



National Transportation Safety Board
Washington, D.C. 20594

Internal Inspection Factual Report, Addenda 1

Accident No.: DCA-99-MP-008
Type of System: Hazardous Liquids Pipeline
Type of Accident: Rupture and fire
Location: Dakin-Yew Water Treatment Plant, Bellingham, Washington
Date and Time: June 10, 1999; 17:02 P.D.T.
Owner/Operator: Olympic Pipe Line Company
Fatalities: Three
Injuries: Eight
Material Released: Gasoline
Component affected: 16" steel pipeline

Party Representatives

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Additional Information on Internal Inspections

The Olympic Pipe Line Company operations and maintenance procedures relating to the repair of its pipelines, which were issued in July of 1995 and provided to the Office of Pipeline Safety in August of 1998, require that any dent with a depth exceeding 2% of the nominal pipe diameter on pipe sizes greater than 12-inches be removed or repaired.

The Olympic Pipe Line Company Spill Prevention Plan that was provided to the State of Washington's Department of Ecology on December 31, 1992, contains provisions specific to internal inspections. The Spill Prevention Plan states that "Olympic Pipe Line will excavate and visually inspect all anomalies that are deeper than 20% of the original wall thickness."

Safety Board investigators interviewed the Olympic engineering assistant that had evaluated the anomalies after the internal inspection runs were completed. He stated that the Spill Prevention Plan had never been approved so he did not consider it to be in effect. He did not recall any relevant operations and maintenance procedures applicable to internal inspection runs. He further stated that he had utilized the ASME B31.4 guidelines for deformations. He also said that he utilized the B31G criteria for corrosion pitting because that was the best guidance available to him for metal loss anomalies.

He said that he had compared the 1996 internal inspection results to those found in 1991 and that he was aware that the defects and features identified in the 1996 magnetic flux internal inspection were not shown on the 1991 results.¹ He said that he had lost faith in Tuboscope's ability to identify deformations with the magnetic flux internal inspection tool because it had not been able to find the buckle that had failed in the Ebey Slough and so he discounted the Tuboscope features called a "possible mash" or "possible wrinkle bend". He said that he had reviewed the pipeline alignment sheets and determined that the water treatment plant area was congested with several foreign pipe crossings. He said that the dates that the line crossings were installed were not reflected on the alignment sheets and that he had not reviewed the Diagram of Changes forms to see when each of the line crossings had been installed.

He stated that after they had excavated several locations during the spring of 1997, he had reassessed the need to excavate the pipeline in the Dakin-Yew water treatment plant. He noted that the actual deformations found in the locations that were excavated were not as severe as had been indicated on the Enduro inspection results. He noted that the Enduro defect was only about 3%, which was less than the ASME B31.4 guidelines. He said that when using B31G to evaluate the 23% metal loss anomaly, repairs were not required. He said that he might have forgotten that the listed defects and features were not identified in 1991 when he did the reassessment in July of 1997. He acknowledged that had he known that construction had occurred in the area in 1994 or had he identified metal loss at the same location as the deformation, he would have probably excavated the pipeline at that location.

¹ The defect was listed as a "possible mill/mechanical" with a 23% metal loss.

He recalled that the “difficult to access” comment related to terrain. He thought that the pipeline was located in a steep area.² He did not recall whether the area being wet was a consideration. He further noted that cost was not a factor in determining whether or not this location should be excavated.

He stated that he had discussed and reviewed this potential excavation with the Olympic management and that all concurred that, in their best engineering judgment, it was not necessary to excavate and visually inspect the pipeline at the water treatment plant location.

He also stated that he did not agree with the OPS consultant’s review of the anomaly locations. He felt that he had depicted them on the dig sheet as they were reported to him.

Appendix A – Additional Olympic Pipe Line Company Procedures

Appendix B – Richard Klasen Interview Transcript

Allan Beshore, IIC

² The area was actually level and accessible.