

Enbridge Pipeline Integrity Management Inspection Executive Summary

Inspection Date(s): May 12-16, 2003 (Week 1)
June 2-6, 2003 (Week 2)

Location: Superior, WI

Lead Inspector: Dave Barrett (OPS Central Region)

Operator Representative: Jay Johnson, Compliance Coordinator

Executive Contact: John Sobojinski, Manager, Compliance & Risk Management

System Overview

Enbridge US operates a total of 4000 pipeline miles of which 1088 miles are could affect HCA miles. Enbridge transports crude and NGL from the Canadian/North Dakota (near Neches, ND) border to the Canadian/Michigan border (near Marysville, MI), including lines to the Chicago area. Enbridge will have assessed 64% of their HCA could affect mileage by September 30, 2004.

Integrity Management Program - Summary Conclusions

Program Strengths

1. Enbridge's Integrity Management Program (IMP) had the strong support of corporate management.
2. Enbridge had a well documented IMP.
3. Enbridge had a strong defect management program.

Most Significant IM Program Concerns/Issues

1. Segment identification had not been performed on the TERRACE III line prior to placing the line in service.
2. Several 180 day discovery dates were missed due to delayed ILI vendor reporting. These included: Line 5 Bay City to Sarnia, Line 3 Gretna to Clearbrook, and Line 2 Gretna to Clearbrook.
3. The IMP did not include requirement for incorporating new could affect segments into the BAP within 1 year and performing assessment within 5 years (' 195.452(d)(3)(ii)).
4. The IM manual permitted the use of techniques other than Section 451.7 of ASME/ANSI B31.4 to determine the amount of immediate repair pressure reduction. In addition, the timeliness of engineering evaluations to determine the pressure reduction was not addressed.
5. In one case, several anomalies identified by ILI were excluded from categorization on the basis that they had previously been remediated. It was later determined the anomalies had not been remediated and were categorized as 180 day repairs with the date of discovery being when the error was recognized. It appeared that Enbridge did not have firm knowledge of where repairs had been made and the anomalies were not remediated in a timely manner.
6. The inspection team noted that the FPP approach to BAP development did not appear to directly include consideration of data that was not directly related to a defect. This included the 195.452(e)(1) required AExisting or projected activities in the area@factor (3rd party damage), use of Cathodic Protection data, and A non-pipe@issues such as flange and fitting leaks.
7. Integration of information/risk analysis (195.452(g)) results does not appear to have a central role in the overall evaluation of integrity challenges.

Significant Pipeline Integrity Issues and Insights

1. HCA could affect segments are identified through a manual process that is not well documented. This lack of documentation makes repeatability of results difficult. It also makes review and validation of results difficult.
2. The calculated release volume for a Cohasset, MN release was less than the actual release.
3. Impact on Business risk factor weighted higher than human or environment factors.
4. Updates to the Risk Model were not being made in a timely manner. E.g., the Cass Lake to Deer River assessment was performed in 2001, but assessment related factors had not been updated.
5. Enbridge needs to validate the 3 hour response time assumed for stream flow transport.
6. Enbridge needs to validate the use of 2 times the mean stream flow for stream flow transport.