Fuels Safety Program	Ref. No.: FS-121-08	Rev. No.:
Oil and Gas Pipeline Systems Code Adoption Document - Amendment	Date: January 14, 2008	Date:

IN THE MATTER OF:
THE TECHNICAL STANDARDS AND SAFETY ACT, 2000,
***S.O. 2000, c. 16* (the "Act")**

- and -

ONTARIO REGULATION 210/01 (Oil and Gas Pipeline Systems)
made under the Act

and

ONTARIO REGULATION 223/01 (Codes and Standards Adopted by Reference)
made under the Act

Subject: Amendments to the Oil and Gas Pipeline Systems Code Adoption Document adopted by reference as part of Ontario Regulation 210/01 (Oil and Gas Pipeline Systems)
Sent to: Gaseous Fuels Advisory Council, Pipeline RRG, Posted on TSSA's Web-Site

The Director of Ontario Regulation 210/01 (Oil and Gas Pipeline Systems) pursuant to section 8 of Ontario Regulation 223/01 (Codes and Standards Adopted by Reference) hereby provides notice that the Oil and Gas Pipeline Systems Code Adoption Document published by the Technical Standards & Safety Authority and dated June 1, 2001, as amended, is amended as follows:

All sections of the Code Adoption Document (Sections 1 to 5) are revoked and replaced with the following:

Section 1

REFERENCE PUBLICATIONS

(1) The reference publications as set forth herein are approved by the Director and adopted as part of this Document and the standards, procedures and requirements therein, as applicable to this Document, shall be complied with by operating companies as well as anyone engaged in the design, construction, erection, alteration, installation, testing, operation or removal of a pipeline, for the transmission of oil or gas or the distribution of gas.

Government of Ontario

Technical Standards & Safety Act, 2000, Ontario Regulation 220/01 (Boilers and Pressure Vessels)

Canadian Standards Association

Service Regulators for Natural Gas, CSA 6.18-02

Section 2

GENERAL REQUIREMENTS

2. (1) The Standards issued by the Canadian Standards Association entitled Oil and Gas Pipeline Systems Z662-07 and CSA Z276-07 Liquefied Natural Gas (LNG) – Production, Storage and Handling and the standards, specifications, codes and publications set out therein as reference publications insofar as they apply to the said Standards are adopted as part of this Document, with the following changes to the CSA-Z662-07 Standard:

(2) 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.

(3) 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.

(4) Clause **4.1.7** is revoked and the following substituted:
4.1.7 Subject to prior review by the Director, it shall be permissible for steel oil and gas pipelines to be designed in accordance with the requirements of Annex C, provided that the designer is satisfied that such designs are suitable for the conditions to which such pipelines are to be subjected.

(5) Clause **7.10.3.2** is revoked and the following substituted:
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.

(6) Clause **10.5.10** is amended by adding the following clauses:
10.5.10.7 Operating companies shall inform agencies to be contacted during an emergency, including the police and fire departments about the hazards associated with its pipelines.

10.5.10.8 Operating companies shall prepare an emergency response plan and make it available to local authorities.

(7) Clause **10.6** is amended by adding the following clause:
10.6.5 Right-of-Way Encroachment

10.6.5.1 It shall be prohibited to 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 It shall be prohibited to erect buildings including garden sheds or to install swimming pools on the pipeline right-of-way. Storage of flammable material and dumping of solid or liquid spoil, refuse, waste or effluent, shall be also forbidden.

10.6.5.3 Operating companies shall be allowed to erect structures required for pipeline system operation purposes on the pipeline right-of-way.

10.6.5.4 No person shall operate a vehicle or mobile equipment except for farm machinery and 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.

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 clauses 10.14.2 and 10.14.6 and a suitable mitigation plan shall be developed and implemented to ensure the pipeline is adequately protected from hazards.

(8) Clause **10.14.2** is amended by adding the following clauses:

10.14.2.6 The Director may require operating companies or a person to submit a design, specification, program, manual, procedure, measure, plan or document to the Director if:

a) the operating company or person makes an application to the Director under Section 18.(1) 1, 18.(1) 3 and 16.(6) of Ontario Regulation 210/01 (Oil and Gas Pipeline Systems), or

b) the Director has reasons to believe that the design, construction, operation or abandonment of a pipeline, or any part of a pipeline is or may cause,

i. a hazard to the safety of the public or to the employees of the operating company,

ii. an adverse effect to the environment or to property, or

iii. the Director wishes to assess the operating company's pipeline integrity management program.

10.14.2.7 For the protection of the public, the pipeline and the environment, an operating company shall develop a pipeline integrity management program for steel pipelines with a MOP of 30% or more of the SMYS. The pipeline integrity management program shall contain:

a) a management system;

b) a working records management system;

c) a condition monitoring program, and

d) a mitigation program.

10.14.2.8 When developing the pipeline integrity management program, an operating company shall consider CAN/CSA-Z662-07, Oil and Gas Pipeline Systems, Annex N, Guidelines for Pipeline Integrity Management Programs.

(9) Clause **10.14.3.1** is revoked and the following substituted:

10.14.3.1 Prior to a change in service fluid, including sweet to sour, the operating company shall conduct an engineering assessment to determine whether it 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 be submitted to the Director for approval.

(10) Clause **10.16.1.2** 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.

(11) 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 standard, Service Regulators For Natural Gas, including the Drip and Splash Test contained in Appendix A of the said Standard. Where a regulator – meter set installation or supplemental protective devices as providing equivalent protection against regulator vent freeze up passes a successful test in accordance to 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 test made in accordance with Appendix C, shall be kept 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.

(12) Clause **12.4.15.6** is amended by replacing the reference to CAN/CSA-B149.1 to "Table 5.2 of B149.1S1-07 Supplement No. 1 to CAN/CSA-B149.1-05, Natural Gas and Propane Installation Code".

(13) Clause **12.10.11** is amended by adding the following clauses:

12.10.11(e) For polyethylene piping installed in Class 1 and Class 2 location, the upgraded maximum operating pressure shall not exceed the design pressure calculated in accordance with the requirements of Clause 12.4.2.1; and

12.10.11(f) For polyethylene piping installed in Class 3 and Class 4 location, the upgraded maximum operating pressure shall not exceed the design pressure calculated in accordance with the requirements of clause 12.4.2.1 with a combined design factor and temperature derating factor (F x T) of 0.32.

(14) Clause **12.10.13.1** is revoked and the following substituted:

12.10.13.1.1 The Director may require operating companies or a person to submit a design, specification, program, manual, procedure, measure, plan or document to the Director if:

a) the operating company or person makes an application to the Director under subsection 18.(1) 2 of Ontario Regulation 210/01 (Oil and Gas Pipeline System),
b) the Director has reasons to believe that the design, construction, operation or abandonment of a pipeline, or any part of a pipeline is or may cause,
    i. a hazard to the safety of the public or to the employees of the operating company,
    ii. an adverse effect to the environment or to property, or
    iii. the Director wishes to assess the operating company's integrity management program.

12.10.13.1.2 Operating companies shall establish effective procedures for managing the integrity of pipeline systems with a MOP less than 30% of SMYS (Distribution Systems) so that they are suitable for continued service. The integrity management program shall contain:

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

When developing the integrity management program, an operating company shall consider Annex M, Guidelines for Gas Distribution System Integrity Management Programs.

This program and implementation plan shall be completed no later than April 30, 2008.

Section 3

POLYETHYLENE PIPE CERTIFICATION

3. (1) 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 the CAN/CSA-B137.4-05. Polyethylene Piping Systems for Gas Services.

Section 4

WELDER QUALIFICATION

4.(1) 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 welder is qualified to make the weld in accordance with the requirements of the CSA Z662-07 Standard adopted under section 2 of this document and is the holder of the appropriate authorization issued under Ontario Regulation 220/01 (Boilers and Pressure Vessels), made under the *Technical Standards & Safety Act, 2000.*

Section 5

5.(1) Where there is a conflict between a standard, specification, code or publication adopted in this document, this document shall prevail.

(2) Any person involved in an activity process or procedure to which this document applies, shall comply with this document.

(3) The above amendments to the Oil and Gas Pipeline Code Adoption Document are effective on March 31, 2008.

Dated at Toronto this 26th. day of March, 2008.

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John Marshall
Statutory Director
Ontario Regulation 210/01 (Oil and Gas Pipeline Systems)
made under the *Technical Standards & Safety Act, 2000*