



STATE OF WASHINGTON
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION
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Ref. No. Docket PG-130309

CERTIFIED MAIL

July 2, 2013

Eric Martuscelli
Vice President-Operations
Cascade Natural Gas Corporation
8113 W. Grandridge Blvd.
Kennewick, WA 99336

Dear Mr. Martuscelli:

RE: Pressure Reduction of the #10 North Whatcom Pipeline-Docket PG-130309

As you are aware, due to two leaks on the longitudinal seam of your #10 North Whatcom pipeline, the Washington Utilities and Transportation Commission (UTC) required CNG to reduce the pressure on this line until an analysis could be performed indicating whether the pipeline was low-frequency electric resistance welded (ERW) pipe. CNG hired Keifner and Associates (Keifner) to evaluate pipeline sections removed from this line. These sections were removed and shipped to Keifner's office in Ohio. Upon completion of their analysis, Keifner was to send the report directly to UTC via email. The UTC received the report June 26, 2013.

The report determined the pipe failure was caused by a "penetrator" defect, not low-frequency seam imbrittlement. According to Keifner's report, these defects tend to be short and difficult to detect. They are caused by contaminants on the coil edge in the manufacturing process of the pipeline. The contaminants prevent thorough penetration of the weld. According to Keifner, because of their short length, they are not pressure or time dependent in failure. In other words, they don't get worse over time or with increased (or decreased) pressure. Additionally, Keifer states the most effective method of detecting penetrator defects is leak surveys—i.e., when they begin to leak.

Keifner's analysis (microhardness testing) found the seams in the test samples to be consistent with high frequency ERW pipe manufacturing. Additionally, the physical measurements of diameter, wall thickness, tensile test and chemical tests all show the pipe samples to be within


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the API 5L, X52 requirements for pipe from 1971. Keifner also performed hydro testing on one of the pipe samples stressing the pipe to 98% SMYS (1600 psi) without incident. The current MAOP of this pipeline is 600 psi.

Given the results of Keifner's report and the examination of the other data requests submitted by CNG, UTC agrees with their finding that the pipe material is not low-frequency ERW pipe. As such, the pipeline can be returned to its original MAOP of 600 psi as of the date of this letter. Please follow your Plan for Pressure Increase as detailed in the July 27, 2013 Interoffice Memo from John Bailey regarding the 16" N. Whatcom Transmission Line Pressure Increase.

Thank you for your cooperation in performing the necessary analyses to determine the adequacy of the #10 North Whatcom line. The report was clear, succinct and thorough in its approach and findings. It will give CNG and the citizens of Whatcom county peace of mind knowing the pipeline can safely perform without the threat caused by some low frequency ERW pipelines.

Sincerely,



Dave Lykken
Director, Pipeline Safety

cc: Steve Kessie, Manager Operation Services, CNG