

MANITOBA) Order No. 5/09
)
THE PUBLIC UTILITIES BOARD ACT) January 26, 2009

Before: Graham Lane, C.A, Chairman
Len Evans, LLD, Member
Monica Girouard, CGA, Member

CENTRA GAS MANITOBA INC.
APPLICATION TO VARY ORDER 170/07
CSA STANDARDS -
OIL AND GAS PIPELINE SYSTEMS

1.0 EXECUTIVE SUMMARY

The Public Utilities Board (Board) hereby approves an application by Centra Gas Manitoba Inc. (Centra) and varies Order 170/07, this in regard to the application of CSA standards to Oil And Gas Pipeline Systems.

Centra's submission requested approval for the use of non-CSA approved fittings, to be used in Centra's butt fusion remediation program.

2.0 APPLICATION

Centra supported its application with an engineering report on the use of non-CSA approved fittings with respect to repairs related to Centra's butt fusion remediation program. The butt fusion remediation program repairs or replaces fusions of suspect quality.

To enhance efficiency, Centra proposed to employ the use of a camera inserted into pipes to locate suspect fusions and the use of an electro-fusion repair patch. Under the proposal, butt fusion repairs (on 60.3 mm (2 NPS) pipes) will be performed by first cutting out the joint, and then employing electro-fusion couplings to install new pipe sections.

To insert a camera into a 114.3 mm (4 NPS) pipe, without squeezing or cutting the main, Centra proposed to use a specialized electro-fusion camera insertion fitting. To repair a suspect butt fusion on a 114.3 mm (4 NPS) pipe,

Centra proposed to use a specialized electro-fusion repair patch to be installed over the suspect failed butt joint.

To-date, these proposed specialized fittings have not been approved by CSA.

3.0 BOARD REVIEW

The Board reviewed Centra's supporting January 10, 2008 engineering report, and requested:

- 3.1 The justification for using the two specialized fittings,
- 3.2 The justification and proposed procedures for joining bimodal polyethylene fittings (PE100) to unimodal polyethylene pipe (PE2406),
- 3.3 The documentation from the manufacturer, confirming that the fittings have been manufactured and tested to appropriate ASTM standards; and
- 3.4 That Centra perform its own testing on a sample of the fittings it receives.

Subsequently Centra responded to the Board's requests, and the Board's findings are pursuant to Centra's response.

4.0 BOARD FINDINGS

The Board concludes:

- 4.1 Centra has properly identified that the proposed fittings are to be stamped with PE3408 in addition to PE100; PE3408 is an approved material specification in accordance with CSA Z662 and CSA B137.4.

Centra further elaborated that the material used in the manufacture of the fittings has been approved in accordance with the Plastic Pipe Institute's TR-4/2006 B standard.

- 4.2 Centra addressed the Board's compatibility issue effectively, by stating that the manufacturer's technical literature indicates that bimodal PE3408/PE100 fittings are suitable for use with unimodal PE2406 pipe.

Centra submitted its procedures for camera insertion and for the 114.3 mm (4 NPS) repair patch, and indicated that for future shipments of these fittings, the utility will test a sample of each batch received.

The Board is satisfied that Centra's Polyethylene Fusion Guide provides proper instruction for the fusing of dissimilar materials by mandating electro-fusion as the only authorized method. Centra's internal testing of a sample of each

batch of fittings is sufficient to comply with Z662-07 12.7.8.2.

- 4.3 Centra submitted the manufacturer's documentation, which reported that the initial batch of fittings had been tested in accordance with appropriate ASTM Standards. The Board will expect that this form of documentation to accompany each shipment of fittings.
- 4.4 Centra confirmed that, with the Board's approval of its application, it will perform joint crush tests on a sample of all fittings received in accordance with CSA B137.4.1.

The Board is satisfied with the proposed testing regime, and will require that its engineering consultant, Energy Consultants International Inc., witness these tests until such time as the Board has delegated certain safety oversight functions to Centra, or at minimum, Centra will forward the results of each test to the Board for review.

5.0 IT IS THEREFORE ORDERED THAT:

Board Order 170/07 IS HEREBY VARIED. The use of PE100 fittings for Camera Access and Butt Fusion Repair on 114.3 mm (4 NPS) pipe BE AND IS HEREBY APPROVED, based on the following conditions:

- 5.1 Centra performs internal testing of each batch of fittings;
- 5.2 Centra obtains documentation from the manufacturer confirming that each batch of fittings has been manufactured and tested in accordance with the appropriate ASTM standard; and
- 5.3 Centra submits this documentation to the Board following each batch of fittings having been received and tested, by Centra (this until such time as the Board has delegated the safety check to Centra).

THE PUBLIC UTILITIES BOARD

"GRAHAM LANE, C.A."

Chairman

"GERRY GAUDREAU, CMA"

Secretary

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Order No. 5/09 issued by
The Public Utilities
Board

Secretary