the required information that shall be submitted in IRIS in order to register a retroactive licence for a pipeline other than a flowline.

Table 5: Data Required: Pipelines other than Flowlines

Status	Data Elements
Operating	<ul style="list-style-type: none"> • Owner BA ID • Industry Licence Reference Number • Segment Count¹ • Licence Type • Transported Substance • Gas-Phase indicator determined in accordance with CSA Z662, if the transported substance is liquid. • Maximum H₂S Concentration • Line Number² • Segment Status³ • Designed for Sour Service Indicator • From/To Infrastructure Type • Class Location designated in accordance with CSA Z662 • H₂S partial pressure, if transport liquids without a gas phase • MOP • Bidirectional Flow Indicator • Watercourse Type • Material Type • Material Standard • Material Grade • Material Category (if Material Type = Steel/Stainless Steel) • Yield Strength • Outside Diameter • Wall Thickness • Internal Protection • External Protection • Minimum Cover Depth
Discontinued or Abandoned	<ul style="list-style-type: none"> • Owner BA ID • Industry Licence Reference Number • Segment Count¹ • Licence Type • Line Number² • Segment Status³ • From/To Infrastructure Type • Class Location • Material Type

Note:

1.2. 3. See note for table 4 for explanation.

7.3 Spatial Data for a Designated Pipeline

An application for retroactive licensing of a designated pipeline other than a flowline must contain a shapefile that meets the requirements specified in Appendix 1.

If the segment data of a flowline is in the possession of the applicant, an application for retroactively licensing of a flowline must contain a shapefile meets the requirements specified in Appendix 1.

If a shapefile cannot be rendered for a flowline during the retroactive licensing process, the start and end location coordinates from the various infrastructure types as decimal degrees must be submitted. ER will derive a geospatial shapefile for the licence based on the information submitted.

7.4 Survey Plan for a Designated Pipeline

Once a designated pipeline other than flowline is retroactively licensed, the licence holder must submit a survey plan that meets the requirements specified in Appendix 2. The survey plan must be submitted through IRIS within 30 days of licence issuing.

Once a designated flowline is retroactively licensed, if the survey plan for the flowline is in the possession of the licence holder, the licence holder must submit a survey plan that meets the requirements specified in Appendix 2. The survey plan must be submitted through IRIS within 30 days of licence issuing.

Appendix 1: Spatial Data (Shapefiles) Submission Requirements

This appendix sets out the standards for the preparation and submission of spatial data used for purposes of mapping the location of pipelines including flowlines.

Shapefile must be submitted for:

- any new pipeline (including flowline) applications submitted on and after the implementation date;
- any pipelines that were licensed prior to the implementation date.
- any retroactive licence applications for designated pipelines other than flowlines; and
- any retroactive licence applications for unlicensed flowline, if the segment data is readily accessible.

If a shapefile cannot be rendered for an unlicensed flowline, the start and end location coordinates from the various infrastructure types as decimal degrees must be submitted. ER will derive a geospatial shapefile for the licence based on the information submitted.

1. Spatial Data Submission

Spatial data must be provided in a shapefile format.

Shapefiles are to be submitted through IRIS as a Zip archive file. The archive file must include the following file types: .SHP, .SHX, .DBF, .PRJ. Other file types generated by the mapping application may be included in the file.

Note: It is recommended that data file names include the name of the pipeline owner or its BA ID to provide for easy identification of electronic submissions.

2. Spatial Data Standards

2.1 Referencing Segment Start and End Points

Pipeline segment spatial data must be in the form of a polyline that represents the location of the pipeline within the right-of-way derived from a survey plan.

The start point and end point of each pipeline segment must be the actual physical start point and end point of that pipeline segment.

Note: Well or facility site lease boundaries or break points for changes in design code or code of construction are not to be considered when referencing a pipeline segment. The polyline must show the physical extent of the pipeline segment from its start point to the end point of the right-of-way.

If the right-of-way of a pipeline does not extend beyond the edge of lease boundary, then the start and end points of the pipeline must be the start and end points of the edge of the lease boundary.

2.2 Spatial Datum

Table 1 sets out the spatial datum standards for all shapefiles submitted to IRIS in accordance with this Directive.

Table: 1: Spatial Datum Standards

Item	Standard
Datum	NAD83(CSRS) UTM Extended Zone 13N
WKID	2957
Authority	EPSG
Projection	Transverse Mercator
False Easting	500000.0
False Northing	0.0
Central Meridian	-105.0
Scale Factor	0.9996
Latitude of Origin	0.0
Linear Unit	Meter (1.0)
Geographic Coordinate System	NAD83_Canadian_Spatial_Reference_System
Angular Unit	Degree (0.017453292519943295)
Prime Meridian	Greenwich (0.0)
Datum	D_North_American_1983_CSRS
Spheroid	GRS_1980
Semi-major Axis	6378137.0
Semi-minor Axis	6356752.314140356
Inverse Flattening	298.257222101

3. Pipeline Segment Data

All shapefiles must include the following data:

Feature Name: Pipeline Segment

Description: Information describing the pipeline segment (polyline geometry represents the location of the segment within the surveyed right-of-way as derived from a survey plan)

Geometry: polyline

Pipeline Segment Attributes:

FID	Object ID	Mandatory	System Defined Unique identifier
GEOM	Geometry	Mandatory	The spatial geometry data
LineNo	Long Integer	Mandatory	A unique number to represent the line in the provided shapefile.
PrevSegNo	Text (50)	Mandatory for segment amendment	Previous Segment Number; this attribute is used for pipeline amendment applications. When used, it must match the Pipeline Segment Number (Segment Alias) on an existing pipeline segment within IRIS. This attribute must be blank for a New Pipeline Licence application.

4. Pipeline Segment Business Rules

- Pipeline segments must not self-intersect or self-overlap.
- Pipeline segments must not extend beyond the boundary of Saskatchewan.
- All pipeline segments except bi-direction flow segments must be digitized in the direction of the substance flowing through the pipeline.

DRAFT

Appendix 2: Pipeline Survey Requirements

1. New Survey Plan Required Components

For a pipeline constructed on or after the implementation date, a new survey plan must:

- Be in a scale acceptable to the minister;
- Be prepared from a survey made by a Saskatchewan land surveyor, within the meaning of *The Land Surveyors and Professional Surveyors Act*; and
- Be dated, certified and signed by the surveyor, with the signature duly witnessed
- Show the location of the proposed pipeline in relation to the:
 - right-of-way of the proposed pipeline; and
 - boundaries of the section;
- Show the location of the following features within a 200m buffer of the proposed
 - pipeline right-of-way;
 - water bodies;
 - mines, whether worked or abandoned;
 - existing wells, lease boundaries and access roads;
 - existing batteries and facilities;
 - roadways, road allowances;
 - railways, pipelines, power lines and any other rights-of-way;
 - aircraft runways or taxiways; and
 - permanent structures of every kind;
- Have all measurements and distances tied to a:
 - survey monument or evidence of a survey monument in a surveyed area; or
 - surveyed baseline; or
 - prominent topographical feature acceptable to the minister in an unsurveyed area.
- Show area of proposed right-of-way in each parcel
- Utilize the following Datum:
 - North American Datum 1983 (CSRS) (Epoch 1997) UTM Extended Zone 13N

2. Historical Survey

For a pipeline constructed before the implementation date, a survey plan must show the location of the proposed pipeline in relation to the right-of-way of the proposed pipeline.

Appendix 3: Applicable Legislation and Design Requirements for Pipeline and Pressure Equipment

1. Background

Appendix 3 is intended to provide an interpretation of interrelationships of applicable governing legislation and design requirements for a pipeline and pressure equipment.

This appendix is for interpretation purposes only and does not replace the requirements set forth in applicable acts, regulations, directives and standards.

Although every effort has been made to ensure that the information provided is accurate, users are still responsible for ensuring that the facility or pipeline complies with all requirements, irrespective of the information provided herein.

2. Governing legislation overview

Pursuant to section 4-2 of the PALR, the following pipelines are exempt from licensing:

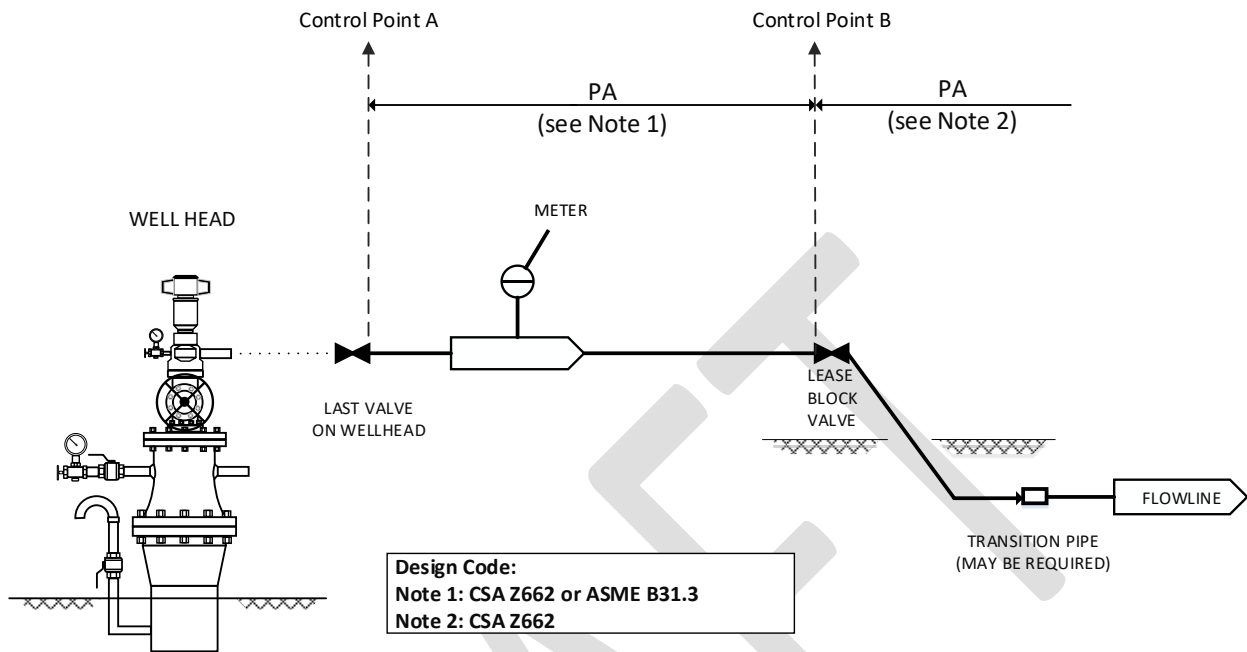
- (a) pipelines that are located wholly within the boundaries governed by a surface lease;
- (b) pipelines that are located wholly within contiguous surface leases;
- (c) any piping situated between designated control point A and designated control point B as set out in this Appendix; and
- (d) temporary pipelines.

3. Detailed interpretation of requirements for pipelines situated between designated control point A and designated control point B and pressure equipment

In general, the following should be considered as a basis for interpretation:

- Piping situated between designated control point A and B in figures 3.1-3.9 does not require a pipeline licence.
- Piping situated between designated control point A and B in figures 3.1-3.9 must be designed and constructed in accordance with CSA Z662 or ASME B31.3 standards.
- With the exception of a single valve on the wellhead outlet and piping, the last valve before a pipeline leaves the lease is considered to be a part of the licence.
- For pipelines entering into a header manifold, the jurisdictional break may reside on the individual inlet pipelines or on the header piping inlet to the facility, depending on the location of the block valve(s).
- Design and licence requirements for wellheads are not covered in this interpretation.

3.1 Well site with no dehydrator or separator, with or without a lease block valve, including a pipeline leaving the well site



Licensing Requirements:

Pipeline leaving designated control point B at the last lease block valve requires a flowline licence. If designated control point B is located at the wellhead, the licence applies from that point.

Design Jurisdiction (Design Review and Acceptance):

ER: Pipeline leaving designated control point B at the last lease block valve. If designated control point B is located at the wellhead, from that point.

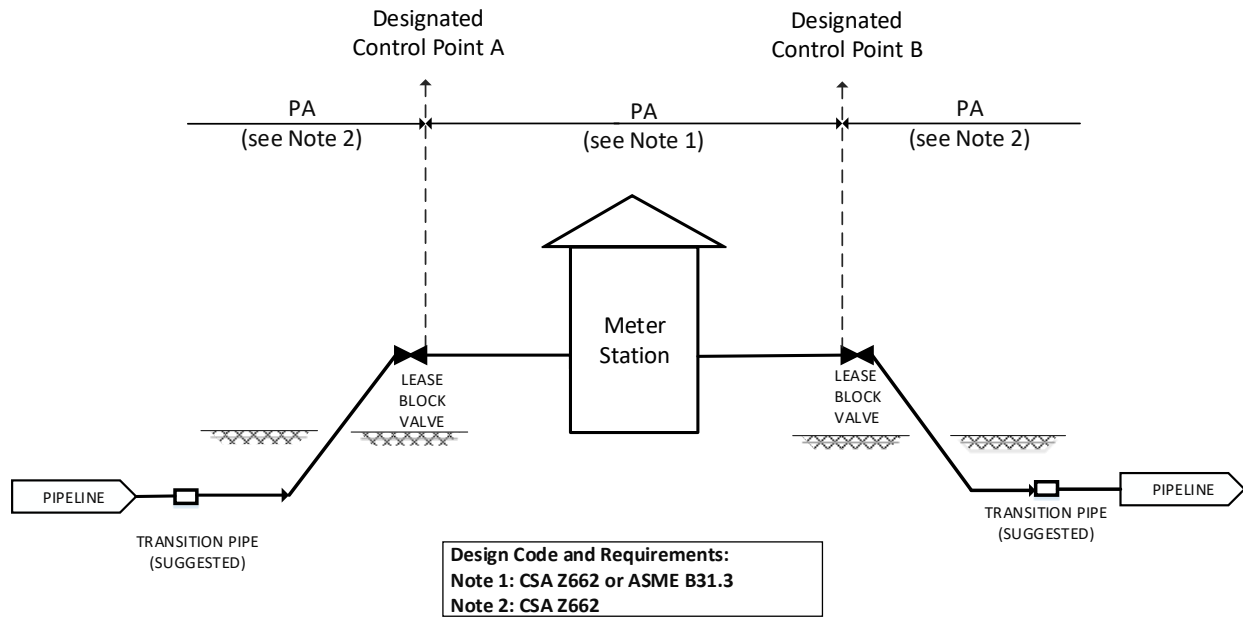
Design Code and Requirements:

CSA Z662 or ASME B31.3: Piping from designated control point A (last valve on wellhead) to designated control point B (last lease block valve).
CSA Z662: Pipeline leaving designated control point B (last lease block valve).

Comments:

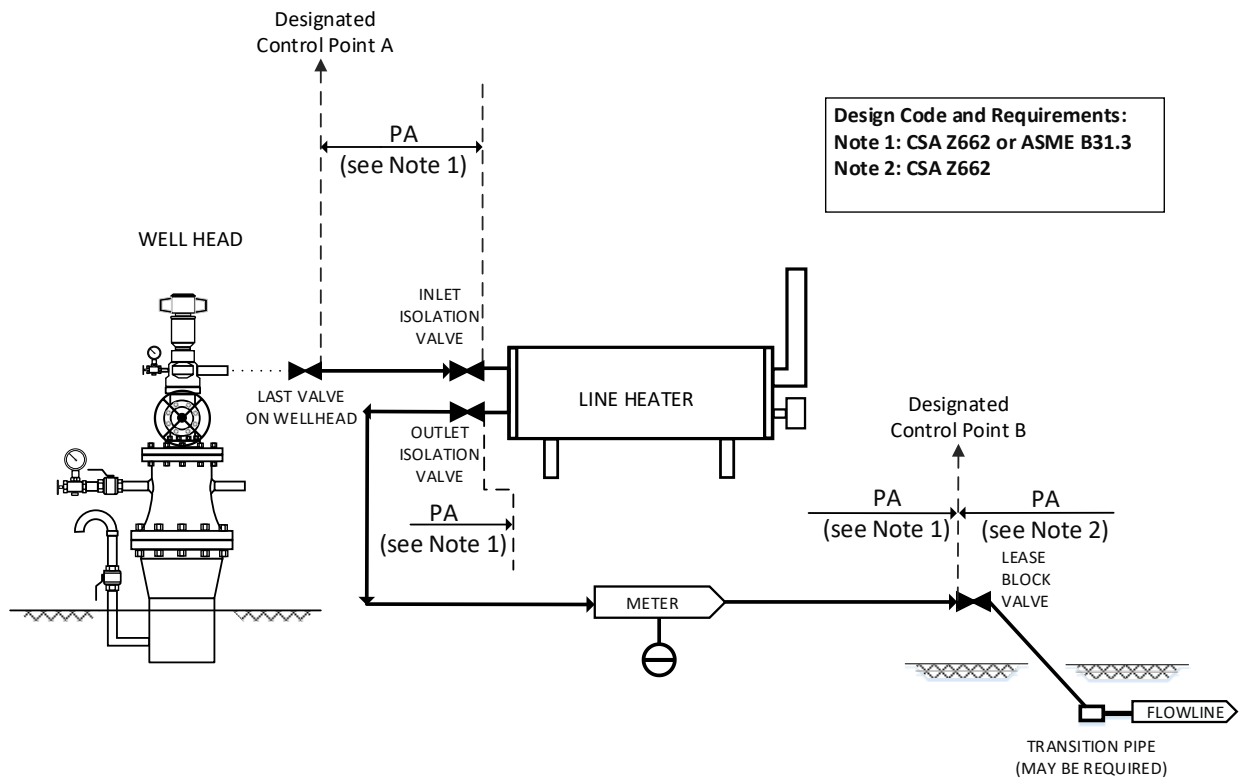
Metering requirements are set forth in Directive PNG017.

3.2 Metering station on wholly-owned lease



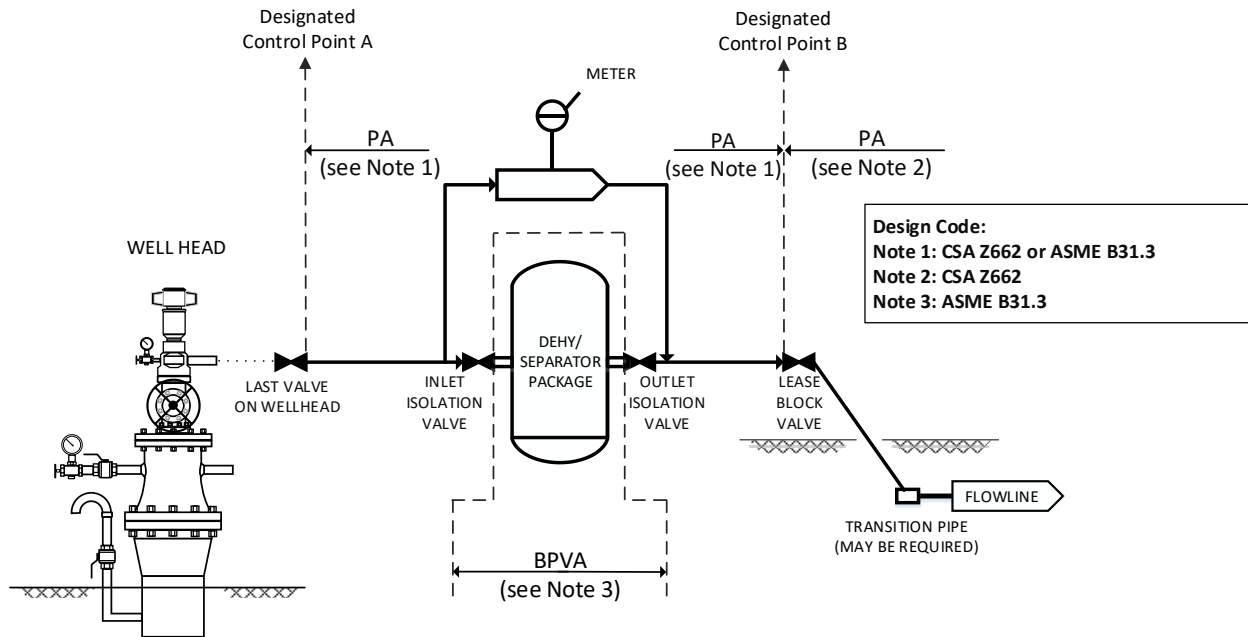
Licensing Requirements:	<p>Pipeline up to designated control point A at the first lease block valve requires a pipeline licence.</p> <p>Pipeline leaving designated control point B at the last lease block valve requires a pipeline licence.</p>
Design Jurisdiction (Design Review and Acceptance):	<p>ER: Pipeline up to designated control point A at the first lease block valve.</p> <p>ER: Pipeline from designated control point B at the last lease block valve.</p>
Design Code and Requirements:	<p>CSA Z662 or ASME B31.3: Piping between designated control point A and B from the first lease block valve to the last lease block valve.</p> <p>CSA Z662: Pipeline up to designated control point A at the first lease block valve</p> <p>CSA Z662: Pipeline leaving designated control point B at the last lease block valve.</p>

3.3 Well site with well site heater, with or without a lease block valve, including a pipeline leaving the well site



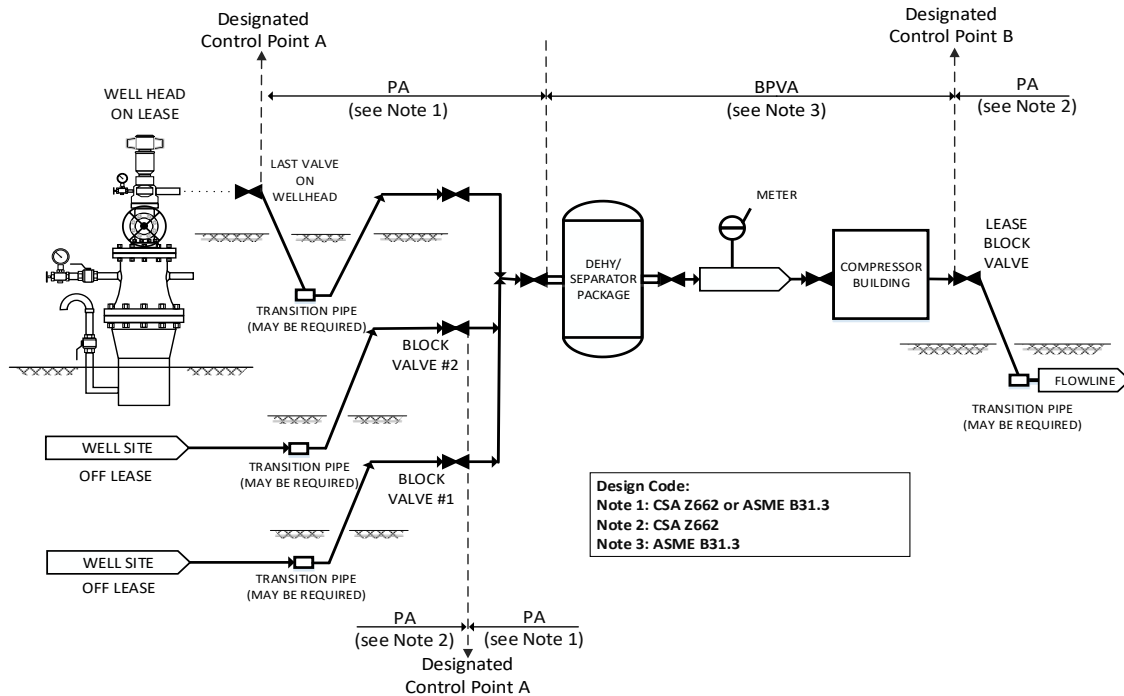
Licensing Requirements:	Pipeline leaving designated control point B at the last lease block valve is covered under a flowline licence. If the lease block valve is located at the line heater outlet, the licence applies from that point.
Design Jurisdiction (Design Review and Acceptance):	ER: Pipeline leaving designated control point B at the last lease block valve. ER: If lease block valve is located at the outlet flange of line heater, the piping from the outlet valve on the line heater to the lease block valve.
Design Code and Requirements:	CSA Z662 or ASME B31.3: Piping from the wellhead to the inlet valve on the line heater and from the outlet valve on the line heater to the lease block valve. CSA Z662: Pipeline from the lease block valve.
Comments:	ER recommends following CSA B51 standards for the wellsite heater coil from the inlet flange to the outlet flange. For inspection of installed line heaters, it is recommended to follow the latest edition of API RP 573.

3.4 Well site with a dehydrator and/or separator, with or without a lease block valve, including a pipeline leaving the well site



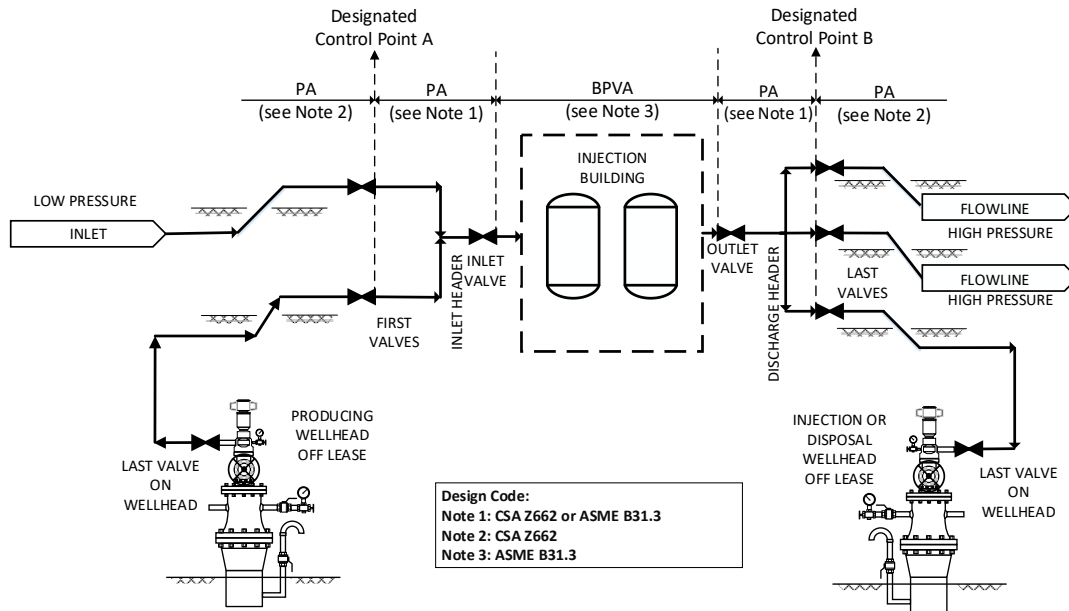
Licence Requirements:	Pipeline leaving designated control point B at the lease block valve requires a flowline licence.
Design Jurisdiction (Design Review and Acceptance):	TSASK: Piping and vessels between the inlet and outlet valves on the dehydrator and/or separator. ER: Pipeline from the lease block valve leaving the lease boundary.
Design Code or Requirements:	CSA Z662 or ASME B31.3: Piping after the last valve on the wellhead to the inlet valve on the dehydrator and/or separator and from the outlet valve leaving the dehydrator and/or separator up to the lease block valve. CSA B51: Dehydrators, separators, and all associated pressure piping must meet the requirements of CSA B51. CSA B51 refers to ASME B31.3 for piping design. CSA Z662: Pipeline leaving designated control point B at the lease block valve.
Comments:	The pressure piping system associated with the dehydrator and/or separator must be registered with TSASK when the aggregate internal capacity is greater than 0.5 cubic meters.

3.5 Gas satellite or group gas gathering facility



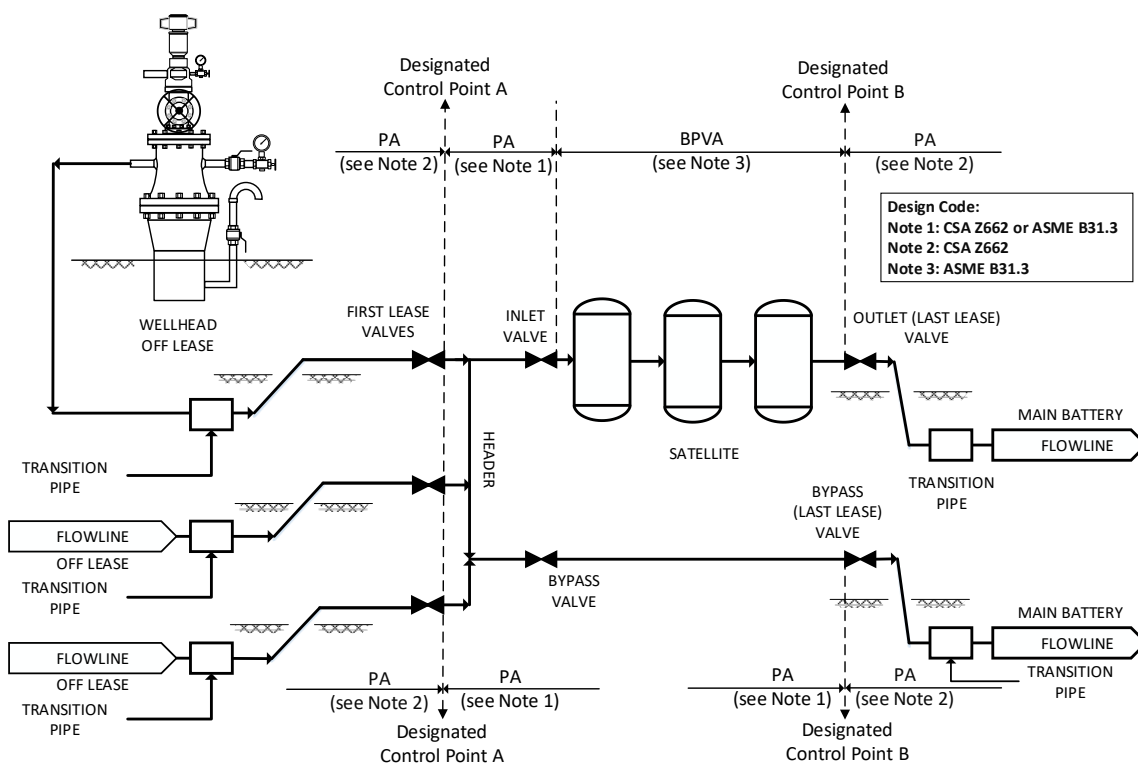
Licensing Requirements:	<p>Pipeline from off lease wells to designated control point A (block valves #1 and #2) on the header manifold upstream of the dehy/separator package is covered under a flowline licence.</p> <p>Pipeline leaving designated control point B (last lease block valve) is covered under a flowline licence.</p>
Design Jurisdiction (Design Review and Acceptance):	<p>ER: Piping from the off-lease well(s) to designated control point A (block valve on the header manifold upstream of the dehy/separator package).</p> <p>TSASK: Dehydrators, separators, meter runs, compressors through to the last lease block valve.</p> <p>ER: Pipeline leaving the lease boundary.</p>
Design Code or Requirements:	<p>CSA Z662: Piping from an off lease wellhead to designated control point A (block valve on the manifold upstream of the dehydrator/separator package).</p> <p>CSA Z662 or ASME B31.3: Piping from an on lease wellhead to designated control point A (block valve on the manifold upstream of the dehydrator/separator package).</p> <p>CSA B51: Dehydrators, separators, and all associated pressure piping must meet the requirements of CSA B51. CSA B51 refers to ASME B31.3 for piping design.</p> <p>CSA Z662: Pipeline leaving designated control point B at last lease block valve.</p>
Comments:	<p>Gas compressor facilities that are part of production operations of gas wells or groups of gas wells that do not have a combined power rating equal or greater than 186.5 kW (250 hp) do not require a facility license in accordance with Directive PNG001.</p>

3.6 Source water collection, injection, and disposal – wells are off lease



Licensing Requirements:	<p>Pipeline from off lease well to designated control point A (first lease valves) at the inlet header upstream of injection facility requires a flowline licence.</p> <p>The produced water pipeline entering the injection facility up to designated control point A at the lease valve on the inlet header upstream of injection facility requires a pipeline licence.</p> <p>For a disposal pipeline (flowline), the pipeline from control point B (the last lease valve) downstream of the injection facility to the lease block valve on the disposal well lease (or wellhead) is covered under a flowline licence.</p>
Design Jurisdiction (Design Review and Acceptance):	<p>ER: Pipeline entering the injection facility up to designated control point A at the lease valve on the inlet header upstream of the injection facility.</p> <p>TSASK: Pressure vessels and all associated pressure piping.</p> <p>ER: Pipeline(s) leaving from designated control point B at the last lease valve on the discharge header.</p>
Design Code or Requirements:	<p>CSA Z662: Pipeline entering the injection facility up to designated control point A at the first lease valve on the inlet header upstream of the injection facility.</p> <p>CSA Z662 or ASME B31.3: Inlet header piping from designated control point A (first lease valves) to the inlet valve upstream of injection facility.</p> <p>CSA B51: Pressure vessels and all associated pressure piping must meet the requirements of CSA B51. CSA B51 refers to ASME B31.3 for piping design.</p> <p>CSA Z662 or ASME B31.3: Discharge header piping from the outlet valve downstream of injection facility to last lease valve(s).</p> <p>CSA Z662: Pipeline(s) leaving from designated control point B at the last lease valve on the discharge header.</p>
Comments:	<p>If any vessels or piping is associated with expansible fluids, these facilities must be designed to CSA B51 and ASME B31.3.</p>

3.7 Oil/gas satellite with field header to group pipelines


Licensing Requirements:

Pipeline entering the satellite up to designated control point A at the first lease valve(s) on the header upstream of the satellite requires a flowline licence. Scenarios, where there is only a piping junction and no vessels, are covered under a flowline licence.

Pipeline(s) leaving designated control point B at the last lease valve require a flowline licence.

Design Jurisdiction (Design Review and Acceptance):

ER: Pipeline(s) entering the satellite up to designated control point A at the first lease valve(s) on the header upstream of the satellite.

TSASK: Pressure vessels and all associated pressure piping.

ER: Pipeline(s) leaving designated control point B at the last lease valve.

ER: If no equipment applicable to *The Boiler and Pressure Vessel Act* is present, all piping will be designed and constructed to CSA Z662 standards.

Design Code or Requirements:

CSA Z662: Pipeline(s) entering the satellite up to control point A at the first lease valve(s) on the header upstream of the satellite.

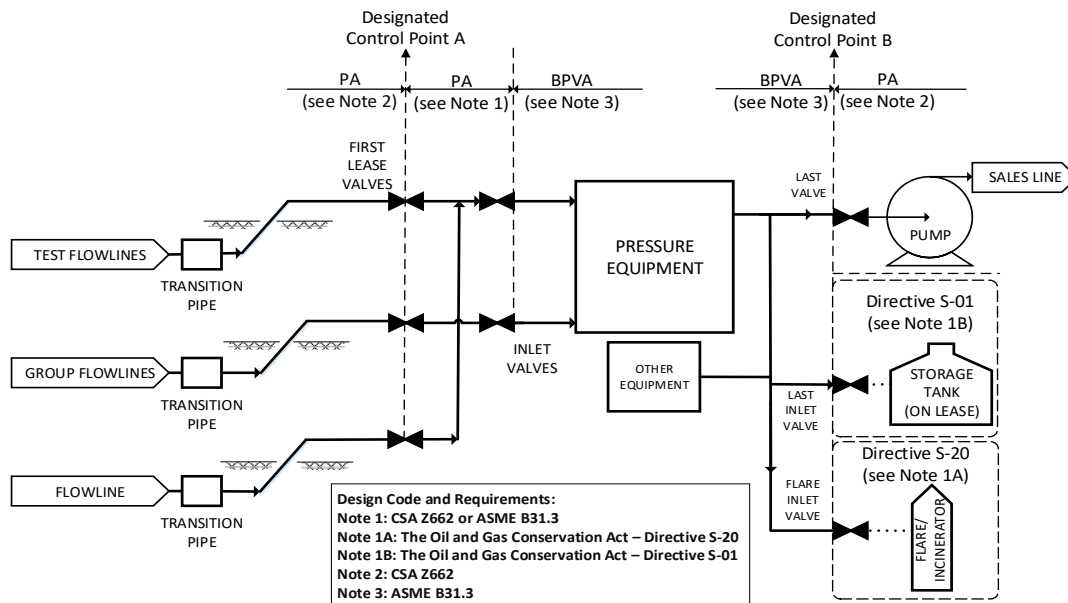
CSA Z662 or ASME B31.3: Inlet header piping from control point A (first lease valves) to the inlet valve upstream of satellite facility.

CSA B51: Pressure vessels and all associated pressure piping must meet the requirements of CSA B51. CSA B51 refers to ASME B31.3 for piping design.

CSA Z662 or ASME B31.3: Any bypass piping from the first lease valve through to the last lease valve.

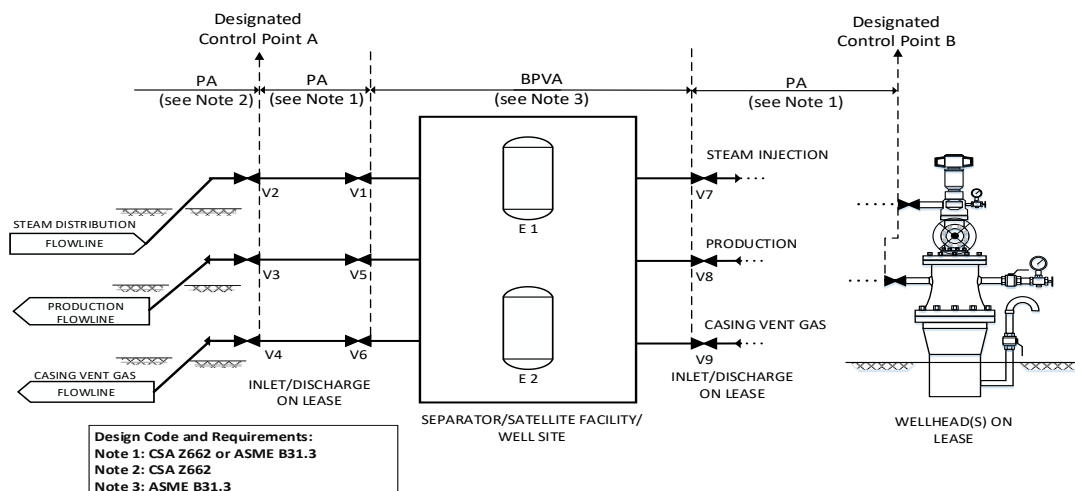
CSA Z662: Pipeline(s) leaving designated control point B at the last lease valve.

3.8 Oil battery facility



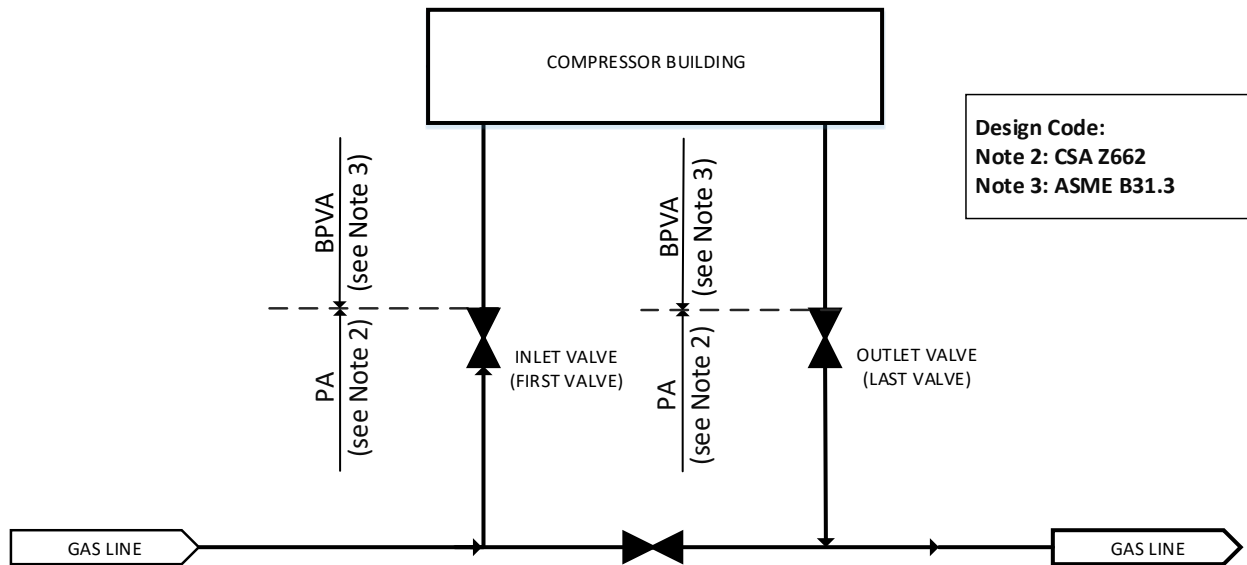
Licensing Requirements:	<p>Pipeline entering the battery up to designated control point A at the inlet valve on the header upstream of the battery requires a flowline licence.</p> <p>Scenarios, where there is only a piping junction and no vessels, are covered under a flowline licence.</p> <p>Pipeline leaving designated control point B requires a pipeline licence.</p>
Design Jurisdiction (Design Review and Acceptance):	<p>ER: Pipeline entering the battery up to designated control point A at the inlet valve on the header upstream of the battery.</p> <p>TSASK: Pressure vessels and all associated piping through to the last inlet valve or last valve on lease.</p> <p>ER: Pipeline leaving designated control point B at the last lease valve.</p>
Design Code or Requirements:	<p>CSA Z662: Pipeline entering the battery up to designated control point A at the inlet valve on the header upstream of the battery.</p> <p>CSA Z662 or ASME B31.3: Inlet header piping from designated control point A at the first lease valves to the inlet valve(s) upstream of battery.</p> <p>CSA B51: Pressure vessels and all associated pressure piping must meet the requirements of CSA B51 through to the last valve on lease or inlet valve on a storage tank or flare/incinerator. CSA B51 refers to ASME B31.3 for piping design.</p> <p>CSA Z662: Pipeline leaving designated control point B at the last lease valve.</p>
Comments:	<p>It is also possible for the sales pump to be a part of the battery design, in which case the pump could be designed using ASME B31.3.</p> <p>Storage tank and flare/incinerator design requirements must be in accordance with Directive S-01 and Directive S-20, respectively.</p> <p>“Other Equipment” may include equipment such as pumps, compressors, vapour recovery units, etc.</p>

3.9 Heavy oil/in situ steam flood facility



Licensing Requirements:	<p>The steam distribution pipeline leaving an off lease steam generation facility up to designated control point A at the first lease valve on the well site pad requires a flowline licence.</p> <p>Production pipelines and casing vent gas pipelines leaving designated control point A require a flowline licence.</p> <p>Scenarios, where there is only piping and no vessels, are covered under a flowline licence.</p>
Design Jurisdiction (Design Review and Acceptance):	<p>ER: Steam distribution pipeline leaving an off lease steam generation facility up to designated control point A at the first lease valve on the well site pad.</p> <p>ER: Production and casing vent gas pipelines leaving designated control point A at the lease block valves on the well site pad.</p> <p>TSASK: Pressure vessels and associated pressure piping, including the steam distribution, production, and casing vent gas piping between the inlet and discharge valves on the separator.</p>
Design Code or Requirements:	<p>CSA Z662, Clause 14 or Annex I: Pipeline leaving the steam generation facility to the well site pad.</p> <p>CSA Z662: Production and casing vent gas pipelines leaving the well site pad.</p> <p>CSA B51: Pressure vessels and all associated pressure piping must meet the requirements of CSA B51.</p> <p>CSA Z662 or ASME B31.3: For steam distribution piping from the discharge header of the well site pad to the wellhead, the applicable design code depends on whether the piping leaves the lease or not. (On lease = B31.3 or CSA Z662, Off lease = CSA Z662)</p> <p>CSA Z662 or ASME B31.3: Production piping and casing vent gas piping from the wellhead to the inlet header in the satellite building.</p> <p>CSA Z662 or ASME B31.3: Cases where there are no pressure vessels and only piping.</p>
Comments:	<p>For cases with common or shared steam injection and production piping, the piping must meet CSA Z662, Clause 14, standards.</p>

3.10 Compressor Station



Licensing Requirements:

Pipeline entering the compressor station lease to the inlet or first valve on the manifold upstream of the compressor station is covered under a flowline licence.

For a pipeline other than a flowline, piping and equipment from the inlet valve on the manifold upstream of the compressor through to the last valve on the compressor station is covered under a pipeline licence.

The pipeline leaving the lease boundary is covered under a pipeline licence.

Design Jurisdiction (Design Review and Acceptance):

ER: Pipeline entering the compressor station to the inlet or first valve on the manifold upstream of the compressor station

TSASK: Separators, vessels, and all associated pressure piping, including interconnecting piping.

ER: Pipeline leaving the lease boundary.

Design Code or Requirements:

CSA Z662: Pipeline entering the compressor station to the inlet or first valve on the manifold upstream of the compressor station

CSA B51: Separators, vessels, and all associated pressure piping, including interconnecting piping, must meet the requirements of CSA B51 through to the last valve on lease. CSA B51 refers to ASME B31.3 for piping design.

CSA Z662: Pipeline leaving the lease boundary from the lease block valve.

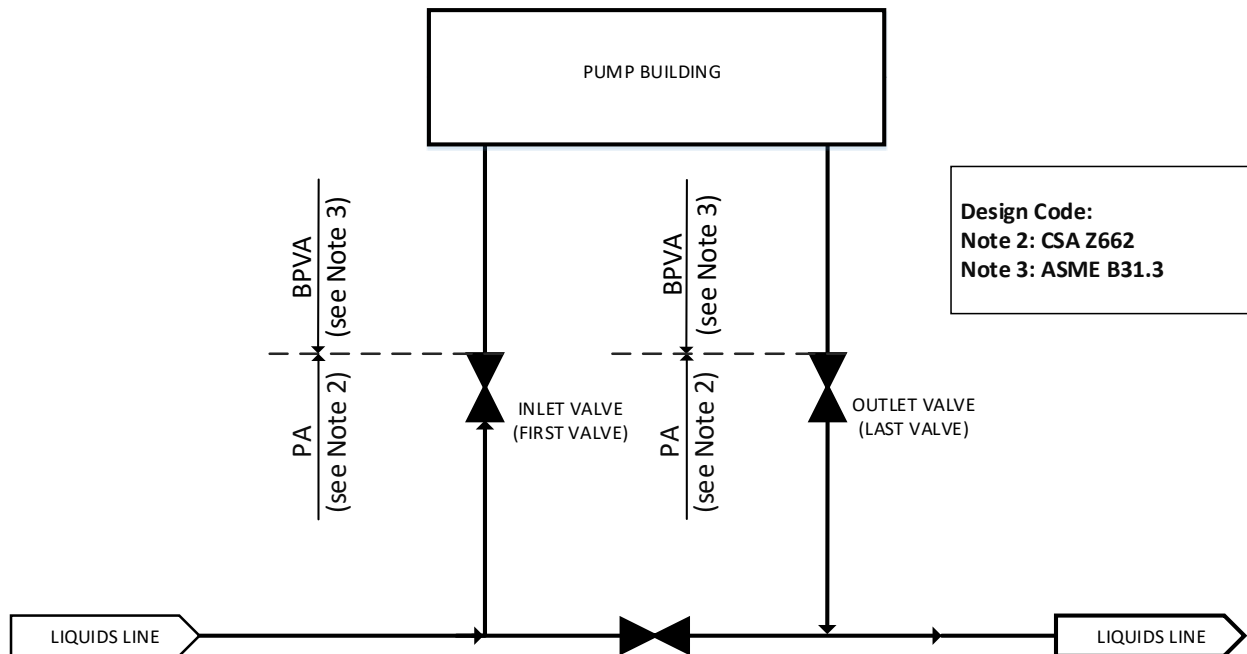
Comments:

Gas compressor facilities that are part of production operations of gas wells or groups of gas wells that do not have a combined power rating equal or greater than 186.5 kW (250 hp) do not require a facility license in accordance with Directive PNG001.

CSA Z662 permits the use of ASME B31.3 for compressor station piping.

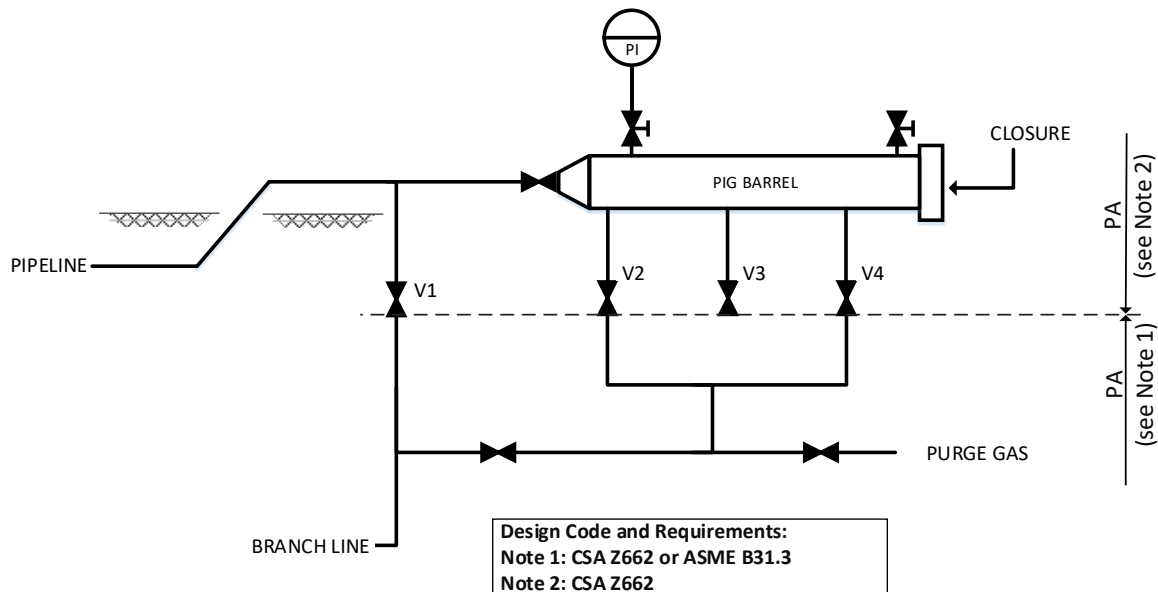
If no vessels or equipment meeting the definitions of *The Boiler and Pressure Vessel Act* exist in the compressor station, it may be possible to use CSA Z662 design throughout.

3.11 Pump Station



Licensing Requirements:	<p>Pipeline entering the pump station lease to the first inlet block valve upstream of the pump station is covered under a pipeline licence.</p> <p>For a pipeline other than a flowline, piping and equipment from the inlet isolation valve upstream of the pump station through to the last valve on lease is covered under a pipeline licence.</p> <p>The pipeline leaving the lease boundary is covered under a pipeline licence.</p>
Design Jurisdiction (Design Review and Acceptance):	<p>ER: Pipeline entering the pump station to the block valve upstream of pump station.</p> <p>TSASK: Separators, vessels, and all associated pressure piping, including interconnecting piping.</p> <p>ER: Pipeline leaving the lease boundary.</p>
Design Code or Requirements:	<p>CSA Z662: Pipeline entering the pump station to the inlet or first valve on the manifold upstream of the pump station.</p> <p>CSA B51: Separators, vessels, and all associated pressure piping, including interconnecting piping, must meet the requirements of CSA B51 through to the last valve on lease. CSA B51 refers to ASME B31.3 for piping design.</p> <p>CSA Z662: Pipeline leaving the lease boundary from the lease block valve.</p>
Comments:	<p>CSA Z662 permits the use of ASME B31.3 for pump station piping.</p> <p>If no vessels or equipment meeting the definitions of <i>The Boiler and Pressure Vessel Act</i> exist in the pump station, it may be possible to use CSA Z662 design throughout.</p>

3.12 Pig barrel design/jurisdiction



Licensing Requirements:	Pipeline leaving the lease boundary, including the pig barrel and valves V1, V2, V3 and V4 are covered under a pipeline or flowline licence.
Design Jurisdiction (Design Review and Acceptance):	ER: Pipeline, pig barrel, and closure.
Design Code or Requirements:	<p>The piping from the isolation valves, shown as “branch line” and “purge gas”, is covered under <i>The Oil and Gas Conservation Act</i>. However, the design code may change depending on the location of the pig barrel. For example:</p> <p>CSA Z662 or ASME B31.3: Within well site lease from wellhead to the lease block valve.</p> <p>CSA Z662: Pipeline junctions.</p> <p>CSA Z662, Clause 4.3.13.1, requires closure to be ASME S.8, Division 1.</p>
Comments:	<p>Although CSA Z662 allows the barrel to be designed and welded to ASM B31.3, additional requirements are specified for sour service pipeline applications (CSA Z662, Clauses 7.2 and 16.6).</p> <p>For piping arrangements where there may be an additional valve(s) before the pig barrel, an exception to the “first valve on lease” rule is warranted, as the pig barrel is considered to be part of the pipeline.</p>

Appendix 4: Temporary Pipeline

Any person who intends to install a temporary pipeline shall apply and obtain approval from the appropriate ER Field Office prior to the installation.

Temporary pipelines must have:

- a form of pressure protection if there is any possibility of a pressure increase above the maximum operating pressure due to an increase in ambient air temperature or solar heating;
- a system to allow for adequate expansion or contraction due to temperature changes;
- temperature monitoring equipment if the pipeline material has temperature limitations;
- suitable restraints to adequately control any movement; and
- any other safety or operational systems the minister considers appropriate.

Temporary pipelines must be buried at all road crossings and shall have warning signs installed at the entry and exit locations of each crossing.

Additional precautions must be undertaken, including adding warning signs or other warnings to indicate the presence of a surface line, when:

- equipment or people may be working in proximity to the pipeline;
- any vehicular traffic may endanger the pipeline; or
- any other conditions that may obscure or endanger the pipeline.

Appendix 5: Field Work Notification Process

