

Tab A

SCHEDULE “A”

TRIBUTE RESOURCES INC. – GATHERING PIPELINE SYSTEM

Tribute Resources Inc. Gathering Pipeline Map

The map displays the gathering pipeline network in Norfolk County, Ontario. The network consists of numerous red lines representing gathering pipelines, which are interconnected and lead to a central compressor site and a delivery point. The map also shows the boundaries of Elgin County, Bayham Township, Malahide Township, and Norfolk County. Key locations marked include Tillsonburg, Straffordville, Vienna, Port Burwell, and Langton. A legend in the bottom right corner identifies the symbols for Norfolk County, Bayham Township, Malahide Township, Union Transmission Pipeline, and Tribute Gathering Pipelines.

LEGEND

- Norfolk County
- Bayham Township
- Malahide Township
- Union Transmission Pipeline
- Tribute Gathering Pipelines

LEGEND

- Norfolk County
- Bayham Township
- Malahide Township
- Union Transmission Pipeline
- Tribute Gathering Pipelines

Norfolk County
Bayham Township
Malahide Township

Union Transmission Pipeline
Tribute Gathering Pipelines

Tab B

SCHEDULE "B"

**MPAC PROPERTY ASSESSMENT NOTICES FOR 2014-2016 PROPERTY TAX
YEARS**



MUNICIPAL PROPERTY
ASSESSMENT CORPORATION
SOCIÉTÉ D'ÉVALUATION
FONCIÈRE DES MUNICIPALITÉS

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Page 1 of 1

Property Assessment Notice Avis d'évaluation foncière

for the 2014-2016 property tax years

Questions?

Please include your roll number
with your enquiry.

Call 1 866 296-MPAC (6722)

1 877 889-MPAC (6722) TTY

Monday to Friday - 8 a.m. to 5 p.m.

Web www.mpac.ca

Fax 1 866 297-6703

Write P.O. Box 9808, Toronto, ON M1S 5T9

Visit 53 Charing Cross St, Brantford

Monday to Friday - 8 a.m. to 4:30 p.m.

If you have any accessibility needs, please
contact MPAC for assistance.



0010007269 20 1/1 10/31

ECHO ENERGY CANADA INC
147 MAHOOD JOHNSTON DR
KINCARDINE ON N2Z 3A2

APPROVED _____

ALLOCATION _____

This Property Assessment Notice is not a property tax bill.

The assessed value of your property is used as the basis for calculating your property taxes. MPAC's role is to accurately value and classify properties in Ontario. Your municipality/local taxing authority is responsible for setting property tax rates. An assessment increase does not necessarily mean your property taxes will increase. For questions about your property taxes, contact your municipality/local taxing authority. To learn how MPAC assesses properties or for details about the Reconsideration and Appeal processes, see the enclosed insert. The deadline to file a Request for Reconsideration or an Appeal is **March 31** of the tax year. Please keep a copy of this Notice for your records.

Roll number	33 10 545 010 35210 0000
Property location and description	PIPELINES
Municipality/Local taxing authority	NORFOLK COUNTY

Assessed value of your property

Property classification	Pipeline
Your property's value as of January 1, 2012	\$2,312,000
Your property's value as of January 1, 2008	\$2,109,000
Over this 4-year period, your property's value changed by	\$203,000

Under the Assessment Act, an increase in assessed value between January 1, 2008 and January 1, 2012 is phased in over four years, from 2013 to 2016. Assuming your property characteristics stay the same, your property assessment will change by \$50,750 each year.

TAX YEAR	PHASED-IN ASSESSMENT
2014	\$2,210,500
2015	\$2,261,250
2016	\$2,312,000

School support

2014 ASSESSMENT	SCHOOL SUPPORT
\$2,210,500	Not Applicable

Property summary

Property type	Pipelines
Property information	Lot area: 1.00 acres

Please login to
www.aboutmyproperty.ca
to see a profile for your property
and compare your property with
similar properties in your area
free-of-charge.

If you don't have an account,
please register by entering:

Roll number: 33 10 545 010 35210
Access key: 2M5Q 8Q7Z WHZQ

Or call MPAC at
1 866 296-MPAC (6722)



MUNICIPAL PROPERTY
ASSESSMENT CORPORATION
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NOV 15 2013

Page 1 of 1

Property Assessment Notice
Avis d'évaluation foncière
for the 2014-2016 property tax years

Questions?

*Please include your roll number
with your enquiry.*

Call 1 866 296-MPAC (6722)

1 877 889-MPAC (6722) TTY

Monday to Friday - 8 a.m. to 5 p.m.

Web www.mpac.ca

Fax 1 866 297-6703

Write P.O. Box 9808, Toronto, ON M1S 5T9

Visit 785 Wonderla[™] Rd S, Unit 252, London

Monday to Friday - 8 a.m. to 4:30 p.m.

If you have any accessibility needs, please
contact MPAC for assistance.

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0010004114 23 1/1 1001

MAGNUM GAS CORP

147 MAHOOD JOHNSTON DR

KINCARDINE ON N5H 3C4

This Property Assessment Notice is not a property tax bill.

The assessed value of your property is used as the basis for calculating your property taxes. MPAC's role is to accurately value and classify properties in Ontario. Your municipality/local taxing authority is responsible for setting property tax rates. An assessment increase does not necessarily mean your property taxes will increase. For questions about your property taxes, contact your municipality/local taxing authority. To learn how MPAC assesses properties or for details about the Reconsideration and Appeal processes, see the enclosed insert. The deadline to file a Request for Reconsideration or an Appeal is March 31 of the tax year. Please keep a copy of this Notice for your records.

Roll number	34 08 000 011 03930 0000
Property location and description	PIPELINES
Municipality/Local taxing authority	MALAHIDE TOWNSHIP

Assessed value of your property

Property classification	Pipeline
Your property's value as of January 1, 2012	\$359,000
Your property's value as of January 1, 2008	\$328,000
Over this 4-year period, your property's value changed by	\$31,000

Under the Assessment Act, an increase in assessed value between January 1, 2008 and January 1, 2012 is phased in over four years, from 2013 to 2016. Assuming your property characteristics stay the same, your property assessment will change by \$7,750 each year.

TAX YEAR	PHASED-IN ASSESSMENT
2014	\$343,500
2015	\$351,250
2016	\$359,000

School support

2014 ASSESSMENT	SCHOOL SUPPORT
\$343,500	Not Applicable

Property summary

Property type	Pipelines
Property information	Lot area: 1.00 acres

Please login to
www.aboutmyproperty.ca
to see a profile for your property
and compare your property with
similar properties in your area
free-of-charge.

If you don't have an account,
please register by entering:

Roll number: 34 08 000 011 03930

Access key: D8Q8 R7V5 R8LM

Or call MPAC at

1 866 296-MPAC (6722)

**MUNICIPAL PROPERTY
ASSESSMENT CORPORATION
SOCIÉTÉ D'ÉVALUATION
FONCIÈRE DES MUNICIPALITÉS**

Avis d'évaluation foncière

Questions?

Please include your roll number with your enquiry.

Call 1 866 296-MPAC (6722)
1 877 889-MPAC (6722) TTY
Monday to Friday - 8 a.m. to 5 p.m.

Web www.mpac.ca
Fax 1 866 297-6703

Write P.O. Box 9808, Toronto, ON M1S 5T9

Visit 785 Wonderland Rd S, Unit 252, London
Monday to Friday - 8 a.m. to 4:30 p.m.

If you have any accessibility needs, please contact MPAG for assistance.

The assessed value of your property is used as the basis for calculating your property taxes. MPAC's role is to accurately value and classify properties in Ontario. Your municipality/local taxing authority is responsible for setting property tax rates. An assessment increase does not necessarily mean your property taxes will increase. For questions about your property taxes, contact your municipality/local taxing authority. To learn how MPAC assesses properties or for details about the Reconsideration and Appeal processes, see the enclosed insert. The deadline to file a Request for Reconsideration or an Appeal is March 31 of the tax year. Please keep a copy of this Notice for your records.

Roll number	34 01 000 003 08810 0000
Property location and description	PIPELINES
Municipality/Local taxing authority	BAYHAM MUNICIPALITY

Property classification	Pipeline
Your property's value as of January 1, 2012	\$3,647,000
Your property's value as of January 1, 2008	\$3,328,000
Over this 4-year period, your property's value changed by	\$319,000

Under the Assessment Act, an increase in assessed value between January 1, 2008 and January 1, 2012 is phased in over four years, from 2013 to 2016. Assuming your property characteristics stay the same, your property assessment will change by \$79,750 each year.

TAX YEAR	PHASED-IN ASSESSMENT
2014	\$3,487,500
2015	\$3,567,250
2016	\$3,647,000

2014 ASSESSMENT	SCHOOL SUPPORT
\$3,487,500	Not Applicable

Property type	Pipelines
Property information	Lot area: 1.00 acres

**Please login to
www.aboutmyproperty.ca
to see a profile for your property
and compare your property with
similar properties in your area
free-of-charge.**

**If you don't have an account,
please register by entering:**

Roll number: 34 01 000 003 08810
Access key: RH7Q HQ2R FQBH

Or call MPAC at
1 866 296-MPAC (6722)

Tab C

SCHEDULE “C”

**EXCERPT FROM THE CSA STANDARD Z662-11 (“CSA STANDARD”) ENTITLED,
“*OIL AND GAS PIPELINE SYSTEMS*”**

CSA Standard

Z662-11
Oil and gas pipeline systems



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Published in June 2011 by Canadian Standards Association
A not-for-profit private sector organization
5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6
1-800-463-6727 • 416-747-4044

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Chen, Q. and Nessim, M.A. 1994. *Risk-based Calibration of Reliability Levels for Limit States Design of Pipelines*. National Energy Board of Canada Report NEB PERD 200-4. Calgary.

Liu, M., Wang, Y., and Horsley, D. 2005. Significance of HAZ Softening on Strain Concentration and Crack Driving Force in Pipeline Girth Welds (OMAE2005-67039). *Proceedings of the Twenty-Fourth International Conference on Offshore Mechanics and Arctic Engineering Conference*.

Warman, D.J., Hart, J.D., and Francini, R. 2009. *Development of a Pipeline Surface Loading Screening Process and Assessment of Surface Loading Dispersing Methods*. Kiefner and Associates Inc. Worthington, Ohio, USA.

2.2 Definitions

The following definitions shall apply in this Standard:

Above-grade installation — installation of a pipeline above the surface of the ground on supports or in an embankment constructed from earth or other materials.

Allowable stress — see **Stress, allowable**.

Ambient temperature — see **Temperature, ambient**.

Applicator — the company responsible for the actual application of the coating systems.

Arc burn — a localized condition or deposit that is caused by an electric arc and consists of remelted metal, heat-affected metal, a change in the surface profile, or a combination thereof.

Axial stress — see **Stress, axial**.

Bar hole survey — see **Survey, bar hole**.

Bond — a metallic connection that provides electrical continuity.

Bond, interference — a metallic connection designed to control electrical current interchange between metallic systems.

Bottle — a gas-tight vessel that is completely fabricated from pipe with integral drawn, forged, or spun end closures and tested in the manufacturer's plant.

Bottle-type holder — see **Holder, bottle-type**.

Buckle arrester — a device or element that acts to stop the advance of a propagating buckle.

Carbon dioxide (CO₂) pipeline system — a pipeline system conveying carbon dioxide or predominantly carbon dioxide mixtures in the liquid or quasi-liquid state at pressures above 7.4 MPa.

Cast iron — all forms and types of cast iron, including ductile cast iron.

Cast iron, ductile — a cast iron in which the graphite present is substantially spheroidal or nodular in shape and the iron is essentially free from other forms of graphite.

Note: Also known as *spheroidal graphite or nodular cast iron*.

Cathodic protection — a technique to prevent the corrosion of a metal surface by making that surface the cathode of an electrochemical cell.

Cement-mortar lining — a mixture composed primarily of cement, sand, and water, shop-applied on the internal surface of line pipe or fittings.

Class location — a geographical area classified according to its approximate population density and other characteristics that are considered when designing and pressure testing piping to be located in the area.

Class location assessment area — a geographical area that extends 200 m on both sides of the centreline of the pipeline.

Class location assessment area, undeveloped — a class location assessment area that is

- (a) at least 400 m long;
- (b) free of dwelling units, other buildings intended for human occupancy, places of public assembly, and industrial installations; and
- (c) unlikely to be developed.

Class location end boundary — the demarcation between different class locations.

Cold-spring factor — the amount of cold spring that is provided, divided by the total computed thermal expansion.

Cold-springing — the fabrication of piping to an actual length shorter than its nominal length so that it is stressed in the installed condition, thus compensating partially for the effects produced by expansion due to an increase in temperature.

Collapse — cross-sectional instability of pipe resulting from combinations of bending, axial loads, and external pressure.

Company — the individual, partnership, corporation, or other entity that is in charge of design, materials, or construction, whichever is applicable.

Note: *The company may act through an authorized representative.*

Company, operating — the individual, partnership, corporation, or other entity that operates the pipeline system.

Competent — qualified, trained, and experienced to perform the required duties.

Component — a pressure-retaining member of the piping, other than pipe.

Compressor station — a facility used primarily to increase the pressure in a gas pipeline system, including

- (a) piping;
- (b) auxiliary devices (e.g., compressors, drivers, control instruments, enclosures, ventilating equipment, and utilities); and
- (c) any associated buildings other than residences.

Construction — all activities required for the field fabrication, installation, pressure testing, and commissioning of piping.

Contractor — the prime contractor and any subcontractors engaged in work covered by this Standard.

Control piping — see **Piping, control**.

Corrosion, stray current — corrosion resulting from direct current flow through paths other than the intended circuit.

Crossing, water — the crossing by an onshore pipeline of a bay, lake, river, or major stream.

Curb shutoff — see **Shutoff, curb**.

Current, impressed — direct current supplied by a device employing a power source external to the electrode system.

Current, interference — see **Current, stray direct**.

Current, stray direct — current flowing through paths other than the intended circuit.

Customer's meter — see **Meter, customer's**.

Damage incident — an event that results in damage to a pipe, component, tank, or coating without release of service fluid.

Deactivated piping — see **Piping, deactivated**.

Defect — an imperfection of sufficient magnitude to warrant rejection based upon the requirements of this Standard.

Demonstrate — verify, or describe and explain, by the use of records, measurements, tests, comparison of specimens, experiments, or analysis by a competent person, supported by documentation.

Dent — a depression caused by mechanical damage that produces a visible disturbance in the curvature of the wall of the pipe or component without reducing the wall thickness.

Design operating stress — see **Stress, design operating**.

Diameter, outside — the specified outside diameter (OD) of the pipe, excluding the manufacturing tolerance provided in the applicable pipe specification or standard.

Distribution line — see **Line, distribution**.

Distribution system, gas — the distribution and service lines, and their associated control devices, through which gas is conveyed from transmission lines or from local sources of supply to the outlet of a customer's meter set.

Distribution system, low-pressure — a gas distribution system in which the operating pressure does not exceed 14 kPa.

Ductile cast iron — see **Cast iron, ductile**.

Effective pipe stiffness — the effective stiffness of a pipe, taking into account localized deformations, weight-coating, field joints, and attachments.

Electrical isolation — the condition of being electrically isolated from other metallic structures and the environment.

Engineering assessment — a documented assessment of the effect of relevant variables upon fitness for service or integrity of a pipeline system, using engineering principles, conducted by, or under the direct supervision of, a competent person with demonstrated understanding and experience in the application of the engineering and risk management principles related to the issue being assessed.

Note: *General requirements for engineering assessment are specified in Clause 3.3.*

Engineering critical assessment — an analytical procedure, based upon fracture mechanics principles that allows determination of the maximum tolerable sizes for imperfections in fusion welds.

Fabricated assembly — an arrangement of piping that is joined together prior to installation in the pipeline system and contains at least two components that are separated by a distance of less than 10 pipe diameters.

Failure incident — an unplanned release of service fluid.

Fluid, service — the fluid contained, for the purpose of transportation, in an in-service pipeline system.

Foreign structure — any structure that is not part of the operating company's pipeline system.

Gas detector survey — see **Survey, gas detector**.

Gas distribution system — see **Distribution system, gas**.

Gathering line — see **Line, gathering**.

Gouge — a surface imperfection caused by mechanical removal or displacement of metal that reduces the wall thickness of a pipe or component.

Grade installation — installation of a pipeline on the surface of the ground or in a shallow ditch.

Note: *The pipeline may be covered with earth or other materials in the form of a berm.*

Ground temperature — the temperature of the earth, river bottom, or lake bottom at pipe depth.

Hazard — a condition or event that might cause a failure or damage incident or anything that has the potential to cause harm to people, property, or the environment.

Heat-affected zone (HAZ) — that portion of a weld consisting of base metal that has not been melted but whose microstructure or mechanical properties have been altered by the heat of welding.

Heat fusion joint — see **Joint, heat fusion**.

High energy joining (HEJ) — explosion welding of aluminum piping.

High-vapour-pressure (HVP) pipeline system — a pipeline system conveying hydrocarbons or hydrocarbon mixtures in the liquid or quasi-liquid state with a vapour pressure greater than 110 kPa absolute at 38 °C, as determined using the Reid method (see ASTM D323).

Holder, bottle-type — any bottle or group of interconnected bottles installed at one location and used for the sole purpose of storing gas.

Holder, pipe-type — any pipe or group of interconnected pipes installed at one location and used for the sole purpose of storing gas.

Holiday — a discontinuity of the protective coating that exposes the metal surface.

Hoop stress — see **Stress, hoop**.

Horizontal directional drilling (HDD) — a trenchless method of installing pipe in the ground at variable angles using a guidable drill head.

Hot tap — a branch connection made to piping while it is under pressure.

Hyperbaric dry chamber welding — see **Welding, hyperbaric dry chamber**.

Imperfection — a material discontinuity or irregularity that is detectable by inspection as specified in this Standard.

Impressed current — see **Current, impressed**.

Indication — evidence obtained by nondestructive inspection.

Inspection, non-destructive — the inspection of piping to reveal imperfections, using radiographic, ultrasonic, or other methods that do not involve disturbance, stressing, or breaking of the materials.

Note: *Direct visual inspection is not considered a form of non-destructive inspection.*

Instrument piping — see **Piping, instrument**.

Integrity management program — a documented program that specifies the practices used by the operating company to ensure the safe, environmentally responsible, and reliable service of a pipeline system.

Note: *An example of items to be included in an integrity management program is provided in Annex N.*

Interference bond — see **Bond, interference**.

Interference current — see **Current, stray direct**.

Isolating valve — see **Valve, isolating**.

Joint, electrofusion — a joint made in thermoplastic piping using electrical energy where the heating element is an integral part of the fitting, such that when electric current is applied, the heat produced melts the mating surfaces, causing them to fuse together. The heating element is moulded into the fitting or is inserted as part of a multi-stage manufacturing process, or employs a plastic material that is an electrical semiconductor.

Joint, heat fusion — a joint made in thermoplastic piping by heating the parts sufficiently to enable fusion of the materials when the parts are pressed together.

Joint, mechanical interference fit — a non-threaded joint for metallic pipe involving the controlled plastic deformation and subsequent mating of the pipe ends, or the mating of the pipe ends with a coupling; the resultant joint is achieved through the interference fit between the mated parts.

Leakage survey — see **Survey, leakage**.

Leak test — see **Test, leak**.

Line, distribution — a pipeline in a gas distribution system that conveys gas to individual service lines or other distribution lines.

Line, gathering — a pipeline that conveys gas from a wellhead assembly to a treatment plant, transmission line, distribution line, or service line.

Line, service — a pipeline in a gas distribution system that conveys gas from a gathering line, transmission line, distribution line, or another service line to the customer.

Line, transmission — a pipeline in a gas transmission system that conveys gas from a gathering line, treatment plant, storage facility, or field collection point in a gas field to a distribution line, service line, storage facility, or another transmission line.

Liner — a tubular product that is inserted into buried piping to form a corrosion-resistant barrier or separate, free-standing, pressure-retaining piping.

Longitudinal stress — see **Stress, longitudinal**.

Long-term hydrostatic strength — see **Strength, long-term hydrostatic**.

Lower explosive limit (LEL) — the smallest proportion of flammable gas mixed with air that would result in combustion when exposed to a source of ignition.

Low-pressure distribution system — see **Distribution system, low-pressure**.

Low-vapour-pressure (LVP) pipeline system — a pipeline system conveying

- (a) hydrocarbons or hydrocarbon mixture in the liquid or quasi-liquid state with a vapour pressure of 110 kPa absolute or less at 38 °C, as determined using the Reid method (see ASTM D323);
- (b) multiphase fluids; or
- (c) oilfield water.

Maximum combined effective stress — see **Stress, maximum combined effective**.

Maximum operating pressure — see **Pressure, maximum operating**.

Measuring station — a facility used to measure the quantity of service fluid flowing through piping, including meters, controls, piping, buildings, and other appurtenances.

Mechanical connector — a device or element, other than a threaded joint, used to join pipe ends by a mechanical process.

Mechanical interference fit joint — see **Joint, mechanical interference fit**.

Mechanical leak repair sleeve — equipment that can be installed over a leak to reduce or stop the leak.

Meter, customer's — a meter that measures gas delivered to a customer.

Monitor regulator — see **Regulator, monitor**.

Multiphase fluid — oil, gas, and water in any combination produced from one or more oil wells, or recombined oil well fluids that possibly have been separated in passing through surface facilities.

Nominal wall thickness — see **Wall thickness, nominal**.

Nondestructive inspection — see **Inspection, nondestructive**.

NPS — nominal pipe size, a dimensionless abbreviation followed by the numerical portion of the previously used inch nominal size of the matching pipe to designate the nominal size of components.

Offshore pipeline — see **Pipeline, offshore**.

Oilfield water — fresh or salt water transported by pipeline, regardless of purity or quality, from wells or surface locations for the purpose of

- (a) providing water injection to underground reservoirs;
- (b) disposing of waste water from hydrocarbon production, processing, or storage facilities; or
- (c) transporting water to or between production facilities, process facilities, or terminals.

One-atmosphere welding — see **Welding, one-atmosphere**.

Operating company — see **Company, operating**.

Operating stress — see **Stress, operating**.

Outside diameter — see **Diameter, outside**.

Overpressure protection — the use of pressure-limiting systems or pressure-relieving systems, or both, to continuously and automatically protect piping from fluid pressures in excess of a predetermined value.

Permafrost — the thermal condition in soil or rock at temperatures below 0 °C persisting over at least two consecutive winters and the intervening summer, whether or not moisture in the form of water or ground ice is present.

Pipe — a tubular product made to a pipe specification or standard, or tubing that is allowed by this Standard to be used as pipe.

Pipeline — those items through which oil or gas industry fluids are conveyed, including pipe, components, and any appurtenances attached thereto, up to and including the isolating valves used at stations and other facilities.

Pipeline emergency — an event involving a pipeline system, such as an uncontrolled release of service fluid, that endangers one or more of the following:

- (a) life;
- (b) the well-being and health of people;
- (c) property; and
- (d) the environment.

Pipeline, offshore — a pipeline that is installed seaward of the ordinary high water mark or from a similar point on the shoreline of major inland water.

Pipeline system — pipelines, stations, and other facilities required for the measurement, processing, storage, gathering, transportation, and distribution of oil or gas industry fluids.

Note: See Figures 1.1, 1.2, and 12.1.

Pipe-type holder — see **Holder, pipe-type**.

Piping — a portion of a pipeline system, consisting of pipe or pipe and components.

Piping, abandoned — piping that is removed from service and not maintained for later return to service.

Piping, control — the piping used to interconnect air-, gas-, or hydraulic-operated control apparatus, or instrument transmitters and receivers.

Piping, deactivated — piping that is removed from service and maintained for later return to service.

Piping, instrument — the piping used to connect instruments to main piping, to other instruments and apparatus, or to measuring equipment.

Piping, pretested — piping that has been subjected, prior to being installed, to a pressure test as specified in this Standard.

Piping, sample — the piping used for the collection of samples of gas, steam, water, or oil.

Position welding — see **Welding, position**.

Pressure — gauge pressure, unless absolute pressure is specifically stated.

Pressure-containment repair sleeve — a full-encirclement repair sleeve that has the ability to contain pipeline pressure within the sleeve.

Pressure-control system — a device or system installed for the purpose of regulating or limiting the pressure in piping, either automatically or by continuous monitoring with manual intervention (e.g., systems that use pressure regulators, pressure-control valves, or speed control of a pump or compressor).

Pressure-limiting system — a device or system that will automatically act to reduce, restrict, or shut off the supply of fluid flowing into piping in order to prevent the fluid pressure from exceeding a predetermined value (e.g., systems that use pressure-activated on/off control of a pump or compressor, pressure-limit override on a control valve, automated pressure-activated isolation valves, or monitoring regulators).

Pressure-regulating station — a facility used to control or limit the pressure within piping, including controls, piping, buildings, and other appurtenances.

Pressure-relieving system — a device or system that automatically operates to actively limit or lower the piping pressure by dumping, flaring, or blowing down the pressurized fluid into containment or the atmosphere (e.g., systems that use pressure-activated blowdown valves, pressure-relief valves, or rupture discs).

Pressure, maximum operating (MOP) — the maximum pressure at which piping is qualified to be operated.

Pressure, standard service — the gas pressure to be maintained at the inlet of a domestic customer's meter under normal operating conditions.

Pretested piping — see **Piping, pretested**.

Private right-of-way — see **Right-of-way, private**.

Production welding — see **Welding, production**.

Pump station — a facility used to pump oil industry fluids, including pumps, drivers, controls, piping, and other appurtenances.

Regulator, monitor — a pressure regulator set in series with the working-pressure regulator, for the purpose of taking over the control of the downstream pressure in the case of malfunction of the working-pressure regulator.

Regulator, service — a regulator installed on a service line to control the pressure of the gas delivered to the customer.

Reverse current switch — a device that prevents the reversal of direct current through a metallic conductor.

Right-of-way, private — a right-of-way that is not located on a road used by the public or on a railway right-of-way.

Riser — the section of piping, together with its supports, integrated components, and corrosion-protection system, commencing at a point 100 m from any offshore structure and ending above the water-line on the structure.

Road — a generic term denoting a highway, road, or street.

Roll welding — see **Welding, roll**.

Root bead — the weld bead that extends into, or includes part or all of, the region where two or more parts to be welded are closest.

Safety and loss management system — a systematic, comprehensive, and proactive process for the management of safety and loss control associated with design, construction, operation, and maintenance activities.

Note: *An example of items to be included in a safety and loss management system is provided in Annex A.*

Sample piping — see **Piping, sample**.

Sea-bottom — the bottom of a body of water (sea water or fresh water) in which an offshore pipeline is situated.

Secondary stress — see **Stress, secondary**.

Sectionalizing valve — see **Valve, sectionalizing**.

Service fluid — see **Fluid, service**.

Service line — see **Line, service**.

Service regulator — see **Regulator, service**.

Service shutoff — see **Shutoff, service**.

Shutoff, curb — a buried valve or cock located in a service line at or near the property line, accessible through a valve box and cover, and operable by a removable key.

Shutoff, service — a valve or cock located in a service line between the gas distribution line and the meter.

Source of ignition — any mechanical, electrical, or other device that can produce sufficient energy and temperature to start combustion of a flammable mixture.

Specified minimum tensile strength — see **Strength, specified minimum tensile**.

Specified minimum yield strength — see **Strength, specified minimum yield**.

Splash zone — the portion of an offshore pipeline subject to periodic wetting.

Standard service pressure — see **Pressure, standard service**.

Steel compression reinforcement repair sleeve — a steel reinforcement repair sleeve that produces a compressive hoop stress in the run pipe under operating conditions.

Storage vessel, pipe-type — pipe or group of interconnected pipes installed at one location and used for the primary purpose of storage.

Stray current corrosion — see **Corrosion, stray current**.

Stray direct current — see **Current, stray direct**.

Strength, long-term hydrostatic — the estimated hoop stress in a plastic pipe wall that causes failure at an average of 100 000 h when the pipe is subjected to a constant hydrostatic pressure.

Note: The determination of this value is specified in CSA B137.0.

Strength, specified minimum tensile — the minimum tensile strength prescribed by the specification or standard to which a material is manufactured.

Strength, specified minimum yield (SMYS) — the minimum yield strength prescribed by the specification or standard to which a material is manufactured.

Strength, tensile — the stress obtained by dividing the maximum load attained in a conventional tensile test by the original cross-sectional area of the test specimen.

Strength test — see **Test, strength**.

Strength, yield — the stress at which a material exhibits the specified limiting offset or specified total elongation under load in a tensile test as prescribed by the specification or standard to which the material is manufactured.

Stress, allowable — the maximum combined stress allowed for the design of piping.

Stress, axial — the uniform stress component acting over the pipe cross-section in the longitudinal direction.

Note: This component is often referred to as *membrane, average, or direct stress*.

Stress, design operating — the calculated hoop stress developed in a pipe by the maximum expected operating pressure, based upon nominal dimensions.

Stress, hoop — the stress in the wall of a pipe or component that is produced by the pressure of the fluid in the piping, any external hydrostatic pressure, or both, and that acts in the circumferential direction.

Stress, longitudinal — the stress at any point on the pipe cross-section acting in the longitudinal direction.

Note: Longitudinal stress includes the effects of both bending moments and axial forces.

Stress, maximum combined effective — the maximum combined stress value obtained when all applicable longitudinal, circumferential, and tangential shear stresses are acting simultaneously.

Stress, operating — the stress in a pipe or structural member under normal operating conditions.

Stress relieving — the heating of a completed weldment in order to reduce stresses produced during the welding process.

Stress, secondary — the stress created in the wall of a pipe or component by loads other than internal or external fluid pressure.

Stress, tangential shear — the shear stress in the wall of a pipe or component acting in the circumferential direction on a plane perpendicular to the longitudinal axis of the piping.

Surge — a transient pressure change due to sudden variations in flow conditions.

Survey, bar hole — a gas leakage survey made by driving or boring holes at regular intervals along the route of buried piping and testing the atmosphere in the holes with a combustible-gas detector or other suitable device.

Survey, gas detector — a gas leakage survey made by testing with a combustible-gas detector the atmosphere in water valve boxes, street vaults, cracks in pavements, and other available locations where access to the soil under the pavement is provided.

Survey, leakage — a systematic survey made for the purpose of locating leaks in a pipeline system.

Survey, vegetation — a leakage survey made by observing vegetation above buried piping.

Tank, aboveground — a tank that sits on or above the ground and is installed in a fixed location.

Tank farm — tank facilities for the storage of liquids.

Tank, relief — a tank that provides containment for fluids released during pressure relief.

Tank, underground — a tank that is partially or completely buried.

Temperature, ambient — the temperature of the surrounding medium in which piping is situated or a device is operated.

Tensile strength — see **Strength, tensile**.

Test-head assembly — an assembly of pipe and components that forms a temporary facility used for pressure testing of piping.

Test, leak — a pressure test to determine whether piping leaks.

Test, strength — a pressure test to confirm the pressure-retaining capability of piping and establish the maximum operating pressure.

Tie-in — a connection between

- (a) two pressure test sections;
- (b) pretested piping and other piping;
- (c) new facilities and existing piping; or
- (d) two lengths of piping that are fixed at their opposite ends or are long enough to act as though they are so fixed.

Transmission line — see **Line, transmission**.

Trenchless installation — any technique, including augering, boring, directional drilling, and tunnelling, whereby pipe is installed without a continuous trench.

Tubing (tube) — a tubular product made to a tubing (tube) specification or standard.

Underwater welding — see **Welding, underwater**.

Undeveloped class location assessment area — see **Class location assessment area, undeveloped**.

Upgrading — qualifying an existing pipeline system, or portion thereof, for a higher maximum operating pressure or for a changed class location.

Utility — an irrigation system, drain, drainage ditch, sewer, underground communications cable or power line, or foreign pipeline.

Valve, isolating — a valve for isolating laterals, stations, pressure-relieving installations, and other facilities.

Valve, sectionalizing — a valve for isolating a segment of a pipeline.

Vegetation survey — see **Survey, vegetation**.

Wall thickness, nominal — the specified wall thickness of the pipe purchased.

Water crossing — see **Crossing, water**.

Weld — a localized coalescence of metals produced by heating the materials to the welding temperature, with or without filler metal.

Welding, direct deposition — welding performed directly on the surface of pipe for the purpose of restoring wall thickness and strength.

Welding, hyperbaric dry chamber — welding underwater in a dry environment provided by a chamber fitted over the items to be welded; water is displaced from the chamber by gas at ambient pressure.

Welding, one-atmosphere — welding underwater in a pressure vessel in which the absolute pressure is maintained at approximately one atmosphere, regardless of depth.

Welding, position — welding with the items being welded held stationary while the weld metal is deposited.

Welding procedure specification — a document providing, in detail, the required parameters for welding.

Welding, production — the execution of welds that are covered by this Standard and are to be part of a pipeline system.

Welding, roll — welding with the items being rotated while the weld metal is deposited at or near the top centre.

Welding, underwater — welding performed below the water surface.

Welding, wet — welding with the items being welded in the water and with no physical barrier around the welding arc.

Wet welding — see **Welding, wet**.

Yield strength — see **Strength, yield**.

Tab D

SCHEDULE “D”

**OIL AND GAS PIPELINE SYSTEMS CODE ADOPTION DOCUMENT AMENDMENT
DATED AUGUST 31, 2012**



Fuels Safety Program OIL AND GAS PIPELINE SYSTEMS CODE ADOPTION DOCUMENT AMENDMENT	Ref. No.: FS-196-12	Rev. No.:
	Date: November 1, 2012	Date:

IN THE MATTER OF AN AMENDMENT TO THE

Oil and Gas Pipeline Systems Code Adoption Document

adopted as part of Ontario Regulation 210/01 (Oil and Gas Pipeline Systems)
by section 8(1) of Ontario Regulation 223/01 (Codes and Standards Adopted by Reference)
made under the *Technical Standards and Safety Act, 2000*, S.O. 2000, c. 16

The Director for the purposes of O. Reg. 210/01 (Oil and Gas Pipeline Systems), under authority of section 36(3)(a) of the *Technical Standards and Safety Act, 2000*, S.O. 2000, c. 16 (the “Act”), hereby amends the Oil and Gas Pipeline Systems Code Adoption Document published by the Technical Standards and Safety Authority and dated June 1, 2001, as amended, as follows:

- 1. All sections of the Oil and Gas Pipeline Systems Code Adoption Document (Sections 1 to 5) are revoked and replaced with Sections 1 to 5 of this document.**

Section 1

CODES ADOPTED BY REFERENCE

- The Director hereby adopts and requires all persons to whom O. Reg. 210/01 (Oil and Gas Pipeline Systems) applies to comply with the standards, procedures and other requirements of the following codes and regulations:
 - CSA Z662-11 (Oil and Gas Pipeline Systems)**, published by the Canadian Standards Association, as amended by Section 2 of this document;
 - CSA Z246.1-09 (Security Management for Petroleum and Natural Gas Industry Systems)**, published by the Canadian Standards Association; and
 - CSA Z276-11 (Liquefied Natural Gas (LNG) - Production, Storage and Handling)**, published by the Canadian Standards Association.

Section 2

AMENDMENTS TO CSA Z662-11 (OIL AND GAS PIPELINE SYSTEMS)

2. For the purposes of compliance with this Code Adoption Document, CSA-Z662-11 (Oil and Gas Pipeline Systems) shall be deemed to be amended as follows:

- (1) Clause 1.2 is amended by adding the following item:

- (h) pipelines that carry gas to and from a well head assembly of a designated storage reservoir.

- (2) Clause 1.3 is amended by adding the following items:

- (p) digester gas or gas from landfill sites
- (q) multiphase fluids
- (r) gathering lines
- (s) offshore pipeline systems
- (t) oil field steam distribution pipeline systems oil field water services
- (u) carbon dioxide pipeline systems.

- (3) Clause 3.2 is amended by renumbering the existing clause as 3.2.1 and adding the following clause:

3.2.2

Natural gas distributors shall incorporate into the procedures for managing the integrity of pipeline systems required in clause 3.2.1 an action plan that includes:

- (a) a description of the steps taken or that will be taken to mitigate the potential of penetration of sewer lines by a natural gas pipeline during trenchless installation;
- (b) a program that raises stakeholder awareness of the potential safety issues that could arise when attempting to clear a blocked sewer service line beyond the outside walls of a building; and
- (c) an assessment of potential risks and a plan to mitigate these risks.

- (4) Clause 4.1.8 is deleted and substituted with the following:

4.1.8

Steel oil and gas pipelines may be designed in accordance with the requirements of Annex C, provided that such designs are suitable for the conditions to which such pipelines are to be subjected, and provided that the design has been reviewed and approved by the Director prior to installation or use.

- (5) Clause 4.3.4 is amended by adding the following clauses:

4.3.4.9 High consequence areas

4.3.4.9.1 Definitions

The following definitions apply to the remainder of clause 4.3.4:

Assessment means the use of testing techniques set out in this section to ascertain the condition of a covered pipeline segment.

Covered segment or **Covered pipeline segment** means a segment of oil or gas transmission pipeline located in a high consequence area. The terms "oil", "gas" and "transmission" are defined in O. Reg. 210/01. For the purpose of this document, transmission lines include only lines with an MOP of 30% or more of the SMYS.

High consequence area means

- (a) for a gas transmission pipeline, an area defined as:
 - (i) a Class 3 location under CSA Z662-11, Clause 4.3.3;
 - (ii) a Class 4 location under Clause 4.3.3;
 - (iii) any area in a Class 1 or Class 2 location where the potential impact radius is greater than 200 metres and the area within the potential impact circle contains 20 or more buildings intended for human occupancy; or
 - (iv) any area in a Class 1 or Class 2 location where the potential impact circle contains an *identified site*; and
- (b) for an oil pipeline, an area containing:
 - (i) a *commercially navigable waterway*, which means a waterway where a substantial likelihood of commercial navigation exists;
 - (ii) a *high population area*, which means an urbanized area, as defined and delineated by the latest Statistics Canada Census, that contains 50,000 or more people or has a population density of at least 385 people per square km;
 - (iii) an *other populated area*, which means a place, as defined and delineated by the latest Statistics Canada Census, that contains a concentrated population, such as an incorporated or unincorporated city, town, village, or other designated residential or commercial area; or

- (iv) an *unusually sensitive area*, as defined in company's pipeline integrity management program.

Identified site means, for Class 1 and Class 2 locations, any of the following areas:

- (a) an outside area or open structure that is occupied by 20 or more persons on at least 50 (not necessarily consecutive) days in any 12 month period. Examples include but are not limited to, beaches, playgrounds, recreational facilities, camping grounds, outdoor theaters, stadiums, recreational areas near a body of water, and areas outside a rural building such as a religious facility;
- (b) a building that is occupied by 20 or more persons at least five (not necessarily consecutive) days a week for at least 10 (not necessarily consecutive) weeks in any 12 month period. Examples include, but are not limited to, religious facilities, office buildings, community centers, general stores, 4-H facilities, sporting and entertainment facilities; or
- (c) a facility occupied by persons who are confined, are of impaired mobility, or would be difficult to evacuate. Examples include but are not limited to hospitals, prisons, schools, day-care facilities, retirement facilities and assisted-living facilities.

Potential impact circle, for natural gas or *HVP pipelines systems*, is a circle of radius equal to the potential impact radius (PIR).

Potential impact radius (PIR) means the radius of a circle within which the potential failure of a pipeline could have significant impact on people or property, determined by the following formula:

$$r = 0.00313 \text{ times square root of } (pd^2)$$

where:

r is the radius of the circular area surrounding the point of failure in metres (m)

p is the MOP of the pipeline in kPa

d is the nominal diameter of the pipeline in mm

NOTE: 0.00313 is the factor for natural gas based on conversion from a formula used in GRI-00/0189. This number will vary for other gases depending upon their heat of combustion. An operator transporting gas other than natural gas shall refer to ASME/ANSI B31.8 S for the formula to calculate the potential impact radius.

4.3.9.2 Identification of high consequence areas

- (a) *General*. Operating companies shall identify which segments of its oil and gas transmission pipeline system are in high consequence areas. The operator must

describe in its integrity management program the method used to establish high consequence areas, including the determination of the potential impact radius.

- (b) *Identified sites.* The operator shall identify identified sites by
 - (i) using information the operator has obtained from routine operation and maintenance activities; and
 - (ii) obtaining information about locations that are likely to meet the criteria for identified sites from public officials with safety or emergency response or planning responsibilities (such as officials from local emergency planning response agencies or from municipal planning departments).
- (c) *Identified sites – where public officials cannot assist.* If the public officials mentioned above indicate that they do not have the necessary information or are otherwise unable to identify potential identified sites, the operator shall use the following methods, as appropriate, to identify potential identified sites:
 - (i) the presence of signs, public notices, flags or other markings that suggest that the area may become an identified site in the future; and
 - (ii) the existence of publicly available information, including online and at local land registry offices, that suggests the area may become an identified site in the future.
- (d) *Newly identified high consequence areas.* When an operator obtains information suggesting that the area around a pipeline segment not previously identified as a high consequence area could constitute a high consequence area, the operator shall evaluate whether the area indeed constitutes a high consequence area. If the segment is determined to constitute a high consequence area, it must be incorporated into the operator's baseline assessment plan as a high consequence area within one year from the date the area is identified.

4.3.4.10 Operator's responsibility to implement this clause

4.3.4.10.1

An operator of a covered pipeline segment shall develop and follow a written program (part of the pipeline system integrity management program (IMP)) that contains all the elements described in the IMP and that addresses the risks on each covered transmission pipeline segment.

4.3.4.10.2 Implementation standards

An operator may use an equivalent standard or practice to a standard or practice required by clause 4.3.4 only when the operator demonstrates in its Integrity Management Program that the alternative standard or practice provides an equivalent level of safety to the public and property.

4.3.4.11 Risk assessment

The operator shall conduct a risk assessment that follows Annex B Guidelines for risk assessment of pipelines falling within the scope of CSA Z662-11 for each covered

segment. The risk assessment shall include the high consequence areas and determine if additional preventive or mitigation measures are needed.

The operator shall prioritize the covered pipeline segments according to the risk.

4.3.4.12 Remediation

For each covered segment, the operator shall develop and establish measures to prevent or reduce the probability of an incident and to limit the potential consequences thereof.

These measures shall include conducting a risk analysis of the pipeline segment to identify additional measures to enhance public safety or environmental protection. Such measures may include, but are not limited to:

- (a) establishing shorter inspection intervals;
- (b) installing emergency flow restricting devices (remote operated valves, check valves and automatic shut off valves, as applicable);
- (c) modifying the systems that monitor pressure or detect leaks, as applicable;
- (d) providing additional training to personnel on response procedures;
- (e) conducting drills with local emergency responders; and
- (f) adopting other management controls.

Evacuation procedures shall take into consideration the PIR.

For oil pipeline segments located in high consequence areas, the operating company shall provide the Ontario Ministry of Natural Resources (MNR) and the Ontario Ministry of Environment (MOE) an opportunity to comment on the company's contingency plan for leaks or spills and shall address any comments provided by MOE or MNR.

- (6) Clause **7.10.3.2** is deleted and substituted with the following:

7.10.3.2

For HVP and for sour service pipeline systems, all butt welds shall be inspected by radiographic or ultrasonic methods, or a combination of such methods, for 100% of their circumferences, in accordance with the requirements of clause 7.10.4.

- (7) Clause **10.3.7.1** is deleted and substituted with the following:

10.3.7.1

Prior to a change in service fluid, including from non-sour service to sour service, the operating company shall conduct an engineering assessment to determine whether the pipeline systems would be suitable for the new service fluid. The assessment shall include consideration of the design, material, construction, operating, and maintenance history of the pipeline system and shall be submitted to the Director for approval.

- (8) Clause **10.3** is amended by adding the following clause:

10.3.10

For the protection of the pipeline, the public and the environment, the operating company shall develop a pipeline integrity management program for steel pipelines with an MOP of 30% or more of the SMYS that complies with the applicable requirements of clause 3.2 of CSA Z662-11. The integrity management program shall include the following items:

- (a) a management system;
- (b) a working records management system;
- (c) a condition monitoring program, and
- (d) a mitigation program.

- (9) Clause **10.5.2** is amended by adding the following clauses:

10.5.2.6 Emergency communication meetings

The operator of a transmission pipeline shall conduct meetings with local authorities, inviting police, firefighting authorities, Ontario Ministry of Transportation (MTO), Ministry of Natural Resources (MNR), Ministry of the Environment (MOE), local conservation authorities and TSSA, to explain to the authorities the characteristics of the pipeline system the operator operates, the type of fuels being transported and the typical behaviour of these fuels in case of uncontrolled escapes or spills and the capabilities and the coordination required to respond to pipeline emergencies.

These meetings shall be conducted at intervals not exceeding five years at locations that ensure the key stakeholders can attend. The meetings shall be prioritized so as to correspond to the operating company's prioritization of the covered pipeline segments according to the risk.

10.5.2.7

Operating companies shall prepare an emergency response plan and make it available on request to the authorities referred to in clause 10.5.2.6.

- (10) Clause **10.6** is amended by adding the following clause:

10.6.5 Right-of-way encroachment

10.6.5.1

No person shall install patios or concrete slabs on the pipeline right-of-way or fences across the pipeline right-of-way unless written permission is first obtained from the operating company.

10.6.5.2

No person shall erect any building (including garden sheds) or install swimming pools on the pipeline right-of-way, and no person shall deposit or store any flammable material, solid or liquid spoil, refuse, waste or effluent on the pipeline right-of-way.

10.6.5.3

Notwithstanding the above, operating companies may erect structures required for purpose of pipeline system operation on the pipeline right-of-way.

10.6.5.4

No person shall operate a vehicle or mobile equipment except for farm machinery or personal recreation vehicles across or along a pipeline right-of-way unless written permission is first obtained from the operating company or the vehicle or mobile equipment is operated within the travelled portion of a highway or public road in the pipeline right-of-way.

10.6.5.5

Operating companies shall develop written procedures for periodically determining the depth of cover for pipelines operated over 30% of SMYS. Such written procedures shall include a rationale for the frequency selected for such depth determinations. Where the depth of cover is found to be less than 60 cm in lands being used for agriculture, an engineering assessment shall be done in accordance with clause 3.3 and a suitable mitigation plan shall be developed and implemented to ensure the pipeline is adequately protected from hazards.

(11) Clause **10.15.1.2** is amended by adding the following items:

- (e) maintain warning signs and markers along the pipeline right-of-way;
- (f) maintain existing fences around above ground pipeline facilities; and
- (g) empty tanks and purge them of hazardous vapours within 60 days of deactivation.

(12) Clause **12.4.11.1** is renumbered as clause **12.4.11.1.1**. Clause **12.4.11** is amended by adding the following clauses:

12.4.11.1.2

All new and replacement natural gas service regulators shall comply with the requirements of CSA 6.18-02 (R2008) (Service Regulators for Natural Gas), published by the Canadian Standards Association, including the Drip and Splash Test contained in Appendix A of the said standard. Where a regulator-meter set installation or supplemental protective devices provides equivalent protection against regulator vent freeze up passes a successful test in accordance with Appendix C of the said standard, the requirements of Appendix A (Drip and Splash Test) and those contained in clause

14.15 (Freezing Rain Test) of the standard are waived. Evidence of tests completed in accordance with Appendix C of the standard shall be retained by the operating company as permanent records.

12.4.11.1.3

Regulator-meter set configurations shall be included in the operating company's operating and maintenance procedures.

- (13) Clause **12.4.15.6** is revoked and substituted with the following:

12.4.15.6

Where regulator failure would result in the release of gas, open ends of the vents shall be located where the gas can escape freely into the atmosphere and away from any openings in the buildings. Clearances from building openings shall be commensurate with local conditions and the volume of gas that might be released, but shall not be less than those set out in the following table:

Clearance from service regulator vents discharge (m)

<i>Column:</i>	I	II	III	IV
Building opening	0.3	1	3	1
Appliance vent outlet	0.3	1	1	1
Moisture exhaust duct (dryers)	1	1	1	1
Mechanical air intake	1	3	3	3
Appliance air intake	0.3	1	3	3
Source of ignition	0.3	1	1	3

Column I applies to natural gas regulators certified under CSA 6.18 standard, incorporating an OPCO system and with a limited relief of 1.5 m³/h.

Column II applies to natural gas regulators certified under CSA 6.18 standard (if within the scope of the standard) with a relief capacity up to 55 m³/h.

Column III applies to natural gas regulators with a relief capacity over 55 m³/h.

Column IV applies to propane regulators.

Where regulators might be submerged during floods, either a special anti-flood-type breather vent fitting shall be installed or the vent line shall be extended above the height of the expected flood waters.

- (14) Clause **12.10.11** is amended by adding the following items:

- (e) For polyethylene piping installed in Class 1 and Class 2 locations, the upgraded maximum operating pressure shall not exceed the design pressure calculated in accordance with the requirements of Clause 12.4.2; and
- (f) For polyethylene piping installed in Class 3 and Class 4 locations, the upgraded maximum operating pressure shall not exceed the design pressure calculated in accordance with the requirements of clause 12.4.2 with a combined design factor and temperature derating factor ($F \times T$) of 0.32, unless the operating company conducts an engineering assessment to determine whether it would be suitable for the existing polyethylene piping to be operated at the new pressure. The assessment shall include consideration of the design, material, construction, operating, and maintenance history of the pipeline system and be submitted to the Director for approval.

(15) Clause **12.10** is amended by adding the following clause:

12.10.16

Operating companies shall establish effective procedures for managing the integrity of pipeline systems with an MOP less than 30% of SMYS (Distribution Systems) so that they are suitable for continued service, in accordance with the applicable requirements of clause 3.2 of CSA Z662-11.

Section 3

POLYETHYLENE PIPE CERTIFICATION

3. Polyethylene piping and fittings that are used in a polyethylene gas pipeline shall be certified by a designated testing organization accredited by the Standards Council of Canada as conforming to CAN/CSA-B137.4-09 (Polyethylene Piping Systems for Gas Services).

Section 4

WELDER QUALIFICATION

4. Welds shall not be made in any steel pipe that forms or is intended to form a part of a steel oil or gas pipeline or a component of a steel pipeline unless the welding procedures have been approved and the welder is qualified to make the weld in accordance with the requirements of CSA-Z662-11 (Oil and Gas Pipeline Systems) and is the holder of the appropriate authorization issued under O. Reg. 220/01 (Boilers and Pressure Vessels) made under the Act.

Section 5

MISCELLANEOUS

5.

- (1) Where there is a conflict between a standard, specification, code or publication adopted in sections 1, 2, 3 or 4 of this document, this document prevails.
- (2) Any reference to “Director” in a code amended by this document means the Director for O. Reg. 210/01 (Oil and Gas Pipeline Systems).
- (3) Any person involved in an activity, process or procedure to which this document applies shall comply with this document.
- (4) Except as provided below, this Code Adoption Document amendment is effective **November 1, 2012**.
- (5) Notwithstanding Section 5(4), the following parts of the Code Adoption Document are effective **March 1, 2013**:
 - (a) Section 1(b), which adopts CSA Z246.1-09 (Security Management for Petroleum and Natural Gas Industry Systems); and
 - (b) Section 2(5), which adds clause 4.3.4.9 (re high consequence areas) to clause 4.3.4. of CSA Z662-11 (Oil and Gas Pipeline Systems).

SIGNED this 31st day of August, 2012



John Marshall

Director for O. Reg. 210/01, appointed under authority of section 4(1) of the Act

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*This document was developed in consultation with the
Gaseous Fuels Advisory Council and the Pipeline Risk Reduction Group*