

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

In the Matter of the Petition of)	DOCKET PG-081033
)	
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 5, 2008, Puget Sound Energy (PSE) filed with the Washington Utilities and Transportation Commission (Commission) a petition requesting approval to operate a pipeline, Gate, and Limit Stations above 250 pounds per square inch gauge (psig), pursuant to WAC 480-93-020. PSE requested approval to operate a new supply main at a pressure of 500 psig.

- 2 PSE proposes to construct and operate a 16-inch diameter gas main approximately 26,500 feet (5 miles) in length, located in Pierce County. The pipeline route begins at the existing Frederickson Gate Station located near the intersection of 192nd Street East and Canyon Road East, west along 192nd Street East, north along 38th Avenue East, west along 176th Street East, north along 36th Avenue East, west along Military Road East, north along Waller Road East, and east along 128th Street East to the new Clover Creek Limit Station. This proposed main is called the Frederickson Supply Main in this Order.

- 3 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 and less than or equal to 500 psig, if the pipeline is located within one hundred feet of: “(i) a building which is in existence or under construction ... and is not owned and used by the petitioning operator in its gas operations; (ii) a high occupancy structure or area that is in existence or under construction ...”; or (iii) a public highway ...” The terms

“building,” “high occupancy structure or area” and “public highway” are defined in WAC 480-93-005 and RCW 81.80.010(3), respectively.

- 4 PSE is required to have Commission approval in this instance because PSE has identified the following: (1) one hundred and nineteen buildings within 100 feet of the proposed pipeline route; (2) the pipeline crosses under two separate railroad tracks; (3) it crosses three separate streams, (4) and it also crosses power transmission lines. 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 (Staff) canvassed the area to ensure that persons living in nearby homes were properly notified.
- 5 PSE is proposing to install the Frederickson Supply Main to serve the South Tacoma area because the existing 8-inch diameter South Tacoma Lateral (See Dockets PG-061768 & PG-071388) has reached its existing capacity. During high flows, the South Tacoma Lateral has experienced excessive pressure drops. PSE has requested Williams Pipeline – West (Williams) to change their contract to increase operating pressure for the South Tacoma Gate Station from 400 psig to 550 psig by 2008-2009. PSE states that, as of this time, Williams has not agreed to amend the contract. Therefore, PSE is requesting permission to build the 16-inch diameter Fredrickson Supply Main to assure long term reliable gas service in the South Tacoma area.
- 6 The Commission has adopted the Code of Federal Regulations, Title 49, Part 192 and Washington Administrative Code 480-93 as minimum standards for natural gas pipeline construction. PSE’s proposed route for the Frederickson Supply Main is located in an area that is classified as a Class 3 Location. This would typically limit the pipeline’s 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.
- 7 For additional safety measures, PSE proposes to design and construct the Frederickson Supply Main to meet or exceed the requirements for Class 4 Standards within the limits prescribed for a Class 3 Location, *i.e.*, at a maximum operating pressure of 500 psig, or a hoop stress less than 20 percent 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, for twenty-four hours.

8 Staff finds PSE's proposed additional measures for the construction and operation of the Frederickson 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 Frederickson Supply Main 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 Frederickson 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 pounds per square inch gauge.
3. PSE will construct the Frederickson Supply Main to accommodate in-line inspection tools such as "Smart Pigs." In addition, the pipe bend radius will be a minimum of three diameters to facilitate a wide range of inspection tools.
4. PSE will construct the Frederickson Supply Main in accordance with PSE Gas Operating Standards for railroad, stream, and transmission line crossings.
5. PSE will locate mainline valves along the Frederickson Supply Main at less than one mile apart in accordance with PSE's standards.
6. PSE will radiographically examine the Frederickson 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 remedied in accordance with PSE standards. PSE will radiograph all repaired welds to ensure pipeline integrity and compliance with existing standards.

7. PSE will electrically test or "jeep" the entire coating of the Frederickson Supply Main to ensure coating integrity. PSE will repair any flaws in accordance with PSE Gas Operating Standard 2525.2700.
8. 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, such as, sand, native soil, or soil-based select materials. 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.
9. PSE will bury the Frederickson Supply Main with at least four feet of cover. However, cover of no less than three feet is allowed where four feet is impractical.
10. PSE will hydro-test the Frederickson 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 leaks, PSE will stop the pressure test, repair the leak and then start the pressure test anew.
11. PSE will install cathodic protection within 90 days after the pipeline is installed.
12. 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 will not operate the Frederickson Supply Main in excess of 500 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 Frederickson Supply Main in accordance with PSE Operating Standard 2625.1100. PSE will conduct leak surveys no less frequently than annually, not to exceed 15 months between surveys, unless additional surveys are required by Commission rules.

FINDINGS AND CONCLUSIONS

- 9 (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.*
- 10 (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 the Commission's gas pipeline safety rules in *WAC 480-93.*
- 11 (3) PSE is proposing to build and operate 26,500 feet of new 16-inch diameter main in Pierce County, Washington. PSE currently operates an 8-inch natural gas main from the South Tacoma Gate Station to the South Tacoma Town Border. PSE needs additional capacity to serve customers located in the South Tacoma service area. PSE agrees to the conditions in Paragraph 8 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.
- 12 (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 500 psig, conditioned upon PSE meeting the commitments it

has made regarding structural strength, inspecting, and monitoring of the pipeline.

- 13 (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 Frederickson Supply Main, limit and gate stations above 250 psig, subject to the conditions listed in Paragraph 8 of this Order.
- 14 (6) This matter was brought before the Commission at its regularly scheduled meeting on July 10, 2008.

ORDER

THE COMMISSION ORDERS:

- 15 (1) The petition of Puget Sound Energy for authorization to operate a pipeline, limit and gate stations above 250 psig is granted, in accordance with WAC 480-93-020, and subject to the conditions listed in Paragraph 8 of this Order.
- 16 (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 July 10, 2008.

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DAVID W. DANNER
Executive Director and Secretary