

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

In the Matter of the Petition of)	DOCKET PG-090811
)	
PUGET SOUND ENERGY,)	ORDER 01
)	
Petitioner,)	
)	
Seeking Authorization to Operate a)	
Facility with a Maximum Allowable)	
Operating Pressure Greater Than 250)	
PSIG Pursuant to WAC480-93-020)	ORDER GRANTING PETITION
.....)	

BACKGROUND

- 1 On May 26, 2009, Puget Sound Energy (PSE or Company), filed with the Washington Utilities and Transportation Commission (Commission) a petition requesting Commission approval to operate a pipeline and associated facilities at 500 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 or areas described in WAC 480-93-020.

- 3 The Company proposes to operate 16 miles of new and existing 16-inch gas main and associated facilities from the existing Kent-Black Diamond Gate outlet valve (VA-08025) located at the 3100 block of Kent-Black Diamond Road S.E. to the site of the proposed Cambridge Limit Station to be located at 4228 S. 272th Street.

- 4 The scope of this petition request includes the 16-mile pipeline, as well as the piping for the existing Sequoia District Regulator (RS-2660) through its intermediate pressure outlet valve, and the piping for the existing Kent Limit Station (RS-2701) and the proposed Cambridge Limit Station (RS-2728) through their respective high pressure outlet valves. This project is called the Kent-Black Diamond High Pressure Pipeline in this Order. Approximately 9.5 miles of pipeline has been designed, constructed, and tested to the same conditions noted in this Order, and is currently operating at 250 psig. The remaining 6.5 miles of pipeline will be constructed in 2009.

- 5 The Kent-Black Diamond High Pressure Pipeline will reduce demand from the South Seattle Gate Station providing additional supply from south of Seattle to Tacoma, ensuring continued reliability as population in the area increases. It will also reduce demand at the North Seattle Gate Station by supplying more gas into Seattle from the south, and reducing the demand for liquefied natural gas facility operations in Gig Harbor.
- 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. The route for the Kent-Black Diamond High Pressure Pipeline is located in an area classified predominantly as a Class 3 Location. This would limit the pipeline's hoop stress to no greater than 60 percent of the specified minimum yield strength (SMYS) of the pipe. The most restrictive 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 Kent-Black Diamond High Pressure Pipeline 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, the hoop stress is less than 20 percent SMYS. In addition, PSE proposes to hydro-test the new pipeline at a minimum of one and one-half times the maximum allowable operating pressure (MAOP), or at least 750 psig for at least twenty-four hours. Where hydro-testing is impractical, PSE will use nitrogen gas as the test medium.
- 8 Commission Staff reviewed the request and recommends the Commission grant the petition subject to the following conditions:
 - (a) PSE will submit a map of the pipe location and final construction specifications to the Commission within 30 days of project completion.
 - (b) The Kent Black-Diamond High Pressure Pipeline will be constructed and operated to maintain a pipe hoop stress below 20% of SMYS of the pipe at the MAOP of 500 pounds psig.
 - (c) PSE will construct the pipeline to accommodate in-line inspection tools.

- (d) PSE will test the pipeline to a minimum of 750 psig. The test pressure is at least 1.5 times the MAOP of 500 psig. The test will be for 24 hours without pressure loss unless the loss can be justified by a corresponding change in temperature. If PSE identifies any leaks, PSE will stop the pressure test, repair the leak and then start the pressure test anew.
- (e) The pipe coating will be electrically inspected and coating defects repaired prior to backfilling. Coating defects shall be repaired in accordance with PSE's Operating Standard 2525.2700.
- (f) PSE will bury the pipeline with a minimum of 48-inches of cover. Where 48-inches of cover cannot be maintained, a minimum of 36-inches of cover will be maintained beneath a protective, red-dyed concrete cap.
- (g) PSE will apply backfill material around the pipe to protect the pipe and coating. The material around the pipe will be free of any 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 of sharp objects and large clods that could damage the pipe and coating.
- (h) PSE will perform radiograph inspections of 100% of all welds unless impractical. Upon request by the Commission, PSE will provide written documentation where radiographs are impractical including the written radiographer's statement. Defects will be remedied in accordance with PSE's operating standards and procedures. PSE will radiograph all repaired welds to ensure pipeline integrity and compliance with existing standards.
- (i) PSE will install and maintain mainline valves spaced at intervals not to exceed 1 mile, if practical but at no time shall the interval be more than 2 miles.

- (j) PSE will conduct leak surveys on the Kent Black Diamond High Pressure Pipeline in accordance with PSE Operating Standard 2625.1100. PSE will conduct leak surveys near high occupancy structures or areas -- no less frequently than annually, not to exceed fifteen months between surveys, unless additional surveys are required by Commission rules.
- (k) PSE will install cathodic protection within 90 days after the pipeline is installed.

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 adopt and enforce rules for gas pipeline safety. *RCW 81.88.040 and RCW 81.88.065.*
- 10 (2) PSE is a gas pipeline company and subject to Commission jurisdiction.
- 11 (3) In WAC 480-93, the Commission has adopted minimum standards for gas pipeline construction. Pursuant to these standards, gas pipelines are designed to withstand higher pressure than the MAOP prescribed by these rules. The most restrictive gas pipeline safety rules specify that pipelines in a highly populated area must be operated at pressures producing a hoop stress of no greater than 40 percent of the SMYS of the pipe.
- 12 (4) PSE is proposing to construct and operate a 16 mile pipeline connecting the Black Diamond Gate Station to the Cambridge Limiting Station. The Kent Black Diamond High Pressure Pipeline will reduce demand from the South Seattle Gate Station providing additional supply from south of Seattle to Tacoma, ensuring continued reliability as population in the area increases and reducing demand for liquefied natural gas facility operations in Gig Harbor. PSE agrees to observe the requirements contained in paragraph 8 of this order. These conditions exceed minimum regulatory requirements.
- 13 (5) This matter came before the Commission at its regularly scheduled meeting on June 25, 2009.

- 14 (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 up to and including 500 psig subject to the condition listed in paragraph 8 of this Order.

ORDER

THE COMMISSION ORDERS:

- 15 (1) After the effective date of this Order, the petition of Puget Sound Energy for authorization to operate a pipeline and associated stations given in paragraph 4 at 500 psig is granted.
- 16 (2) This authorization is conditioned on PSE meeting the conditions of paragraph 8 of this order. These conditions exceed the minimum regulatory requirements.
- 17 (3) 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 Director and Secretary to enter this Order.

DATED at Olympia, Washington, and effective June 25, 2009.

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DAVID W. DANNER, Executive Director and Secretary