

## Western Region Unit Information

Inspector or State Office:	Kuang Chu/UTC	SMART Activity #	
Unit ID:	285	Unit Name:	Trans Mountain Pipeline (Puget Sound) LLC
Operator ID:	19585	Operator Name:	Kinder Morgan Canada Inc.

### Unit Boundaries

Description:	Device:	Latitude:	Longitude:
15.3 miles of 20" crude oil line from the Canada-US border to Laurel; 11.6 miles of 16" line between Laurel Station and Ferndale Scraper Trap Station; 27.6 miles of 20" line between Laurel Station and Burlington Scraper Trap Station; 9 miles of 16" line between Burlington Scraper Station and Anacortes Meter Station.			

### Pre-Inspection

*The information collected and documented here is in addition to other pre-inspection efforts [pulling unit summaries, SRCR's, Annual Reports, Accident/Incident Reports, previous PIM, Post-Inspection OQ & IMP reports, previous and outstanding enforcement actions, etc.]*

I conducted the 2009 standard inspection for this unit. The issues identified for breakout tank T-7 inside Shell Refinery for failing mastic along the chime and drainage around the tank were included in the PIM for probable violations. These items will be verified during the field inspection.

### Baseline Information

1) If accidents or incidents have occurred in this unit, what has the operator done to prevent recurrence? *(select all that apply)*

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Added Equipment   | <input checked="" type="checkbox"/> Procedural Change | <input type="checkbox"/> Engineering Barriers Added |
| <input type="checkbox"/> Removed Equipment | <input type="checkbox"/> Additional Training          | <input type="checkbox"/> Other                      |

Describe:

2) Will these actions adequately mitigate threats?  Yes  No

Please Explain:

Gaps identified in the incidents were addressed through the procedural change.

3) Have any abnormal events occurred in this unit?  Yes  No

Describe Operator's Response:

The relief event at Anacortes. The operator shut down the delivery and minimized the amount of relief volume.

4) Commodity Transported:

Liquid 1:

Crude Oil

Gas 1:

Liquid 2:

Gas 2:

5) Year of Original Installation (yyyy):

1954

Pipe specification (e.g. API 5L, ASTM D2513)

API 5L

6) Normal Operating Pressure (psig), min:

0

max: 840

% SMYS, max:

52

7) MOP/MAOP (psig), min:

630

max: 1170

Changes in MOP/MAOP in previous year:  Increase  Decrease  None

8) Seam Type:

9) Coating Type:

10) Overall Coating Quality:  Poor  Fair  Good Coating Improvement Efforts:  Yes  No

Describe:

11) Potential for AC Interference?  Yes  No Has operator tested for stray current?  Yes  No

12) Parallel Construction/Crossing?  Yes  No Explain:

13a) [Gas Only] Is there a monitoring program for liquids?  Yes  No

Method:

Frequency:

13b) [Liquid Only] Are there Dead Legs?  Yes  No

Explain:

14) [Liquid Only] Number of cycles:  per  Day  Week  Month

Pressure range (psig):

15) Has equipment been deleted/added that changed the hydraulic profile of this line?  Yes  No

Explain:

16) Level of automation:  Manual Control  Local/SCADA  Remote/SCADA

17) Total unit mileage:

18) HCA-Affecting Mileage (% of total mileage):

High Population Area (%):	6.05 miles (9%)
Other Population Area (%):	7.10 miles (11%)
Drinking Water USA (%):	30.11 miles (47%)
Ecological Resource USA (%):	19.34 miles (30%)
Commercially Navigable Waterway (%):	0.12 mile (0.2%)

19) Indicate the year of the most recent tool run and summarize results, including digs:

Tool Type	Year	Results Summary
Magnetic Flux Leakage	2007	Minor dents and corrosion, all re-coated without additional repair.
Geometry	2004	Minor dents, all re-coated without additional repair.

**Post-Inspection Information**

20) Using your engineering judgement, describe how well is the manager addressing this unit's threats:

- Corrosion Specific:  Poor  Fair  Good
- Equipment Specific:  Poor  Fair  Good
- Excavation Specific:  Poor  Fair  Good
- Human Error Specific:  Poor  Fair  Good
- Material/Weld Specific:  Poor  Fair  Good
- Natural Force Specific:  Poor  Fair  Good
- Overall:  Poor  Fair  Good

Additional Assessments: