

**BEFORE THE WASHINGTON STATE
UTILITIES AND TRANSPORTATION COMMISSION**

In the Matter of the Petition of)	DOCKET PG-080793
)	
PUGET SOUND ENERGY,)	ORDER 01
)	
Petitioner,)	
)	
Seeking Authorization to Operate a)	ORDER GRANTING PETITION
Facility with a Maximum Allowable)	FOR APPROVAL TO OPERATE A
Operating Pressure Greater Than 250)	PIPELINE AT PRESSURES
pounds per square inch gauge, pursuant)	EXCEEDING 250 POUNDS PER
to WAC 480-93-020)	SQUARE INCH GAUGE
.....)	

BACKGROUND

- 1 On May 2, 2008, Puget Sound Energy (PSE) filed with the Washington Utilities and Transportation Commission (Commission) a petition requesting approval to operate a pipeline above 250 pounds per square inch gauge (psig), pursuant to WAC 480-93-020. PSE proposes to construct a 16-inch diameter gas main of approximately 600 linear feet, along Union Hill Road approximately between 178th Place and Avondale Road, located in Redmond, WA. This proposed 600 foot main is called the Redmond Supply Main in this Order.

- 2 WAC 480-93-020(1)(b) requires a gas pipeline company to petition the Commission for approval prior to operating a pipeline above 250 psig, if the pipeline is located within one hundred feet of: a building intended for human occupancy which is in existence or under construction prior to the date the company seeks authorization for construction with the Commission, a high occupancy structure or area, as defined in WAC 480-93-005(12), that is in existence or under construction prior to the date the company seeks authorization for construction; or a public highway, as defined in RCW 81.80.010(3).

- 3 A petition is required in this instance because PSE has identified two commercial structures located within 100 feet of the proposed route of a pipeline segment PSE is planning to install in Redmond, Washington. PSE distributed notices to each of the identified property owners, communicating project details and alerting them to the scheduled commission open meeting. Commission Pipeline Safety Section staff canvassed the area to ensure that persons living in nearby homes were properly notified.

- 4 PSE is proposing to install the Redmond Supply Main as phase four of a five phase PSE project designed to replace 20,000 linear feet of existing PSE 8-inch diameter pipe. PSE will supply natural gas to the new main from the existing Williams Gas Pipeline Northwest facility at the Redmond Gate Station located at 227 NE and Union Hill Road, Redmond. The purpose of the Redmond Supply Main is to provide additional capacity to serve the cities of Bellevue, Kirkland, and Redmond.
- 5 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. PSE's proposed route for the Redmond Supply Main is located in an area that is classified as a Class 3 Location. This would typically limit the hoop stress to no more than 60 percent of the specified minimum yield strength (SMYS) of the pipe. 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 50 percent of SMYS.
- 6 PSE proposes to operate the Redmond Supply Main within the limits prescribed for a Class 3 or 4 Location, *i.e.*, at 300 psig or a hoop stress of 11.4 percent SMYS, and PSE will construct the pipeline for a maximum operating pressure of 500 psig or a hoop stress of less than 20 percent of SMYS. In addition, PSE proposes to hydro-test the new pipe at a minimum of one and one-half times the maximum allowable operating pressure, or 750 psig.
- 7 Commission staff finds PSE's proposed additional safety and design measures for the construction and operation of the Redmond Supply Main located in a Class 3 location will provide added safety to the public. Staff recommends the Commission grant the petition, subject to the following conditions:
 - (a) **Filings and Notices:**
 1. PSE will notify the Commission 48 hours prior to the commencement of construction.
 2. PSE will submit a map of the pipe location and the final construction specifications to the Commission within 30 days of project completion.

(b) **Design and Construction:**

1. PSE will construct the Redmond Supply Main pipe using American Petroleum Institute (API) 5L Grade X-56 steel pipe with a nominal wall thickness of 0.375 inch.
2. PSE will construct the Redmond Supply Main to maintain the pipe stress level for natural gas below 20 percent of the Specified Minimum Yield Strength at the Maximum Allowable Operating Pressure of 500 psig.
3. PSE will construct the Redmond Supply Main to accommodate in-line inspection tools such as “Smart Pigs.” The pipe bend radius will be a minimum of three diameters to facilitate a wide range of inspection tools.
4. PSE will locate mainline valves at the ends of the Redmond Supply Main.
5. PSE will radiographically examine the Redmond Supply Main at 100 percent of all girth welds or at a minimum 90 percent for the pipeline and above ground piping, except for welds that cannot be radiographed. PSE will provide upon request, written documentation where radiographs are impractical including the certified radiographer’s statement. PSE will inspect all welds and any defects will be remediated in accordance with PSE standards. PSE will radiograph all repaired welds to ensure pipeline integrity and compliance with existing standards.
6. PSE will electrically test or “jeep” the entire coating of the Redmond Supply Main to ensure coating integrity. PSE will repair any flaws.
7. PSE will apply backfill materials around the pipe to protect the pipe and coating, in accordance with PSE Gas Operating Standard 2525.1800. The material around the pipe will be free of sharp rocks with a maximum particle size of one half inch and containing a large percentage of fines. Rock shield is allowed where the use of sand is impractical or prohibited. The backfill material shall be free from sharp objects and large clods that could damage the pipe and coating.

8. PSE will bury the Redmond Supply Main with at least four feet of cover. However, cover of no less than three feet is allowed where four feet is impractical.
9. PSE will hydro-test the Redmond Supply Main to a minimum of 1.5 times the maximum allowable operating pressure. The test will be for 24 hours without pressure loss unless the pressure loss can be justified by corresponding change in pipe temperature. If PSE identifies any leak, PSE will stop the pressure test, repair the leak and then restart the pressure test.
10. PSE will install cathodic protection within 90 days after the pipeline is installed.
11. PSE will have cathodic protection test locations at intervals sufficient to determine the adequate protection of the pipeline during surveys.

(c) **Operations and Maintenance:**

1. PSE shall not operate the Redmond Supply Main in excess of 300 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 Redmond Supply Main 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

- 8 (1) The Washington Utilities and Transportation Commission is an agency of the State of Washington vested by statute with the authority to regulate the safety of gas pipeline companies. *RCW 81.88.*

- 9 (2) PSE is a gas pipeline company subject to the jurisdiction of the Commission under RCW 81.88, including RCW 81.88.065. PSE is subject to Commission's gas pipeline safety rules in WAC 480-93.
- 10 (3) PSE is proposing to build 600 feet of 16-inch main in Redmond, Washington. PSE currently operates 20,000 feet of 8-inch natural gas main from the Redmond Gate Station at 227 NE Avenue and Union Hill Road to the Redmond Limit Station at Avondale Way and Union Hill Road. PSE needs additional capacity to serve customers located in the cities of Bellevue, Kirkland, and Redmond. The proposed route will run parallel to the existing 8-inch main at Union Hill Road. PSE agrees to the conditions in paragraph 7 of this Order. These conditions exceed the minimum regulatory requirements by increasing the design strength of the pipe, providing additional inspections, installing remote monitoring equipment, and installing pipe bends to accommodate in-line inspection tools.
- 11 (4) It is consistent with the public interest that the Commission grant PSE's request for authorization to operate the proposed 16-inch pipeline at pressures not exceeding 300 psig, conditioned upon PSE meeting the commitments it has made regarding structural strength, inspecting, and monitoring of the pipeline.
- 12 (5) After examining the petition and giving consideration to all relevant matters and for good cause shown, the Commission finds it is consistent with the public interest to grant PSE's request to operate the Redmond Supply Main above 250 psig, subject to conditions in Paragraph 7 of this Order.
- 13 (5) This matter was brought before the Commission at its regularly scheduled meeting on May 28, 2008.

ORDER

THE COMMISSION ORDERS:

- 14 (1) The petition of Puget Sound Energy for authorization to operate a pipeline above 250 psig is granted, in accordance with WAC 480-93-020, and subject to the conditions listed in paragraph 7 of this Order.

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

The Commissioners, having determined this Order to be consistent with the public interest, directed the Executive Secretary to enter this Order.

DATED at Olympia, Washington, and effective May 28, 2008.

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

CAROLE J. WASHBURN, Executive Secretary