

SAFETY ADVISORY

2011-02

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INTERNAL CORROSION OF SOUR GAS PIPELINES

In 2009, 64 per cent of pipeline incidents on sour gas pipelines within British Columbia were the result of internal corrosion. A preliminary analysis of sour pipeline incidents for 2010 indicates a similar rate (58 per cent).

The British Columbia Oil and Gas Commission (the Commission) notes that the requirements for design, construction and operation of pipelines transporting sour fluids were changed significantly with the introduction of Annex M of CSA Z662 Oil and Gas Pipeline Systems (CSA Z662) in 2005. The requirements of Annex M have since been incorporated as clause 16 of the 2007 edition of CSA Z662.

The definition for a “sour service pipeline” is found in clause 16.2 of CSA Z662. Permit Holders operating sour service pipelines within British Columbia are required to comply with all requirements found within CSA Z662 as per section 3 of the Pipeline and Liquefied Natural Gas Facility Regulation under the [Oil and Gas Activities Act \(OGAA\)](#).

The contents of clause 16 include (but are not limited to):

- Requirements for records regarding design information including design parameters, calculations, material specifications, welding procedures, etc.
- Requirements ensuring that all sour service pipelines are designed to accommodate internal maintenance cleaning and inspection devices.
- Requirements for inspection plans prepared by or on behalf of the permit holder describing the necessary inspection, testing and documentation required to be performed by the contractor.
- Requirements for 100 per cent non-destructive examination of all butt welds and clause specific standards of acceptability.
- Requirements for corrosion mitigation and monitoring programs including the mandatory application of corrosion inhibitors.

The Commission notes that CSA Z662 establishes the minimum requirements for corrosion management through mandatory design, construction, operating and maintenance practices. Individual permit holder programs and procedures may exceed the requirements of CSA Z662.

**For oil and gas incidents and emergencies, please contact the Commission at:
1-800-663-3456 (24 hours).**

Should you have any questions regarding this Safety Advisory, please contact:

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