BEFORE THE WASHINGTON STATE
UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Petition of	)	DOCKET PG-111037
	)	
PUGET SOUND ENERGY,	)	ORDER 01
	)	
Petitioner,	)	
	)	
Seeking Authorization to Operate a	)	
Facility with a Maximum Allowable	)	
Operating Pressure Greater Than 250	)	
PSIG Pursuant to WAC 480-93-020	)	ORDER GRANTING PETITION
. . . . .	)	

BACKGROUND

1 On June 6, 2011, Puget Sound Energy (PSE or Company), filed with the Washington Utilities and Transportation Commission (Commission) a petition requesting Commission approval to operate a pipeline at greater than 250 psig (pounds per square inch gauge).

2 A gas pipeline company must have permission from the Commission to operate a pipeline at greater than 250 psig, up to and including 500 psig, within one hundred feet of certain buildings described in WAC 480-93-020.

3 The Company proposes to construct approximately 4,600 feet of 8-inch diameter pipeline in the vicinity of Coal Creek Rd in Chehalis, Washington. The pipeline will be within 100-feet of eight structures. The existing 4-inch pipeline is operating near capacity and the new 8-inch pipeline will supply additional gas supply to the Chehalis area ensuring reliability.

4 The Commission has adopted the Code of Federal Regulation, Title 49, Part 192 and 480-93 of the Washington Administrative Code as minimum standards for natural gas pipeline construction. The most restrictive natural gas pipeline safety rules specify that pipelines in a highly populated area (Class 4 Location) be operated at pressures producing a hoop stress of no greater than 40 percent of the specified minimum yield strength (SMYS) of the pipe. PSE's proposed pipeline route is in a class 2 location that would allow a pipeline to operate up to 60 percent of the SMYS of the pipeline. PSE has elected to use a factor of 20 percent of the SMYS as a design factor which is 50 percent more stringent than the most restrictive class 4 factor. The pipeline segment will be constructed for a

MAOP of 300 psig, resulting in a hoop stress of 8.9 percent of SMYS at the requested operating pressure of 280 psig. This is less than 15 percent of the SMYS allowed for a Class 2 Location.

5 Commission Staff reviewed the request and recommend the Commission grant the petition subject to the following condition(s):

(a) **Filings and Notices**

1. Notify the Commission two business days prior to the commencement of construction.

2. Residents along the pipeline right-of-way will be contacted and informed of the future pipeline construction and any additional information found in the public awareness requirements of Code of Federal Regulation (CFR) Title 49, Part 192.616 will be provided.

3. Submit ESRI GIS Shapefiles of the pipeline route, valves, rectifiers, and cathodic protection testing points, to the Commission within six months of project completion.

(b) **Design and Construction**

1. The 8-inch diameter pipe will be constructed of American Petroleum Institute (API) 5L X-42 with a nominal wall thickness of 0.322 inch.

2. Valve spacing will be less than 1 mile apart.

3. The pipeline will be designed and tested for 300 psig.

4. The pipeline will be built to maintain the pipe stress level for natural gas at or below 8.9 percent of the SMYS at the system MAOP of 280 psig.

5. A design factor of .20 will be utilized.

6. PSE will radiograph 100 percent of all girth welds unless impractical, in which case at least 90% of welds will be radiographed. PSE will provide, upon request by Staff, written documentation where radiographs are impractical including the certified radiographer's statement. All welds will be inspected and defects will be replaced or repaired in accordance with PSE's standards. All repaired welds will be radiographed to ensure pipeline integrity and compliance with existing standards.

7. The pipeline will be buried with at least 36-inches of cover.

8. The entire pipeline, where feasible, will be "jeeped" for flaws to ensure coating integrity. Any flaws will be repaired in accordance with PSE's standards.

9. Any portions of the pipeline that are horizontally directionally drilled (HDD) will use abrasion resistant (ARO) coating.

10. The backfill materials around the pipe and coating will be in accordance with PSE's standards and free from sharp objects and large clods that could damage the pipe or coating. The backfill materials will contain a maximum particle size of 3/8-inch with a large percentage of fines. Rock shield is allowed where the use of sand is impractical or prohibited.

11. The pipeline will be tested to a minimum of one and one-half times the MAOP. The test will be conducted without pressure loss unless the pressure loss can be justified by corresponding change in pipe temperature. Any leaks identified during the test will be repaired and the pressure test shall be restarted.

12. Cathodic protection will be installed within 90 days after the pipeline is installed.

13. Cathodic protection test locations will be installed at intervals sufficient to determine the adequate protection of the pipeline during surveys.

(c) **Operations and Maintenance**

1. PSE shall not operate the pipeline in excess of 280 psig, without further Commission approval.

2. PSE will provide a 24-hour Supervisory Control and Data Acquisition system to monitor the system operating pressures.

3. PSE will conduct leak surveys on the pipeline in accordance with PSE Operating Standard 2625.1100. The survey is to be conducted no less frequently than annually, not to exceed 15 months, unless additional surveys are required by Commission rules.

FINDINGS AND CONCLUSIONS

6 (1) The Washington Utilities and Transportation Commission is an agency of the State of Washington vested by statute with the authority to adopt and enforce rules for gas pipeline safety. *RCW 81.88.040 and RCW 81.88.065*.

7 (2) PSE or Company is a gas pipeline company and subject to Commission jurisdiction.

8 (3) The Commission has adopted the Code of Federal Regulation, Title 49, Part 192 and 480-93 of the Washington Administrative Code as minimum standards for natural gas pipeline construction. The most restrictive gas pipeline safety rules specify that pipelines in a highly populated area (Class 4 Location) must be operated at pressures producing a hoop stress of no greater than 40 percent of the SMYS of the pipe.

9 (4) The existing 4-inch pipeline is operating near capacity and the new 8-inch pipeline will supply additional gas supply to the Chehalis area ensuring reliability. In addition, the proposed 8-inch pipeline exceeds state and federal pipeline safety codes in the following areas:

(a) The design and construction specifications meet or exceed the requirements for a Class 4 location.

(b) PSE's design factor of 0.20 exceeds the 0.40 factor for a class 4 location.

(c) Valve spacing exceeds state and federal pipeline safety code requirements.

(d) The minimum requirement to radiograph at least 90 percent of girth welds exceeds state and federal pipeline safety code requirements.

(e) The 36-inch depth requirement exceeds the federal requirement of 24-inches.

(f) Pressure testing requirements exceed state and federal pipeline safety code requirements.

(g) At the system MAOP of 280 psig, the pipeline is a relatively low stress level of 8.9 percent of the SMYS.

10 (5) This matter came before the Commission at its regularly scheduled meeting on July 28, 2011.

11 (6) After reviewing PSE's petition and giving due consideration to all relevant matters and for good cause shown, the Commission finds it is consistent with the public interest to conditionally grant PSE's request to operate at greater than 250 psig up to and including 500 psig subject to the conditions recommended by Commission Staff in paragraph 5 of this order.

O R D E R

THE COMMISSION ORDERS:

12 (1) After the effective date of this Order, the petition of Puget Sound Energy for authorization to operate a pipeline at greater than 250 psig to and including 500 psig is granted.

13 (2) This authorization is conditioned on Puget Sound Energy meeting the following, which exceed the minimum regulatory requirements:

(a) **Filings and Notices**

1. Notify the Commission two business days prior to the commencement of construction.

2. Residents along the pipeline right-of-way will be contacted and informed of the future pipeline construction and any additional information found in the public awareness requirements of CFR 192.616.

3. Submit ESRI GIS Shapefiles of the pipeline route, valves, rectifiers, and cathodic protection testing points, to the Commission within six months of project completion.

(b) **Design and Construction**

1. The 8-inch diameter pipe will be constructed of American Petroleum Institute (API) 5L X-42 with a nominal wall thickness of 0.322 inch.

2. Valve spacing will be less than 1 mile apart.

3. The pipeline will be designed and tested for 300 psig.

4. The pipeline will be built to maintain the pipe stress level for natural gas at or below 8.9 percent of the SMYS at the system MAOP of 280 psig.

5. A design factor of .20 will be utilized.

6. PSE will radiograph 100 percent of all girth welds unless impractical, in which case at least 90% of welds will be radiographed. PSE will provide, upon request by Staff, written documentation where radiographs are impractical including the certified radiographer's statement. All welds will be inspected and defects will be replaced or repaired in accordance with PSE's

standards. All repaired welds will be radiographed to ensure pipeline integrity and compliance with existing standards.

7. The pipeline will be buried with at least 36-inches of cover.

8. The entire pipeline, where feasible, will be "jeeped" for flaws to ensure coating integrity. Any flaws will be repaired in accordance with PSE's standards.

9. Any portions of the pipeline that are horizontally directionally drilled (HDD) will use abrasion resistant (ARO) coating.

10. The backfill materials around the pipe and coating will be in accordance with PSE's standards and free from sharp objects and large clods that could damage the pipe or coating. The backfill materials will contain a maximum particle size of 3/8-inch with a large percentage of fines. Rock shield is allowed where the use of sand is impractical or prohibited.

11. The pipeline will be tested to a minimum of one and one-half times the MAOP. The test duration will be a minimum of 24 hours without pressure loss unless the pressure loss can be justified by corresponding change in pipe temperature. Any leaks identified during the test will be repaired and the pressure test shall be restarted.

12. Cathodic protection will be installed within 90 days after the pipeline is installed.

13. Cathodic protection test locations will be installed at intervals sufficient to determine the adequate protection of the pipeline during surveys.

(c) **Operations and Maintenance**

1. PSE shall not operate the pipeline in excess of 280 psig, without further Commission approval.

2. PSE will provide a 24-hour Supervisory Control and Data Acquisition system to monitor the system operating pressures.

3. PSE will conduct leak surveys on the pipeline in accordance with PSE Operating Standard 2625.1100. The survey is to be conducted no less frequently than annually, not to exceed 15 months, unless additional surveys are required by Commission rules.

14 (3) The Commission retains jurisdiction over the subject matter and Puget Sound Energy to effectuate the provisions of this Order.

DATED at Olympia, Washington, and effective July 28, 2011.

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

JEFFREY D. GOLTZ, Chairman

PATRICK J. OSHIE, Commissioner

PHILIP B. JONES, Commissioner