

Meter Station, and Yelm Meter Station relief valves were tested. Many fire eyes, gas detectors and ESD's were tested at all compressor stations and all operated as designed.

Persons Interviewed:

Grant Jensen	District Manager
Frances Roemer	Assistant District Manager
Ron Mertz	Senior Operations Technician
Dustin Wallis	Pipeline Safety Engineer
Justin Reynolds	Pipeline Integrity Team Lead
Mike Wolfe	Pipeline Integrity Specialist

Probable Violations/Concerns: No probable violations noted.

Recommendations: Continue inspecting district in accordance with normal inspection cycle.

Comments: The 8" North Seattle leaked at MP 8 during a hydrotest in 2011. The leak was caused by a through-wall crack on the pipe. The pipe wall thickness is 0.188", API 5L grade X-42 material. The MAOP is 741 psi corresponding to 40% SMYS. The hydrotest pressure when the leak occurred was 1,339 psi (73% SMYS). The failure mode was classified as near neutral circumferential SCC. A section of 300 feet was replaced. The operator will retest the line in 7-year interval as part of the IMP for this line.

Attachments:

Field Data Collection Form
Western Region Unit Information Form

Version Date: 5/5/08

Field Data Collection
(2012 Standard Inspection)

Company: Northwest Pipeline Corp (WGP)

Unit: Redmond District

Pipe-to-Soil Potential Readings (for 30" line), Rectifiers and Others

Date	Location	Pipe (Volts) Power On/Off	Casing (Volts)	Comments
4/11/2012	Snohomish Compressor Station 30" North Block Valve 30" Pig Receiver 30" Pig Launcher 36" Pig Launcher	 -0.760 (off) -1.080 (on) -0.896 (off) -1.247 (on) -1.000 (off) -1.560 (on) -1.061 (off)		The station was inspected. Two fire eyes and two gas detectors and ESD were tested and they were working properly. Rectifier #848 DC outputs: 7.13 V; 2.87 A Rectifier #1660 DC outputs: 22.11 V; 3.50 A Native was -0.495, met 100 mv shift criterion.
4/11/2012	North Seattle Lateral Meter Station The 8" inlet valve to the station	 -1.654 (on) -1.061 (off)		The pressure relief valve was tested by operator Doug Oberbilling. The gas is odorized by Puget Sound Energy (PSE) at the meter station. Rectifier #492 DC outputs: 8.72 V; 4.60 A.

	The 16" valve 39L-1	-1.684 (on) -1.062 (off)		
4/11/2012	Novelty Hill mainline block valve (MLV) station			Both 30" and 36" valves were inspected and partially operated. Rectifier #1763 DC outputs: 11.77 V; 5.8 A
4/11/2012	South Seattle Lateral Odorant Station 10" Incoming line 16" Loop line	 -2.130 (on) -1.348 (off) -2.052 (on) -1.346 (off)		The pressure relief valve was tested. The station has a worker and monitor for pressure regulation. Therefore, the relief valve is redundant.
4/11/2012	Covington Creek span			The 30" line is in a 36" casing. A parallel 26" line has been idled. No signs of atmospheric corrosion were noticed.
4/11/2012	Issaquah Highlands			This area is located north of interstate highway I-90 and it is currently classified as class 2 location. It has been heavily developed to a combination of commercial and residential complex. It should be classified to a class 3 location next year following a class location study.
4/12/2012	Sumner Compressor Station CP test point #14 CP test point #11	 -1.914 (on) -0.766 (off) -2.035 (on) -0.789 (off)		The station was inspected. Two fire eyes, two gas detectors were tested and they were working properly. Rectifier #895 DC outputs: 28.33 V; 7.5 A Native is -0.366 volts. It met 100 mv shift criterion. Native is -0.366 volts. It met 100 mv shift criterion.

4/12/2012	Boeing Meter Station			The station was inspected and the relief valve was tested. It opened at the set point. Rectifier #1175 DC outputs: 26.15 V; 7.78 A
	4" by-pass at filter skid	-3.761 (on) -0.942 (off)		
	6" Inlet line from the mainline	-2.797 (on) -1.029 (off)		
4/12/2012	Yelm Meter Station			This meter station was inspected and the relief valve was tested. It opened at the set point. Rectifier #1767-2 DC outputs: 4.495 V; 0.2 A
	30" line	-2.840 (on) -1.085 (off)		
	36" line	-2.518 (on) -1.094 (off)		
4/12/2012	Rainier Take-off			
	20" Grays Harbor Lateral	-2.128 (on) -1.127 (off)		
	10" Olympia Lateral	-1.738 (on) -1.136 (off)		The 10" Olympia Lateral tap valve to 36" line was partially operated and it was fine.
4/12/2012	Mainline block valve station at MP 1310 near Skookumchuck River			This valve station is the southern tip of the district. The station was inspected.
	30" line	-2.439 (on) -1.352 (off)		Rectifier #134 DC outputs: 13.14 V; 11.08 A

4/13/2012	Tumwater Compressor Station			<p>The compressor station was inspected.</p> <p>A-Plant gas detector was tested and was acceptable (alarm at 20% LEL, and ESD at 40% LEL). A-Plant fire eye was tested and was acceptable.</p> <p>Similar tests were conducted for B-Plant and the tests were acceptable.</p> <p>Rectifier #1626 (deep well) DC outputs: 47.27 V; 9.3 A</p> <p>Rectifier #1836 DC outputs: 18.28 V; 1.1 A</p> <p>Rectifier #1837 DC outputs: 7.03 V; 0.8 A</p>
	8" kicker line to 20" Grays Harbor Lateral launcher	-2.600 (on) -0.918 (off)		
	20" Grays Harbor Lateral valve	-2.926 (on) -1.118 (off)		
	20" station outlet line	-3.069 (on) -1.185 (off)		
	10" Shelton Lateral suction	-1.968 (on) -0.968 (off)		
	10" Shelton Lateral discharge	-2.063 (on) -1.102 (off)		

Western Region Unit Information

Inspector or State Office:

SMART Activity #

Unit ID:

Unit Name:

Operator ID:

Operator Name:

Unit Boundaries

Description:	Device:	Latitude:	Longitude:
<p>The Williams Redmond District is bordered to the north by the Sumas District and is bordered to the south by the Battle Ground District. The district consists of 214 miles of right-of-way and 64 miles are in class 3 locations. There are 3 compressor stations at Snohomish, Sumner, and Tumwater. The 30" line runs through the entire district. The 36" line runs 12 miles from Snohomish to Sammamish and 25 miles from Ft. Lewis to Rainier</p>			

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.]

The 8" North Seattle lateral has experienced near neutral SCC along the circumferential orientation. A leak was discovered during a hydrotest in October 2011 and a section of 300 feet long was replaced. The operator was not entirely convinced that it was SCC as the operating stress was only 40% SMYS and the cracks were not on axial orientation. They suspect the cracks were caused by pipe manufacturing process. The current IMP is to hydrotest the line every 7 years.

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 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:

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

Describe Operator's Response:

4) Commodity Transported:

Liquid 1: <input style="width: 150px;" type="text"/>	Gas 1: <input style="width: 150px;" type="text" value="Natural Gas"/>
Liquid 2: <input style="width: 150px;" type="text"/>	Gas 2: <input style="width: 150px;" type="text"/>

5) Year of Original Installation (yyyy): Pipe specification (e.g. API 5L, ASTM D2513)

6) Normal Operating Pressure (psig), min: max: % SMYS, max:

7) MOP/MAOP (psig), min: max: 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 (%):	63.76
Other Population Area (%):	N/A
Drinking Water USA (%):	N/A
Ecological Resource USA (%):	N/A
Commercially Navigable Waterway (%):	N/A

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

Tool Type	Year	Results Summary
Magnetic Flux Leakage	2011	One dig from Snohomish compressor station to Sumner
Geometry	2011	compressor station. No digs from Sumner compressor station to
		Chehalis compressor station.

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:

Inspection Output Report (IOR)

Report Filters: **Results: Unsat,Concern**

Report Generated: **12/31/2012 for Ross Reineke**

Inspection Information

Inspection Name Redmond	Operator(s) NORTHWEST PIPELINE CORP (WGP) (13845)	Submit Date	
Status ACTIVE	Lead Kuang Chu	Review Started Date	
Start Year 2012	Observer(s) David D Lykken	Reviewer	
System Type GT	Supervisor Chris Hoidal, Ross Reineke, Joe Subsits	Review Complete Date	
Inspection Type OTHER	Director	Approver	
Protocol Set ID GT.2012.01		Approval Date	

Scope (Assets)

#	Short Label	Long Label	Asset Type	Asset ID	Planned	Required	Total Inspected	Required % Complete
1.	UNIT 3675	WA-UTC/REDMOND DISTRICT	unit	3675	247	247	247	100.0%

a. Percent completion excludes unanswered questions planned as "always observe".

Plans

#	Plan Assets	Focus Directives	Topical Modules/Sub-Modules	Qst Type(s)	Extent	Notes
1.	UNIT 3675	Baseline Procedures (Form 1/3), Baseline Field Observations, Baseline Records, OQ Protocol 9, Gas IMP Field Verification	AR, CR, DC, EP, FS, IM, MO, PD, RPT, SRN, TD, TQ	O, P, R, S	Detail	

Plan Implementations

#	Activity Name	SMART Act#	Modules/Submodules	Assets	Qst Type(s)	Planned	Required	Total Inspected	Required % Complete
1.	Unit Inspection	--	all planned questions	UNIT 3675	all types	247	247	247	100.0%

a. Since questions may be implemented in multiple activities, but answered only once, questions may be represented more than once in this table.

b. Percent completion excludes unanswered questions planned as "always observe".

Results (Unsat,Concern values, 0 results)

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