

POST INSPECTION MEMORANDUM

Inspector: Kuang Chu/UTC
Reviewed: David Lykken/UTC
Reviewed: _____
Follow-Up Enforcement: No Violation
PCP* PCO* NOA WL LOC
Director Approval* _____

Date: 11/5/2009

Operator Inspected: Kinder Morgan Canada, Inc. **OPID:** 19585 **Region:** Western

Unit Address: Trans Mountain Pipeline (Puget Sound) LLC
Laurel Station
1009 East Smith Road
Bellingham, WA 98226

Unit Inspected: Western Washington **Unit ID:** 285
Unit Type: Interstate Hazardous Liquid
Inspection Type: IMP Team Inspection (Dave Barrett, Team Lead from Central Region, Bruce Hansen from Western Region, and Kuang Chu from UTC for the Puget Sound system))
Record Location: Casper, Wyoming
Inspection Dates: 10/5 – 10/9/2009 & 10/26 – 10/30/2009
AFOD: 10
SMART Activity Number:

Operator Contact: Terry DeLong, Manager, Integrity Program & Risk Engineering
Phone: (403)-651-2216 **Fax:** (403)-514-6492 **Emergency:** (888)-876-6711

Unit Description: The pipeline system from the Canada-United States border to supply crude oil to the Conoco-Phillips refinery at Ferndale was constructed in 1954. The pumping capacity is provided by Sumas Pump Station in Canada and by the two new pumps facility built at the Laurel Station in 2008. In 1955, the pipeline was extended to Anacortes to supply crude oil to Shell and Tesoro refineries. In 1971, the pipeline system was extended from Ferndale to Cherry Point to supply crude oil to BP Cherry Point refinery. In total, 63.2 miles of pipeline was constructed in the State of Washington. The pipeline system can be broken down as follows:

- 15.3 miles of 20" pipeline between the Canada – US border to Laurel.
- 11.6 miles of 16" pipeline between Laurel Station and Ferndale Station.
- 27.6 miles of 20" pipeline between Laurel Station and Burlington Scrapper Trap Station.
- 9.0 miles of 16" pipeline between Burlington Scrapper Trap Station and Anacortes Meter Station.

The 2008 system expansion added two 2,500 horsepower motor pumps along with reactivation of two 100,000 barrels breakout tanks at the Laurel Station. This system enhancement allows the

flexibility to deliver crude oil to both Ferndale and Anacortes simultaneously. In addition to the Laurel Station expansion, a new meter station and a new 3,000 barrels relief tank were built at the Ferndale site in 2007.

Facilities Inspected: This IMP inspection covered the Platt, Express and Trans Mountain Puget Sound system.

Persons Interviewed: Terry DeLong, Manager, Integrity Programs and Risk Engineering
Paul Huddleston, Director, Tech Services & Control Center
Dean Dick, Director, Operations
Mark Bihr, Manager, Engineering
Bryan Scott, Integrity & Corrosion Specialist
Nikki Nguyen, Jr. Operations Engineer
Trish Laliberte, Int. Operations Engineer
Hai Nguy, Int. Operations Engineer

Probable Violations/Concerns:

- Volume spilled used in HCA segment identification analysis is based on full line rupture. Full line rupture release volume should be compared to volume from small leak (below leak detection thresholds) to assure that undetected small leak over time does not result in larger volume.
- Facilities are identified as affecting HCAs if pipeline spill at the facility could affect HCAs. The operator should assure that spills at facilities with a large footprint (such as tank farms, etc) cannot get off site affecting HCAs not anticipated by the analysis of pipeline spills.
- Further process language is necessary to adequately describe how possible P&M measures are evaluated. The process should include parties responsible for the evaluation, a schedule for evaluations, decision basis, and implementation and documentation requirements.
- Similar to the general P&M measures noted above, the periodic evaluation of possible improvements to leak detection requires process language to consistently evaluate enhancements to leak detection. The operator is implementing Real Time Transient Model (RTTM) for the Puget Sound system. The CPM system used for the Express and Platte pipelines are currently being upgraded and will be converted to RTTMs in 2010. The evaluation used to justify installation of RTTM will be provided by the operator.
- It is not apparent that addition of EFRDs has been periodically evaluated. For the Puget Sound system, two new pumps were installed at the Laurel Station in 2008 to increase the throughput. However, their study indicated that the existing EFRDs are adequate.
- The operator should develop records retention policy for all IM related documents, and analyses, decision support documents, etc.

Follow up on the history of prior offenses that are still open:

Prior Offenses (for the past 5 years)		
CPF #	What type of open enforcement action(s)?	Status of the regulations(s) violated (Reoccurrence Offenses, Implement a NOA Revision, Completion of PCO or CO, and etc...)

Recommendations: Please refer to inspection team comments and recommendations.

Comments: None.

Attachments: None.

Version Date: 5/5/08