

Notice of Proposed New Directive

Directive PNG034: Saskatchewan Pipelines Code

Background

The Ministry of Energy and Resources (ER) is consulting with the oil and gas industry on *The Pipelines Administration and Licensing Regulations (PALR) and Directive PNG034: Saskatchewan Pipelines Code* (Directive PNG034). PALR and Directive PNG034 will replace requirements prescribed in *The Pipelines Regulations, 2000*, which will be repealed.

- PALR outlines general administration and licensing requirements for all activities related to pipelines;
- Directive PNG034 specifies technical standards/rules and application/reporting requirements for the construction, operation, maintenance, discontinuation and abandonment of a pipeline.

The proposed regulations are more concise and clear as technical rules are now contained in Directive PNG034. This format is more user-friendly and simpler to comply with for industry.

In addition to structural changes, the proposed regulations and directive support the implementation of the Pipeline Regulatory Enhancement Program to modernize and strengthen pipeline regulations and address the following core policy objectives:

- Create efficiencies for industry and government by integrating risk-based pipeline licensing and reporting into ER's Integrated Resource Information System (IRIS);
- Enhance regulatory oversight by retroactively licensing approximately 80,000 flowlines (well to battery gathering lines) and any remaining licence-exempt pipelines;
- Provide clarity for regulatory requirements, and eliminate overlap or conflict among the regulations, technical standards and directives.

This notice mainly focuses on the changes introduced by Directive PNG034.

The Regulatory Process

Once this consultation period has concluded on September 9, 2019, ER will review feedback received in the preparation of a final draft of Directive PNG034 to be presented for consideration by the Lieutenant Governor and Council in the fall of 2019.

The new directive is expected to come into effect on November 12, 2019.

Overview of Proposed Changes

The proposed *Directive PNG034* is organized in chapters outlining the technical and application requirements to be followed by anyone conducting pipeline activities. It is a living document and will be reviewed, expanded and revised as needed. The Directive will allow operators submitting low risk applications to receive immediate approval while public safety and environment are protected by intensive review of higher risk applications.

The proposed changes utilize a risk based approach to all applications. Highlights include:

- Establishing setback requirements and require horizontal directional drilling for installation method of high-risk watercourse crossing pipelines
- Establishing H₂S limit for non-metallic pipelines
- Clarifying requirements in relation to pressure testing and operating pressure
- Extending licence expiration period to two years
- Updating notification timelines
- Establishing spatial data requirements to support the development of Geographic Information System pipeline data repository that will enhance regulation and support industry needs
- Establish survey requirements
- Specifying spatial and pipeline data requirements for retroactive licensing legacy pipelines
- Removing requirement for approvals for low-risk activities including abandonment, discontinuation and repair
- Requiring operators to be members in good standing of a spill response cooperative.

Directive PNG034 also contains requirements prescribed in the PR including:

- Adoption of CSA Standard Z662, *Oil and Gas Pipelines Systems*
- Requiring that pipelines design work be certified by an engineer whose registration pursuant to *The Engineering and Geoscience Professions Act* is in good standing
- Obligating operator's to locate pipelines within specified time periods
- Requiring operators to actively maintain the integrity of a pipeline

Review of Draft Directive

ER is seeking written comments on the proposed Directive PNG034. Draft directive to give effect to the above changes are attached to this notice as Appendix A.

Please direct any comments or questions about the directive to:

ER.servicedesk@gov.sk.ca

Attn: Yanyan Han, Regulatory Affairs,
Energy Regulation Division

The deadline for submitting written comments is **September 9, 2019**.

Directive PNG034: Saskatchewan Pipelines Code

Directive PNG034

April 2019

Revision 1.0

Governing Legislation:

Act: *The Pipelines Act, 1998*

The Oil and Gas Conservation Act

Regulation: *The Pipelines Administration and Licensing Regulations*

The Oil and Gas Conservation Regulations, 2012

Order:

Record of Change

Revision	Date	Description
0.0		Initial draft
1.0	Month Day, Year	Approved first version

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Chapter 1: Introduction

1.1 Introduction

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 and after November 12, 2019;
- applications for registering a legacy licence; and
- applications for retroactive licensing of previously exempt 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

This Directive should be used in conjunction with *The Pipelines Act, 1998 (PA)*, *The Pipelines Administration and Licensing Regulations (PALR)*, *The Oil and Gas Conservation Act (OGCA)* and *Directive PNG014: Incident Reporting Requirements*.

It is the responsibility of all licence holders and operators, as specified in the legislation, to be aware of ER and other government agencies' requirements and to ensure compliance with all requirements.

1.3 Application and Interpretation

This Directive, other than appendix 3 and 4, applies to all pipelines that are subject to the jurisdiction of the PA. Please refer to subsection 3(2) of PA and Section 1-5 of PALR for pipelines that are exempt from the PA.

Appendix 3 and 4 of this directive provide interpretations of licence and technical requirements for pipelines that are exempt from PA but subject to OGCA.

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 previously exempt pipeline, that lesser standard is acceptable.

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

1.4 Right of Entry

No pipeline licence confers a right of entry to the holder for the purposes of accessing land to survey, construct or operate a pipeline. In the case of flowlines, surface rights may be acquired under the provisions of *The Surface Rights Acquisition and Compensation Act* administered by 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.

1.5 Definitions

All defined terms found in PA and PALR apply to the interpretation of this Directive.

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.

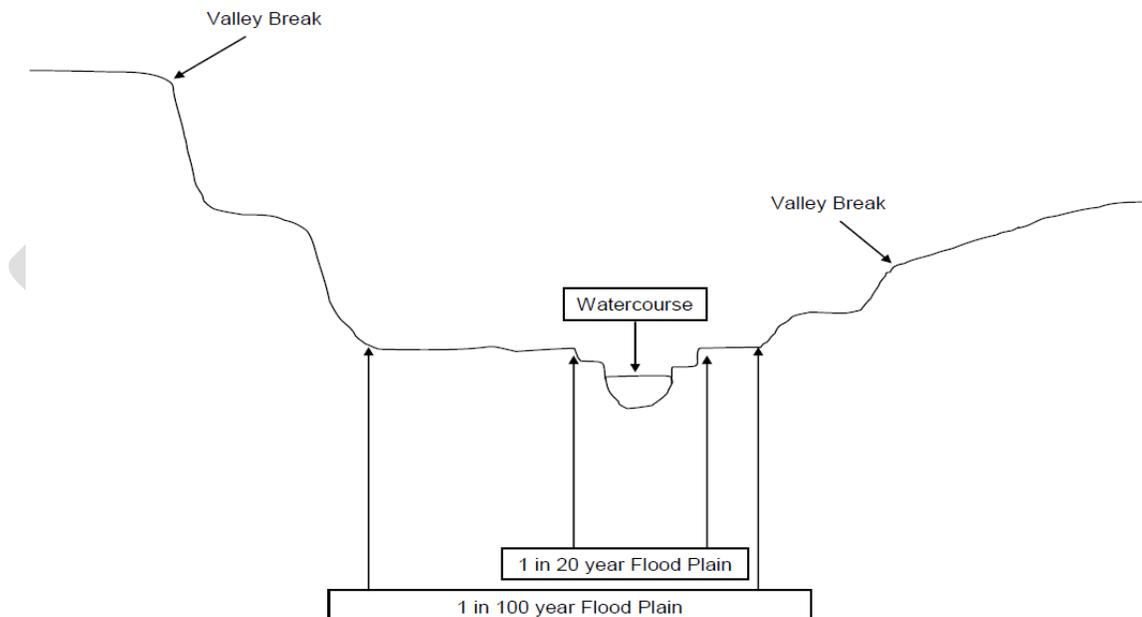
“adverse effect” means impairment of or damage to the environment or harm to human health, caused by any chemical, physical or biological alteration or any combination of any chemical, physical or biological alterations.

“ASME” means American Society of Mechanical Engineers.

“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.

“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.



“discontinuation” means the temporary deactivation of a pipeline or part of a pipeline where the licence for that pipeline remains in effect.

“engineer” an engineer who is a professional engineer whose registration pursuant to *The Engineering and Geoscience Professions Act* is in good standing.

“ephemeral” means a stream that flows only during and following a short period of precipitation or snowmelt.

“fish” means any species of fish and includes:

- any aquatic crustaceans, aquatic molluscs or aquatic invertebrates;
- any eggs or sperm from any fish; or
- any part or parts of any fish.

“fish habitat” means spawning grounds and any other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes.

“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 abstract entity that represents any type of oil and gas related physical asset, such as a Well, Battery, Facility, Terminal, Pipeline, etc.

“geoscientist” a geoscientist who is a professional geoscientist whose registration pursuant to *The Engineering and Geoscience Professions Act* is in good standing.

“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.

“in kind” means the replace/re-route/repair sections are identical, of the same material, or evaluated as being equivalent or exceed the requirements and suitability for the licensed purpose and operating conditions.

“implementation date” means the date prescribed in accordance with Part VI of the PA.

“IRIS” means the Integrated Resource Information System.

“legacy licence” means the legacy licence defined in Part VI of the PA.

“no drill zone” means the upper limit of the drill path as determined by an 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.

“previously exempt pipeline” means the previously exempted pipeline defined in Part II of the PA.

“repair” means a pipeline replacement where the repair section is less than 100 m long and is within the existing right-of-way.

“**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.

“**trenchless**” means a crossing installation method which does not disturb the bed, bank or boundary of any watercourse or water body.

“**water body**” means a body of water or an area where water flows or is present, whether the flow or the presence of water is continuous, seasonal or intermittent, or occurs only during a flood.

“**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 (large permanent)**” means major streams or rivers with well-defined flood plains. They are often wide valley bottoms with a non-vegetated channel.

“**watercourse (small permanent)**” means permanent streams that may or may not include small or developed valley bottoms or bench floodplain development. Banks and channel are often well defined.

“**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 and may have terrestrial vegetation. The small stream usually has some bank development and the channel width is typically less than 1.5 meters.

Chapter 2: Technical Standards and Requirements

2.1 Technical Standards

- (1) A reference in this directive to the CSA Standard Z662, *Oil and Gas Pipeline Systems* (CSA Z662) means the most recent published version of the standard issued by the Canadian Standards Association (CSA).
- (2) 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.
- (3) 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 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 Method

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 Certification

An engineer shall certify the design of a pipeline other than a flowline is in accordance with the standards mentioned in section 2.1.

A typical design of a flowline certified by an engineer can be used for other flowlines.

2.5 Watercourse Crossing

2.5.1 Watercourse Crossing Requirements and Interpretation

A pipeline that crosses or is in proximity to a watercourse must meet the requirements outlined in Table 1.

A pipeline that is in proximity to a watercourse means the pipeline has the potential to cause an adverse effect on the watercourse in event of a spill or release. This determination is the responsibility of the applicant and will require all relevant factors to be taken into consideration. This may include but is not limited to: flow rate, transported substance, inspection frequency, leak detection, as well as distance and elevations in relation to the watercourse. It will also be the responsibility of the applicant to document this assessment.

Requirements in table 1 may be exempted if a Hydrotechnical, Hydrogeological and Terrain Assessment supports an alternative method of installation that can ensure the required level of environmental protection and public safety.

The setback for watercourses in table 1 is measured from the top of break (valley), or where undefined, from the top of bank. Top of a break/bank is determined by the intersection of the slope angle with the upland ground elevation.

Applicants shall also follow CSA Z662 requirements for the applicable installation method. ER may require additional information that supports requirements outlined in CSA Z662.

Table 1: Watercourse Crossing Requirements

Type	Channel Characteristics	Minimum Entry and Exit Setback Requirements	Method of Installation Required	Required Documents to be Submitted
Large permanent or small permanent with fish habitat	Defined Channel	100 m	HDD	<ul style="list-style-type: none"> • HDD Feasibility Report with Hydro-fracture Analysis • Geotechnical Report • Drilling Execution Plan • HDD Crossing Profile • Pullback Detail
Small permanent	Defined Channel	45 m	HDD	<ul style="list-style-type: none"> • HDD Feasibility Report • Geotechnical Report • Drilling Execution Plan • HDD Crossing Profile • Pullback Detail

2.5.2 Required Documents

A description of the documents contained in this section are:

- **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 completed by a geoscientist or engineer.

- **HDD Crossing Profile**

This report must include the Issued for Construction (IFC) drawing for the HDD crossing profile. The drawing must show 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 prepared by an 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 prepared by an engineer.

- **Hydrotechnical, Hydrogeological and Terrain Assessment**

This document must provide an assessment of site conditions - in terms hydrotechnical, hydrogeological and geotechnical considerations, for the purpose of designing and installing the pipeline. It must also provide supporting evidence that potential geohazards are being avoided or mitigated.

The document must be prepared by a geoscientist or engineer.

- **Pullback Detail**
This document must provide an IFC drawing that shows the spacing and height of supports, overbend radius, and topography. The drawing must also be accompanied with applicable pullback notes.
- **Typical Crossing Profile**
This document must show the typical crossing profile including the minimum depth of the crossing and applicable design and construction notes.

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2.6 H₂S Limitations

Pipeline applications using fiberspar, flexpipe, flexcord or flexsteel composite pipes shall meet specific sour service restrictions in Table 2. There are also sour service limits found in the CSA Z662 that apply to all composite materials and these are reflected in Table 2.

Table 2: H₂S Limitations for Pipelines using fiberspar, flexpipe, flexcord or flexsteel composite pipes

Pipeline Material	Transported Substance Type	Allowable H ₂ S Content	Allowable Partial Pressure	Allowable Design Pressure
Fiberspar FSLP	OE,SW,FW,CO,LV	Any Amount	Any Partial Pressure	Any pressure to the maximum rating of pipe for that service condition
	NG, FG	1 %(10 mol/kmol) (ER limit)	50 kPa (CSA limit)	9,930 kPa (CSA limit)
Flexcord FCLP	OE,SW,FW,CO,LV	0.3 %(3 mol/ kmol) (ER limit)	Any Partial Pressure	Any pressure to the maximum rating of pipe for that service condition
	NG, FG	0.3 %(3 mol/ kmol) (ER limit)	50 kPa (CSA limit)	9,930 kPa (CSA limit)
Flexpipe FPLP	OE,SW,FW,CO,LV	Any Amount	Any Partial Pressure	Any pressure to the maximum rating of pipe for that service condition
	NG, FG	1 %(10 mol/kmol) (ER limit)	50 kPa (CSA limit)	9,930 kPa (CSA limit)
Flexpipe High Temperature FPHT	OE,SW,FW,CO,LV	Any Amount	Any Partial Pressure	FPHT 301: 4,960 kPa FPHT 601: 9,930 kPa
	NG, FG	1 %(10 mol/kmol) (ER limit)	50 kPa (CSA limit)	9,930 kPa (CSA limit)
Wellstream Flexsteel WSLP	OE	Any Amount	5.5 kPa (ER limit)	6,620 kPa (ER limit)
	SW,FW,CO,LV	Any Amount	5.5 kPa (ER limit)	Any Pressure to the maximum rating of pipe for that service condition
	NG, FG	1 %(10 mol/kmol) (ER limit)	5.5 kPa (ER limit)	6,620 kPa (ER limit)
	OE,SW,FW,CO,LV	If zero H ₂ S	NA	Any pressure to the maximum rating of pipe for that service condition
	NG, FG	If zero H ₂ S	NA	9,930 kPa (CSA limit)

NG – Natural Gas, OE – Oil Effluent, SW- Salt Water, FW – Fresh Water, CO – Crude Oil, LV – Low Vapour Pressure, FG-Fuel Gas.

2.7 Pressure Testing

2.7.1 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 and this Directive.

Pressure testing of a pipeline to be reactivated 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 would 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.

2.7.2 Notice of Pressure Test

A licence holder shall notify ER through IRIS at least 48 hours prior to the scheduled date of any pressure test.

2.7.3 Minimum Test Pressure

Notwithstanding CSA Z662, pipelines conveying gas containing more than 10 moles of hydrogen sulphide (H₂S) gas per kilomole of natural gas must be pressure tested to a minimum of 1.4 times the MOP and not greater than the maximum test pressure prescribed in CSA Z662.

2.7.4 Pressure Testing Pipelines with Mixed Materials

Each section of pipe that is being constructed using a different line pipe material must be pressure tested separately, to meet the different pressure testing requirements imposed on different materials.

2.7.5 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.

2.8 Operating Pressure

2.8.1 Maximum Operating Pressure

No pipeline for which a licence has been issued is to be operated at a pressure exceeding the maximum operating pressure (MOP) specified in the approved leave to open.

2.8.2 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.

2.8.3 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 do not 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 licence holder of the flowline must have:

- a single overpressure protection device installed that will protect the flowline from experiencing pressures that do not 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 certified 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.

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. Licence holders 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 Pipelines near Highways

No person shall construct a pipeline within 90 metres of the surveyed limit of a provincial highway or within 30 metres of the surveyed limit of a road other than a provincial highway without the prior written consent of the Minister of Highways and Transportation.

3.2 Pipeline to be Located

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.

3.3 Incidents

Pipeline incidents must be managed and reported in accordance with *Directive PNG014: Incident Reporting Requirements*.

3.4 Construction Notification

A licence holder shall notify ER through IRIS, 24 hours prior to the scheduled commencement date of pipeline construction including any following activities, whichever occurs first:

- stripping the right of way;
- laying down a pipe;
- pipe stringing, bending; or
- welding and facility installation

Construction activities associated with discontinuation and abandonment of a pipeline are exempt from this notification requirements.

3.5 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.

3.6 Pipeline Integrity

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:

- additional pressure tests on the pipeline or any portion of the pipeline;
- special electronic surveys on the pipeline or any portion of the pipeline

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

Chapter 4: Application Requirements

4.1 Application

The application requirements in this chapter apply to pipelines that commence construction on and after the implementation date.

4.2 Licence Expiry

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

4.3 Application for Approval Required

(1) an application must be submitted through IRIS and application approval must be obtained before performing any of the following changes to a pipeline:

- construct a new pipeline
- construct a new pipeline segment that is to be added to an existing pipeline licence;
- install free-standing liner;
- replace or re-route a pipeline other than repair as defined in this directive;
- remove free-standing liner;
- remove an entire pipeline or any part of a pipeline;
- reactivate an abandoned or discontinued pipeline;
- change the operating parameters of an existing pipeline.

(2) a leave to open application must be submitted through IRIS and application approval must be obtained before operating a new or altered pipeline.

This requirement is exempt when operation commences immediately after completing a pipeline repair as defined in this directive.

4.4 Reporting Required

Application and approval are not required before performing pipeline abandonment, pipeline discontinuation and pipeline repair as defined in this directive.

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

A licence holder also shall submit a report to IRIS within 90 days of completion of the work if performing a pipeline repair as defined in this directive and the repair meets one or more of the following conditions:

- the repair is the result of an incident reported in accordance with Directive PNG 014;
- the repair is the result of surface exposure of the pipeline or 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 30m of a water body;
- the repair does not result in the removal of any pipe.

4.5 Survey Plan

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

4.6 Pipeline Spatial Data

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

4.7 As-Built Survey and Spatial Data

If a proposed pipeline is altered 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.

4.8 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 can not be changed when adding segments to an existing licence.

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.

The mandatory segment level data attributes include:

- length of the segment;
- infrastructure type at the start and end of the segment;
- class location designated in accordance with CSA Z662;
- material used for manufacturing the segment including material type, standard, grade, and category;
- size or sizes of pipes to be used;
- 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 and 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 or is proximate to; and
- any other information that the minister may require.

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Chapter 5: Legacy Licence

5.1 Legacy Licence

A legacy licence issued prior to the implementation date 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 Act and regulations.

Licence holders shall prepare shapefiles in accordance with Appendix 1 and submit them through 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.

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Chapter 6: Retroactive Licence

6.1 Retroactive Licence Required

Owners of previously exempt pipelines, including flowlines that are constructed or have commenced construction prior to the implementation date shall apply through IRIS to register a retroactive licence in accordance with the timeframes specified in the PALR.

6.2 Information Required for a Retroactive Licence

6.2.1 Flowlines

Table 4 sets out the information required to be submitted to IRIS in order to register a retroactive licence for flowlines.

Table 4: Data Required: Flowlines

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

6.2.2 Pipelines other than Flowlines

Table 5 sets out the information required to be submitted to IRIS in order to register a retroactive licence for pipelines other than flowlines.

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 Number • Licence Type • Transported Substance • Gas-Phase indicator determined in accordance with CSA Z662, if the transported substance is liquid. • Maximum H₂S Concentration • Line Number • Segment Status • 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 Count • Licence Type • Line Number • Segment Status • From/To Infrastructure Type • Class Location • Material Type

6.3 Spatial Data for a Previously Exempt Pipeline

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

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

If a shapefile cannot be rendered for a previously exempt 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.

6.4 Survey Plan for a Previously Exempt Pipeline

Once a previously exempt pipeline other than flowline is retroactively licensed, the licence holder must submit a survey plan within 30 days that meets the requirements specified in Appendix 2.

If a survey plan is readily accessible for a previously exempt flowline, the survey must be submitted through IRIS after the flowline is retroactively licensed.

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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 previously exempt pipelines other than flowlines; and
- any retroactive licence applications for previously exempt flowline, if the segment data is readily accessible.

If a shapefile cannot be rendered for a previously exempt 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)	Optional	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.

Appendix 2: Pipeline Survey Requirements

A pipeline survey plan must contain all the components listed below:

- 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*;
- be dated, certified, and signed by the surveyor, with the signature duly witnessed;
- show the location of the proposed pipeline in relation to:
 - right-of-way of the proposed pipeline;
 - the boundaries of the section;
 - water bodies;
 - mines, whether worked or abandoned;
 - existing wells and abandoned wells;
 - existing batteries and facilities;
 - roadways, road allowances, railways, pipelines, power lines, and any other right of way;
 - aircraft runways or taxiways; and of structures of every kind within a radius of 200 metres of the proposed pipeline site;
- show the elevation of the pipeline site and the locations of:
 - the surface lease boundaries;
 - the access road;
- have all measurements and distances tied to:
 - a surveyed monument or evidence of a surveyed monument in a surveyed area; or
 - a surveyed base line, or
 - some prominent topographical feature acceptable to the Minister in an unsurveyed area;
- state in the legend the true East/West and North/South co-ordinates of the well site relative to the initial reference point (section corner monument, surveyed base line, etc.) used in the survey;
- Datum Standard in North American Datum 1983 (NAD83) (CSRS) UTM Extended Zone 13N.

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

2.1.1 Following pipelines are exempted from *The Pipelines Act, 1998 (PA)* but governed by *The Oil and Gas Conservation Act (OGCA)*:

- (a) pipelines that are located wholly within the boundaries governed by a surface lease;
- (b) pipelines that are located wholly within the boundaries governed by adjacent and abutting surface leases;
- (c) any pipeline situated between designated control point A and designated control point B set out in this appendix;
- (d) temporary pipelines that are:
 - above ground;
 - not located wholly within the boundaries governed by a surface lease or by adjacent and abutting surface leases; and
 - will be in use for a period of no more than 180 days.

2.2 Pipelines within the meaning of the definition under *PA*, but not mentioned in subsection 2.1 are governed by *PA*.

2.3 If pipeline installations and pressure equipment within the meaning of the definition under *The Boiler and Pressure Vessels Act, 1999 (BPVA)*, they are regulated by the Technical Safety Authority of Saskatchewan (TSASK) and must meet the requirements prescribed in *The Boiler and Pressure Vessel Regulations, 2017 (BPVR)*. Where there is a conflict between the provisions of the *PA*, *PALR* and the provisions of *BPVA*, *BPVR*, the provisions of *BPVA* and *BPVR* apply.

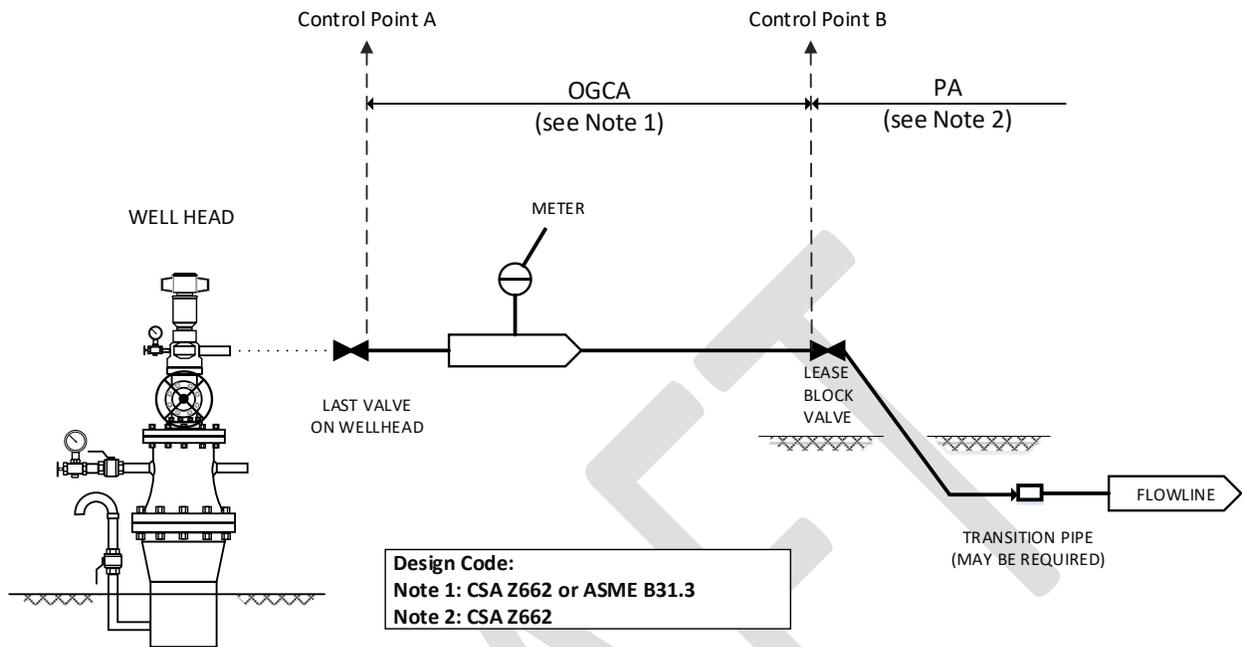
3. Detailed interpretation of requirements for pipelines situated between designated control point A and designated control point B and pressure equipment

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

- Pipelines situated between designated control point A and B in the illustration 3.1-3.9 are exempt from PA and do not require a pipeline licence.
- Pipelines situated between designated control point A and B in the figure 3.1-3.9 designated under OGCA and 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.

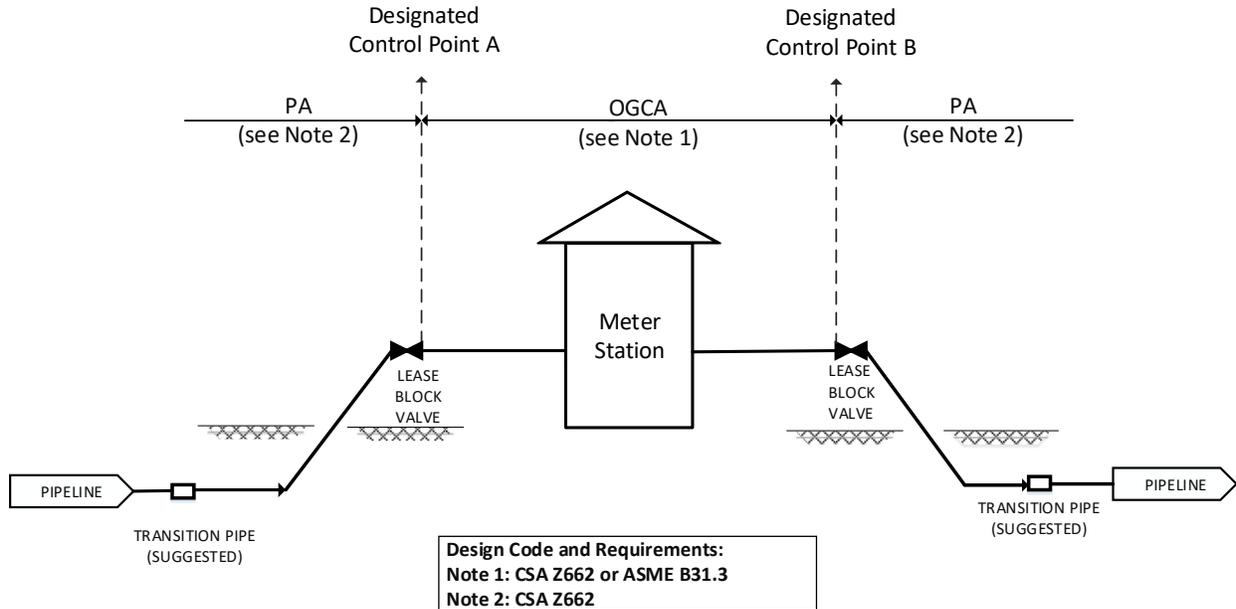
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3.1 Well site with no dehydrator or separator, with or without a lease block valve, including a pipeline leaving the well site



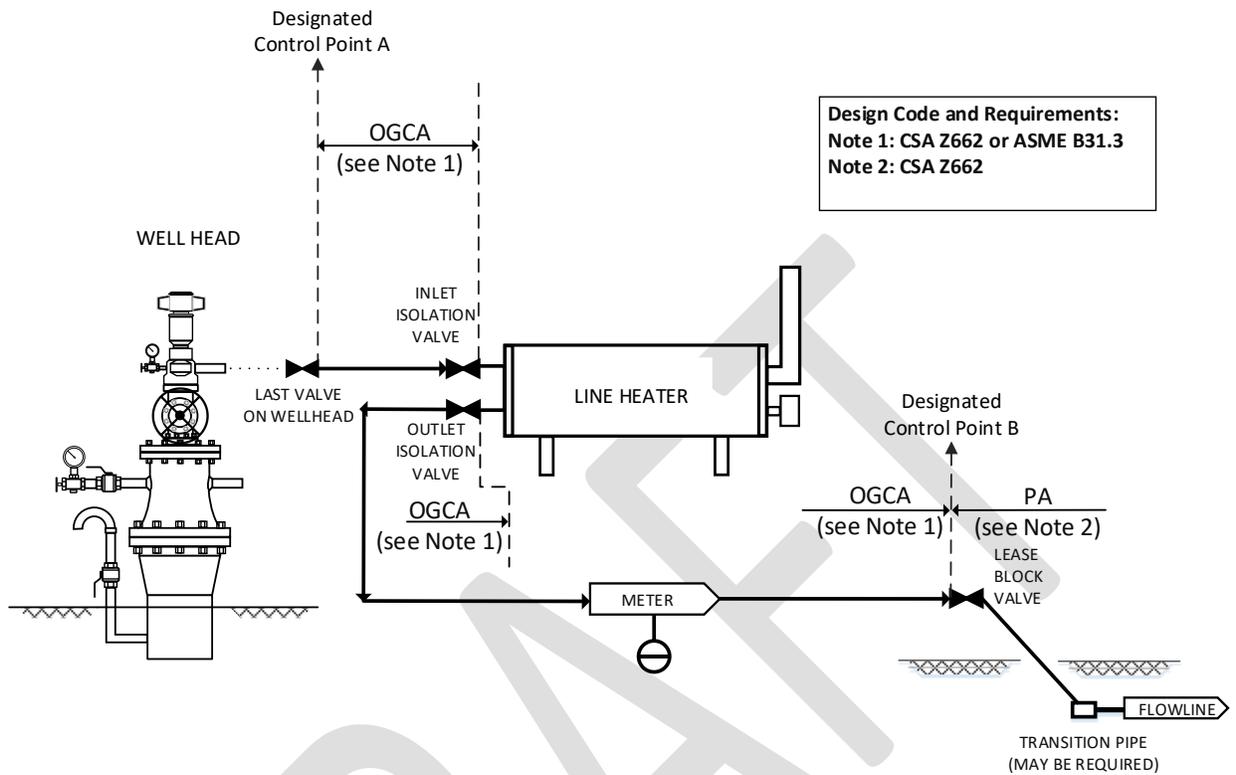
Licensing Requirements:	Pipeline leaving designated control point B at the last lease block valve requires a pipeline licence. If designated control point B is located at the wellhead, the licence applies from that point.
Design Jurisdiction (Design Review and Acceptance):	ER: Pipeline leaving designated 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



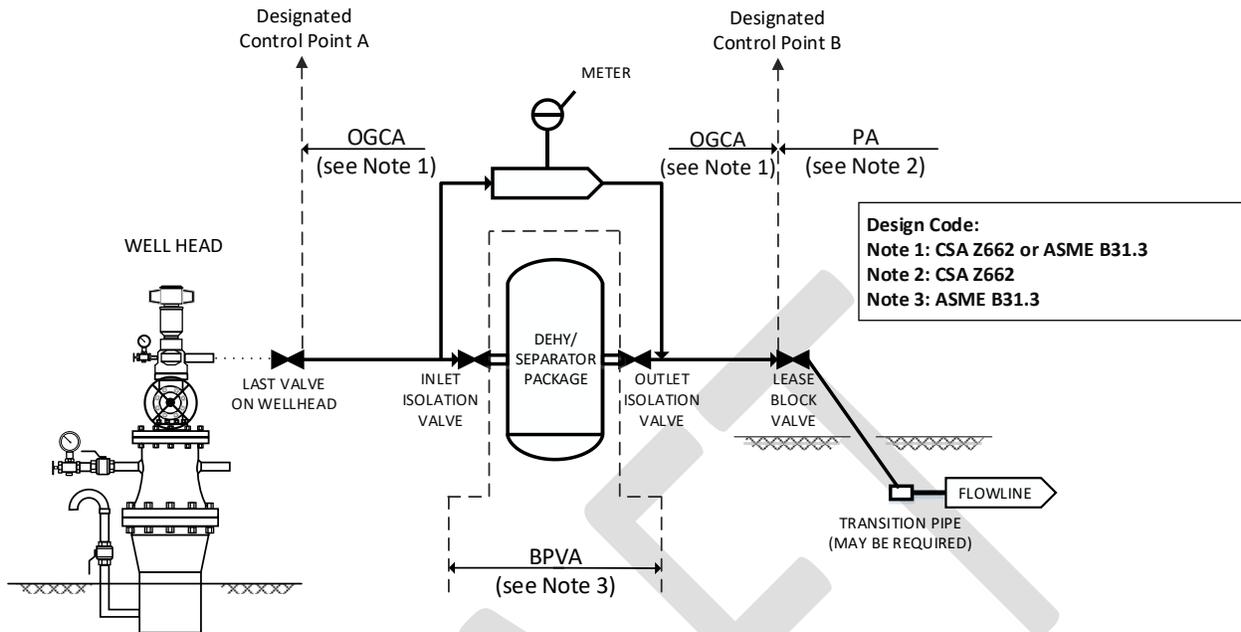
Licensing Requirements:	Pipeline up to designated control point A at the first lease block valve requires a pipeline licence. Pipeline leaving designated control point B at the last lease block valve requires a pipeline licence.
Design Jurisdiction (Design Review and Acceptance):	ER: Pipeline up to designated control point A at the first lease block valve. ER: Pipeline from designated control point B at the last lease block valve.
Design Code and Requirements:	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. CSA Z662: Pipeline up to designated control point A at the first lease block valve CSA Z662: Pipeline leaving designated control point B at the last lease block valve.

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



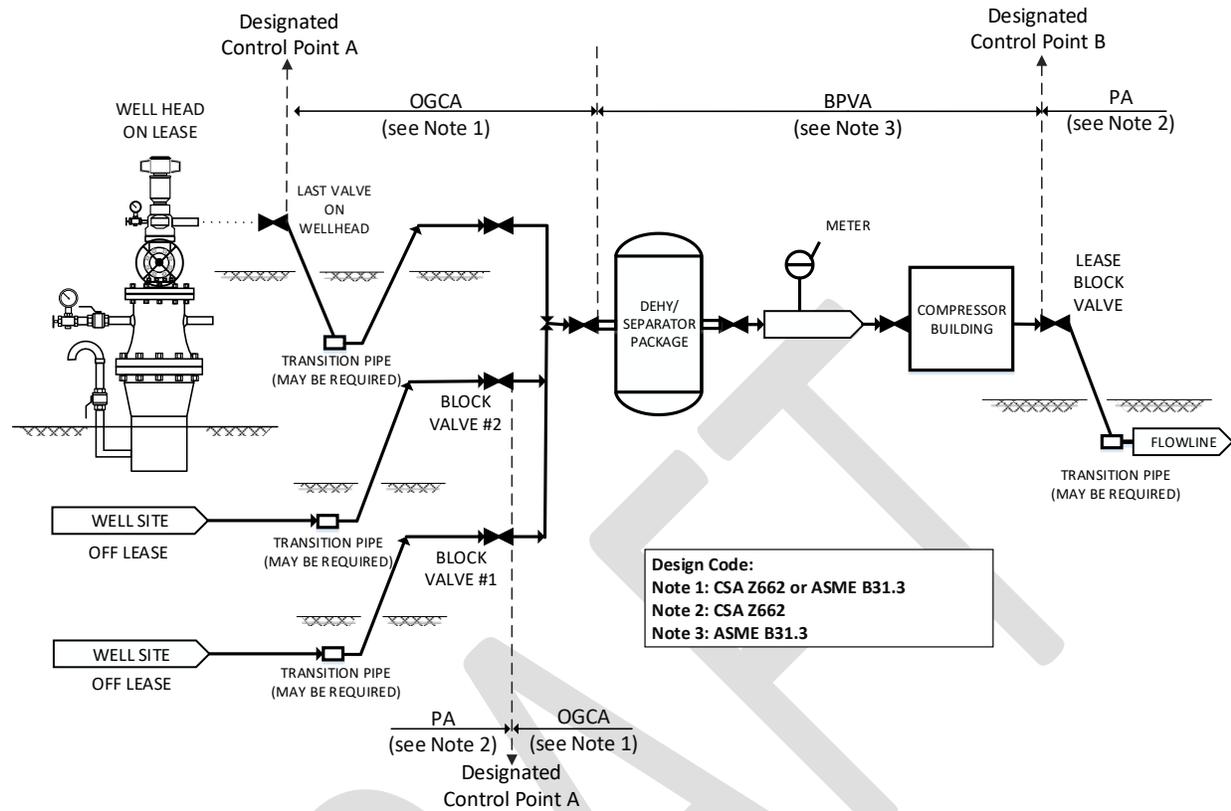
Licensing Requirements:	Pipeline leaving designated control point B at the last lease block valve is covered under a pipeline licence. If the lease block valve is located at the line heater outlet, the licence applies from that point.
Design Jurisdiction (Design Review and Acceptance):	ER: Pipeline leaving 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



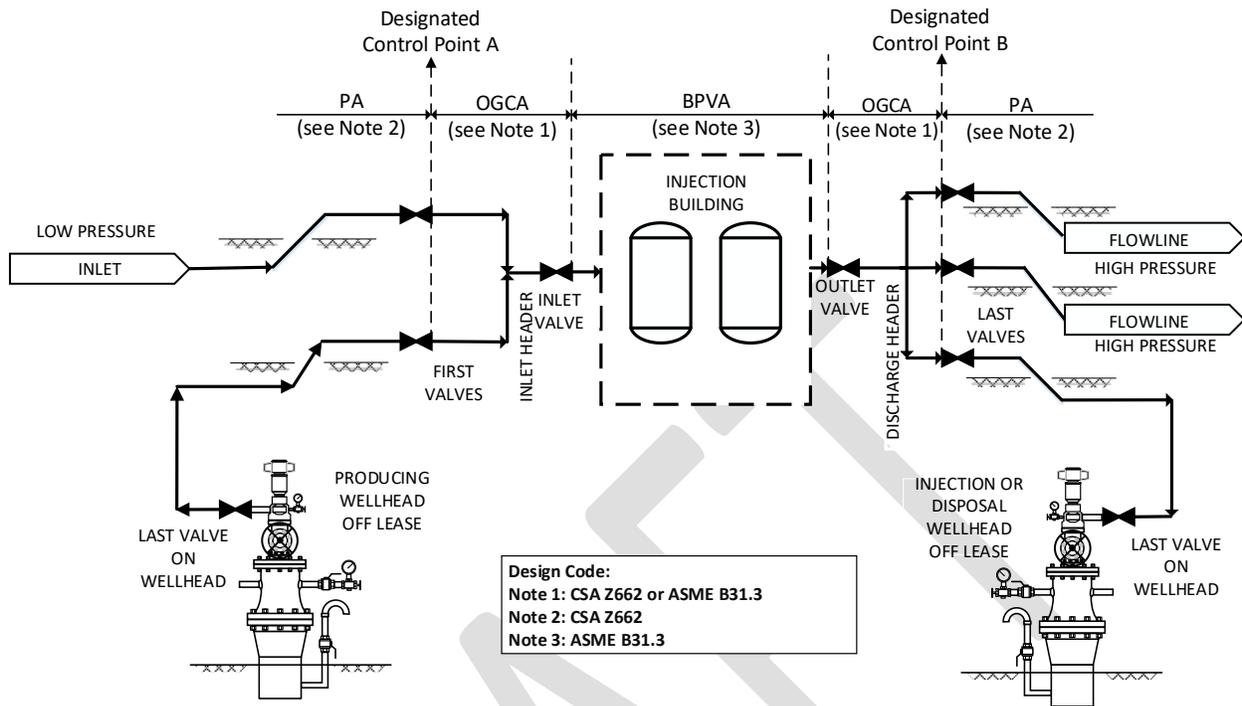
Licence Requirements:	Pipeline leaving designated control point B at the lease block valve requires a pipeline licence.
Design Jurisdiction (Design Review and Acceptance):	TSASK: Piping and vessels between the inlet and outlet valves on the dehydrator and/or separator. ER: Pipeline from the lease block 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



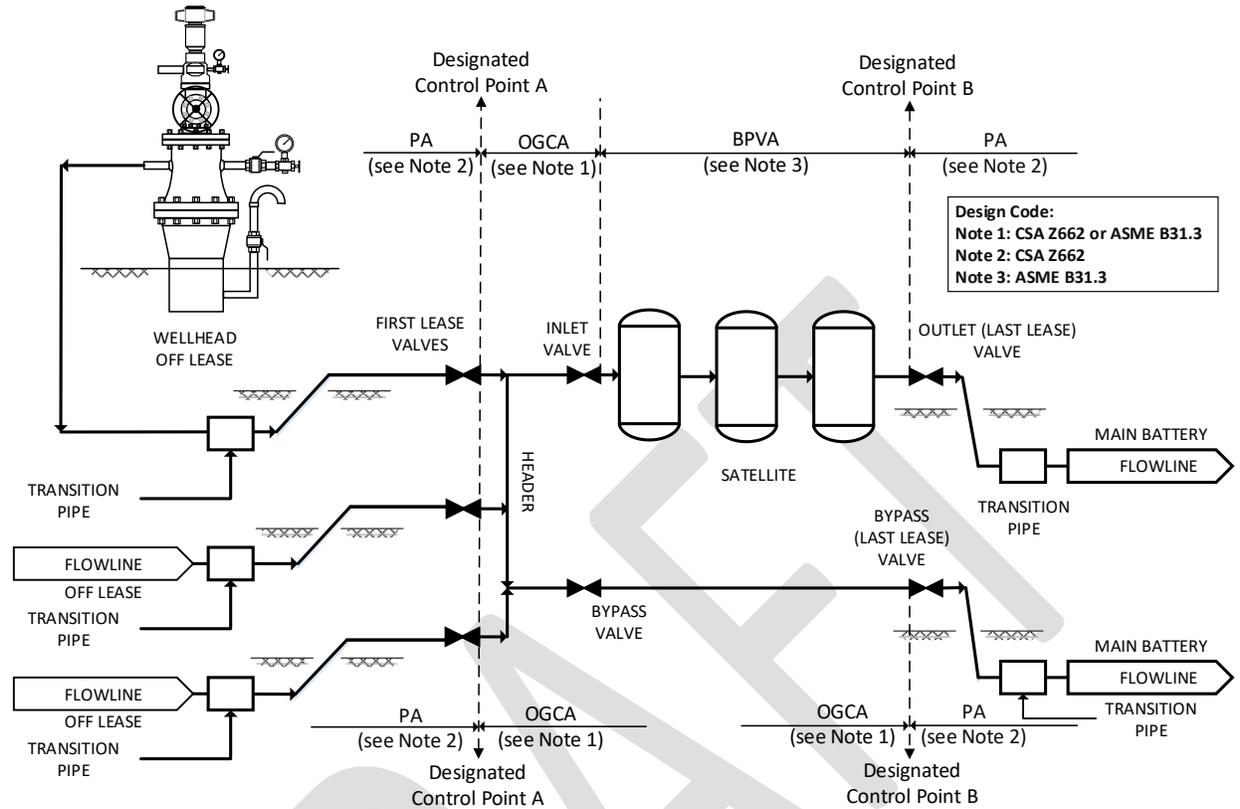
Licensing Requirements:	<p>Pipeline from off lease wells to designated control point A (block valves #1 and #2) on the header manifold upstream of the dehy/separator package is covered under a pipeline licence.</p> <p>Pipeline leaving designated control point B (last lease block valve) is covered under a pipeline 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



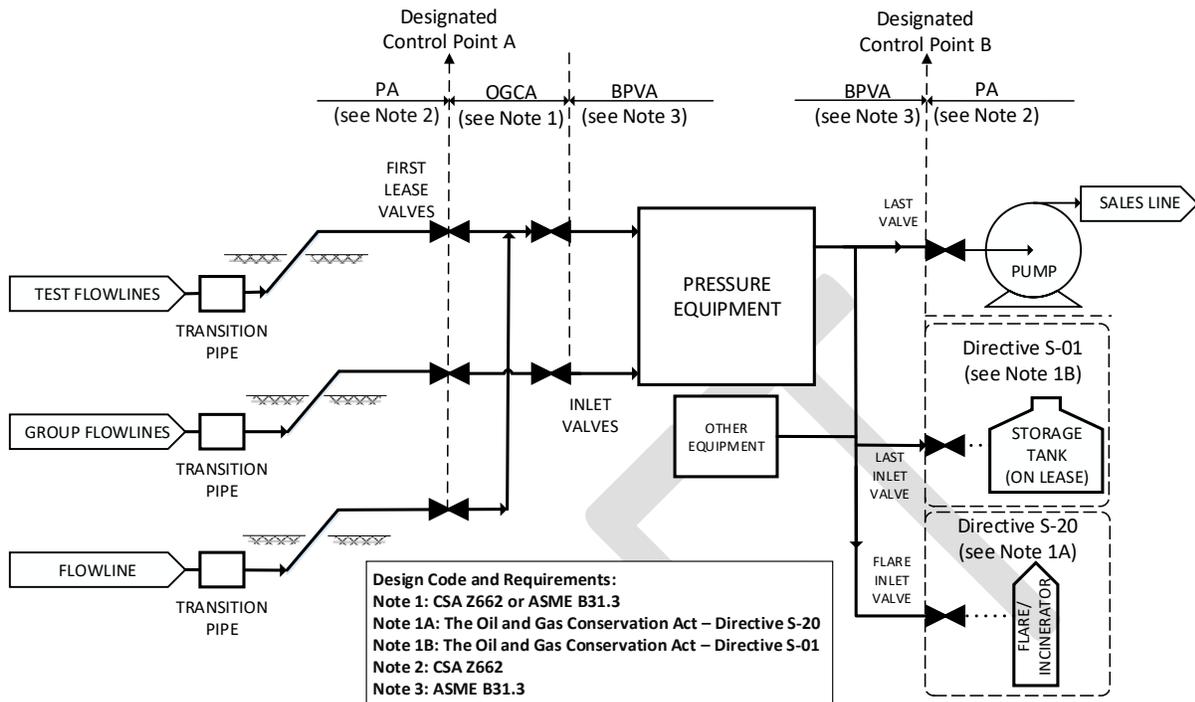
Licensing Requirements:	<p>Pipeline from off lease well to designated control point A (first lease valves) at the inlet header upstream of injection facility requires a pipeline licence.</p> <p>The produced water pipeline entering the injection facility up to designated control point A at the lease valve on the inlet header upstream of injection facility requires a pipeline licence.</p> <p>For a disposal pipeline (flowline), the pipeline from control point A (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 pipeline 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



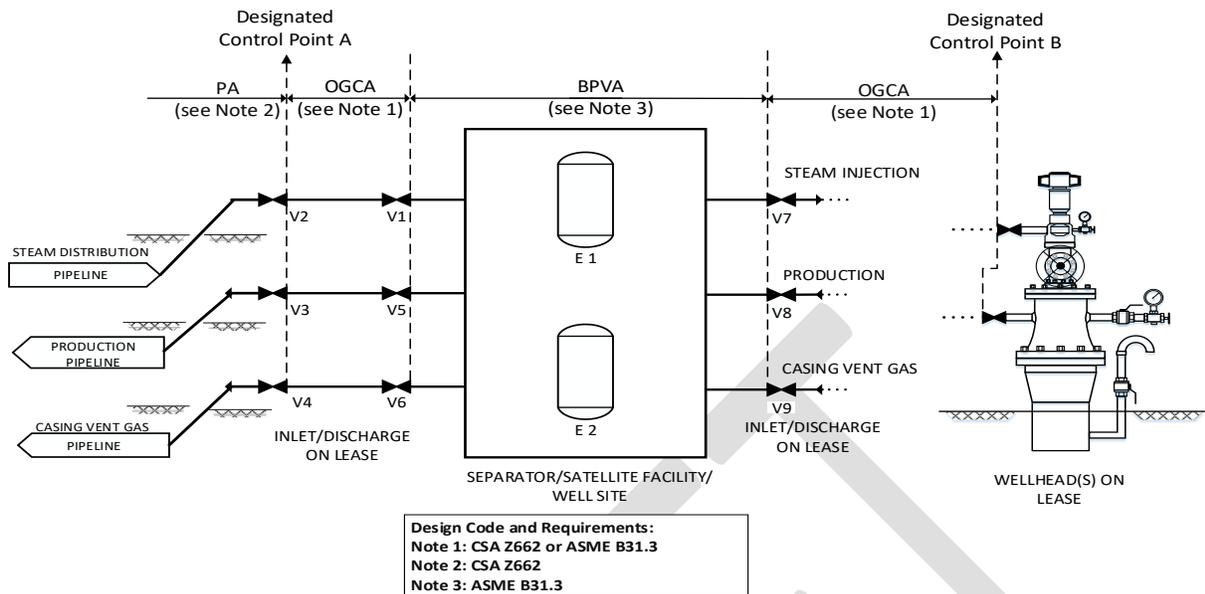
Licensing Requirements:	<p>Pipeline entering the satellite up to designated control point A at the first lease valve(s) on the header upstream of the satellite requires a pipeline licence. Scenarios where there is only a piping junction and no vessels are covered under a pipeline licence.</p> <p>Pipeline(s) leaving designated control point B at the last lease valve require a pipeline licence.</p>
Design Jurisdiction (Design Review and Acceptance):	<p>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.</p> <p>TSASK: Pressure vessels and all associated pressure piping.</p> <p>ER: Pipeline(s) leaving designated control point B at the last lease valve.</p> <p>ER: If no equipment applicable to <i>The Boiler and Pressure Vessel Act</i> is present, all piping will be designed and constructed to CSA Z662 standards.</p>
Design Code or Requirements:	<p>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.</p> <p>CSA Z662 or ASME B31.3: Inlet header piping from control point A (first lease valves) to the inlet valve upstream of satellite 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: Any bypass piping from the first lease valve through to the last lease valve.</p> <p>CSA Z662: Pipeline(s) leaving designated control point B at the last lease valve.</p>

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 pipeline licence.</p> <p>Scenarios where there is only a piping junction and no vessels are covered under a pipeline 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 Heavoil/in situ steam flood facility



Licensing Requirements:

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 pipeline licence.
 Production pipelines and casing vent gas pipelines leaving designated control point A require a pipeline licence.
 Scenarios where there is only piping and no vessels are covered under a pipeline licence.

Design Jurisdiction (Design Review and Acceptance):

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.
ER: Production and casing vent gas pipelines leaving designated control point A at the lease block valves on the well site pad.
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.

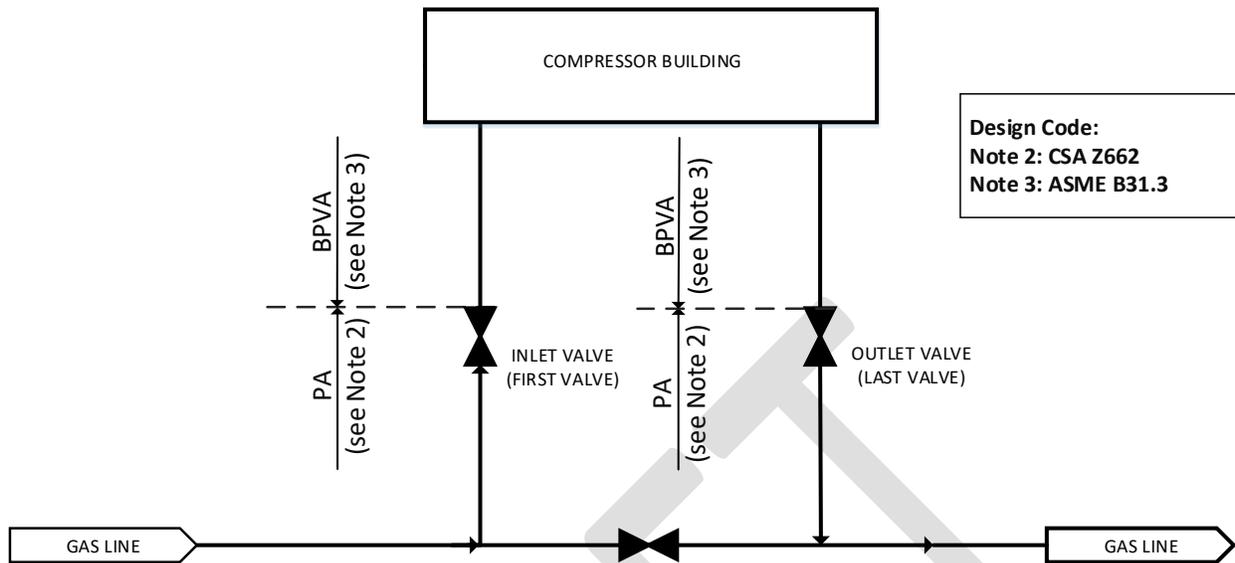
Design Code or Requirements:

CSA Z662, Clause 14 or Annex I: Pipeline leaving the steam generation facility to the well site pad.
CSA Z662: Production and casing vent gas pipelines leaving the well site pad.
CSA B51: Pressure vessels and all associated pressure piping must meet the requirements of CSA B51.
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)
CSA Z662 or ASME B31.3: Production piping and casing vent gas piping from the wellhead to the inlet header in the satellite building.
CSA Z662 or ASME B31.3: Cases where there are no pressure vessels and only piping.

Comments:

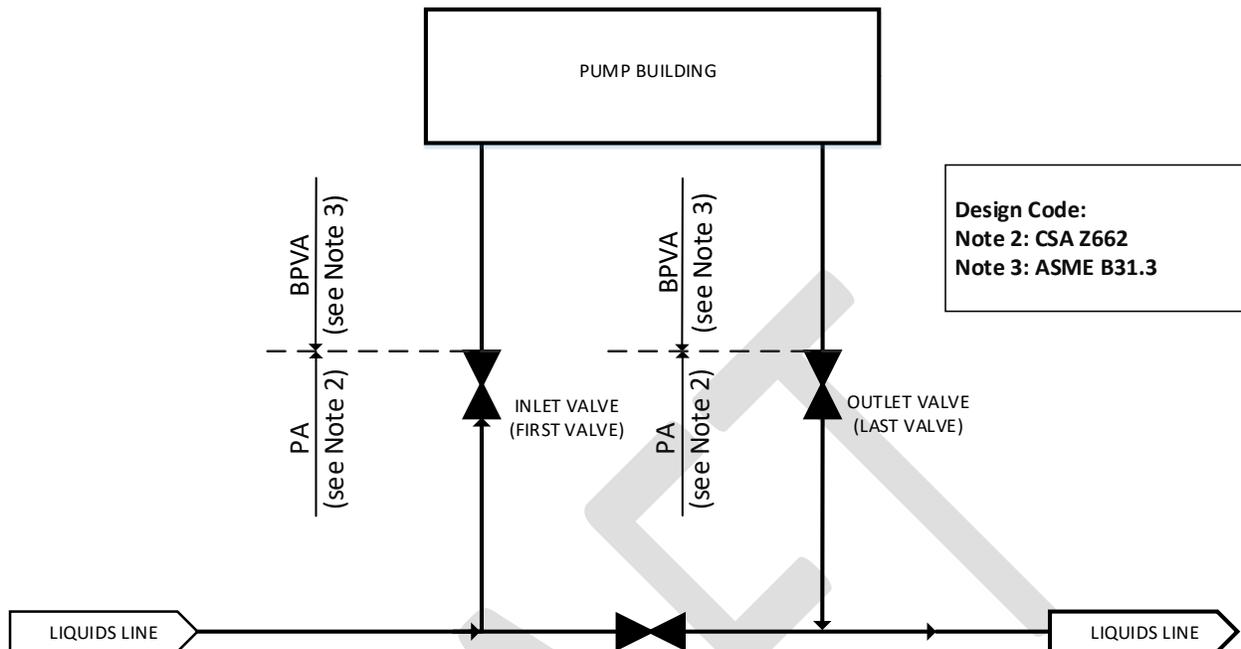
For cases with common or shared steam injection and production piping, the piping must meet CSA Z662, Clause 14, standards.

3.10 Compressor Station



Licensing Requirements:	<p>Pipeline entering the compressor station lease to the inlet or first valve on the manifold upstream of the compressor station is covered under a pipeline licence.</p> <p>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.</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 compressor station to the inlet or first valve on the manifold upstream of the compressor station</p> <p>TSASK: Separators, vessels, and all associated piping, including interconnecting piping.</p> <p>ER: Pipeline leaving the lease boundary.</p>
Design Code or Requirements:	<p>CSA Z662: Pipeline entering the compressor station to the inlet or first valve on the manifold upstream of the compressor station</p> <p>CSA B51: Separators, vessels, and all associated 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>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>

3.11 Pump Station



Licensing Requirements:

Pipeline entering the pump station lease to the first inlet block valve upstream of the pump station is covered under a pipeline licence.
 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.
 The pipeline leaving the lease boundary is covered under a pipeline licence.

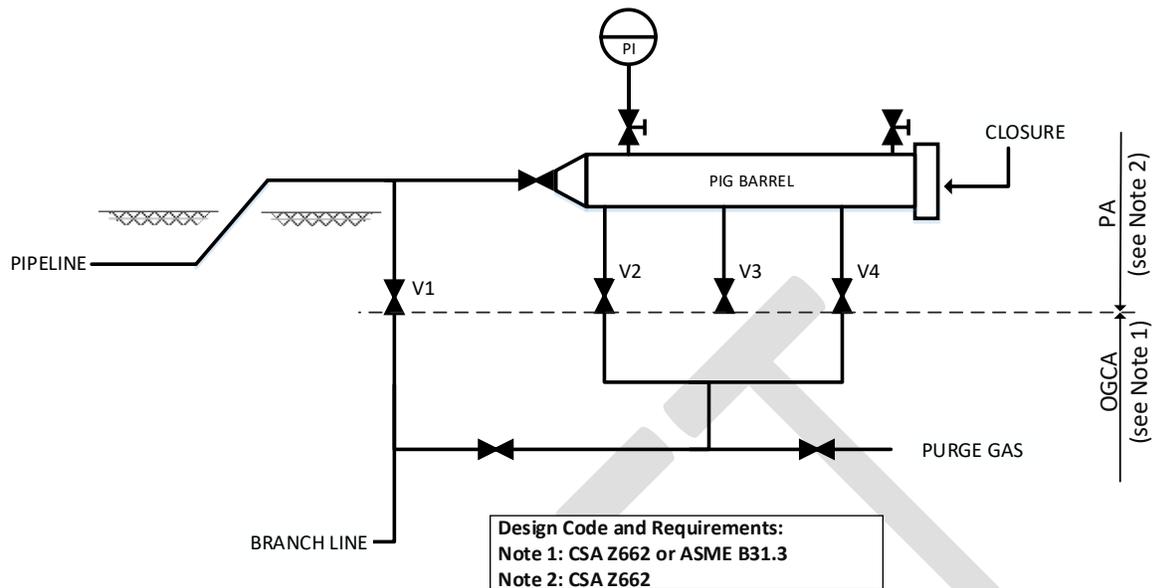
Design Jurisdiction (Design Review and Acceptance):

ER: Pipeline entering the pump station to the block valve upstream of pump station.
TSASK: Separators, vessels, and all associated piping, including interconnecting piping.
ER: Pipeline leaving the lease boundary.

Design Code or Requirements:

CSA Z662: Pipeline entering the pump station to the inlet or first valve on the manifold upstream of the pumpstation
CSA B51: Separators, vessels, and all associated 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.

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 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>

4. Definitions

ASME B31.3: American Society of Mechanical Engineers: Process Piping

CSA B51: Boiler, Pressure Vessel, and Pressure Piping Code

Directive S-01: Saskatchewan Upstream Petroleum Industry Storage Standards

Directive S-20: Saskatchewan Upstream Flaring and Incineration Requirements

Piping: Pipe or pipeline contained on the lease site which may or may not be located above ground.

Pressure piping system: means pipes, tubes, conduits, gaskets, bolts and other fittings making up a system, the sole purpose of which is the conveyance of an expansible fluid under pressure and the control of the flow of an expansible fluid under pressure between two or more points. (TSASK definition)

Pressure vessel: means a vessel or similar apparatus, other than a boiler, that is or may be used for containing, storing, distributing, transferring, distilling, evaporating, processing or otherwise handling gases, fluids or solids and that is normally operated under pressure, and includes any pipe or fitting that is attached to the vessel or used in connection with the vessel. (TSASK definition)

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Appendix 4: Temporary Pipeline

In this appendix, “temporary pipeline” means a pipeline that is

- above ground;
- not located wholly within the boundaries governed by a surface lease or by adjacent and abutting surface leases; and
- will be in use for a period of no more than 180 days.

Temporary Pipelines are subject to the Jurisdiction of *The Oil and Gas Conservation Act*.

Any person who intends to install a temporary pipeline shall obtain approval from Field Services office of Energy Regulation, ER, where the pipeline is located, 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;
- any other conditions that may obscure or endanger the pipeline.