

**NOTES-FIELD INSPECTION**

**Company:** Northwest Natural Company

**Date(s):** June 14-18, 2010

**Unit:** Clark County

Field Readings									
Line & Location	Line		CP Volts		Rectifier		Pressures		Remarks
	Size	In.	P/S	Casing	Volts	Amps	Set	Actual	
Valve - Camas	6"	Operated	Valve - OK						Valve 1-022-056-L-03-V-A
Valve - Camas	6"	Operated	Valve - OK						Valve 1-021-055-L-07-V-A
Valve - Vancouver	8"	Operated	Valve - OK						Valve 1-019-055-L-07-V-A
Valve - Vancouver	6"	Operated	Valve - OK						Valve 1-011-030-L-01-V-A
Bridge Line at: Washougal River, Camas	6"								Pipe supports need evaluating for atmospheric corrosion.
Irrigation crossing: Camas	8"								NE 11 Ave & NE Division The two concrete pipe supports need to be removed to evaluate pipe for corrosion.
Bridge Line at: Lackamas Lake	8"								SE Everett Rd at Lackamas Lake. New pipe, FBE coating, and stainless steel pipe supports.
Bridge Line at: 99 North & Burnt Creek, Vancouver	6"								New pipe, FBE coating, and stainless steel pipe supports.

**Field Readings**

Line & Location	Size	Line In.	P/S	CP Volts		Rectifier Volts	Rectifier Amps	Pressures		Remarks
				Casing				Set	Actual	
Pipe/Soil at: 15000 SE Mill Plain Blvd. Vancouver	4"		-1.535							
Pipe/Soil at: 5620 NE Gher Rd. Vancouver	1"		-1.389							
Pipe/Soil at: 3010 Falk Rd, Vancouver	1"		-1.145							
Pipe/Soil at: NE 164 Ave & Mill Plain			-1.519							
Casing at: 94 St & 21 NW Ave, Vancouver	4"		-1.16	-0.424						8" Steel Casing in a 12" Concrete Casing
Casing at: SE 6 St near RR Xing, Washougal	2"		-1.564	-0.501						6" Casing
Casing at: NW Lake Rd/Sierra St. Camas	8" HP		-1.494	-0.284						
Casing at: SR 14 & 6 St Washougal	1"		-1.539	-0.339						4" Casing
Rectifier at: E. Mill Plain & Missoula Ave Vancouver			-1.102		42.7	0.3				Station data indicated the rectifier deep well is failing. Rectifier is adjacent to about one mile of bare pipe.

**Field Readings**

Line & Location	Line		CP Volts		Rectifier		Pressures		Remarks
	Size	In.	P/S	Casing	Volts	Amps	Set	Actual	
Rectifier at: "C" St & 1 <sup>st</sup> Washougal			-1.54		3.45	1.5			
Regulator Sta: "C" St Washougal	Single	Regulator	>>>				35	37	40 MAOP
	Over-	pressure	Protection	>>>			40	44	Left at 40 psig
Regulator Sta: 1630 W Simpson, Vancouver	Single	Regulator	>>>				35	38	60 MAOP
	Over-	pressure	Protection	>>>			55	57	Left at 57 psig
Regulator Sta: E. Reserve St & 4 <sup>th</sup> Plain Rd. Vancouver	Single	Regulator	>>>				47	48	50 MAOP
	Over-	pressure	Protection	>>>			50	52	Reset to allow for build-up
Regulator Sta: 26 <sup>th</sup> St & 998 S 4 <sup>th</sup> Plain Blvd. Vancouver	Single	Regulator	>>>				45	46.5	60 MAOP
	Over-	pressure	Protection	>>>			50	51.5	
Regulator Sta: NE 20 <sup>th</sup> Ave & NE 138 <sup>th</sup> St Vancouver	Single	Regulator	>>>				48	45.5	50 MAOP
	Over-	pressure	Protection	>>>			50	N/A	Relief could not be checked because valve was in street.

Sniff Test location:	Tester	% Gas in Air Threshold	% Gas in Air Readily Detectable						Odorometer DTEX Unit Serial #654
1-007-035	Vance	0.12%	0.31%						
NWN ID#10091	Darlene	0.02%	0.06%						
5408 NE 88 <sup>th</sup> St.	Al	0.02%	0.06%						
Vancouver, WA	Lex	0.04%	0.05%						
Sniff Test location:									Odorometer DTEX Unit Serial #654
1-023-065	Roy R.	0.01%	0.02%						
4855 Evergreen Way	Vance	0.21	0.51						
Washougal, WA	Bob	0.03	0.11						
	Mark	0.03	0.41						
	Al	0.02	0.11						