

June 17, 2008

David W. Danner, Executive Director and Secretary
Washington Utilities and Transportation Commission
PO Box 47250
Olympia, WA 98504-7250

RECEIVED
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WASH. UT. & TP. COMM

Attn: Anne Soiza, Pipeline Safety Director

RE: Gate Station RS 2745 Pressure Authorization

Dear Ms. Soiza:

Pursuant to WAC 480-93-020, Puget Sound Energy (PSE) requests approval to operate the new Beaver Lake Gate Station (RS 2745) at a pressure exceeding 500 psig. The proposed station replaces the existing gate station (RS-2498) at the same location. The new station is planned to be constructed beginning late July and commissioned by October 15, 2008.

The station is located at the same site as Williams Northwest Pipeline's (WNWP) North Bend Delivery Meter Station, which delivers gas to the station from a 30" transmission line. The new station will be constructed by PSE on the same parcel of land as the existing gate station and is being built for higher capacity and increased pressure rating. Pressure reduction through the station will occur through two stages of regulation and will have monitor overpressure protection with a token relief for redundancy to protect the downstream system.

The new station is designed for a Maximum Allowable Operating Pressure (MAOP) of 960 psig and all Station components are rated to at least 960 psig. The station piping will be tested to 1440 psig minimum and will have an MAOP of 960 psig. The station will operate at less than 20% SMYS at an MAOP of 960 psig. PSE proposes to operate the inlet of the station at a minimum pressure of 550 psig and a maximum of 960 psig (MAOP of WNWP 30" transmission line) and the outlet of the station at a Maximum Operating Pressure of 225 psig (MAOP of 12" distribution main downstream).

The proposed station exceeds the minimum federal safety regulations in the following design, operation and maintenance areas:

- **Class Location** – the design and construction specifications meet or exceed the requirements for Class 4 location even though the land parcel is situated in a Class 3 location. (192.5)

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- **Design Factor** – the design factor of the station is 0.2, exceeding the 0.40 factor for a Class 4 location. (192.111)
- **Nondestructive Testing** – PSE will perform radiographic inspection of 100% of all welds unless impractical, in which case at least 90% of the welds will be inspected. This exceeds the minimum federal safety and regulations which do not require nondestructive testing of pipelines operating below 20% SMYS. (192.241 and 192.243).
- **Cover** – PSE’s standards require a minimum cover of 36” over high-pressure pipelines, this exceeds the minimum federal requirements of 24”
- **Piggability** – The station piping will be configured to accommodate a pig launcher that may be used in the future to smart pig the 12” high pressure main. This exceeds the minimum federal regulations which do not require distribution pipelines to be piggable.

Exhibit A provides a schematic of the proposed station and associated facilities. Exhibit B provides additional information regarding the design, construction, operation and maintenance of this facility. If you require any additional information, please call me at (425) 462-3967.

Sincerely,



Helge Ferchert
Manager – Gas Compliance and Regulatory Audits

Attachment

cc: Eric Markell
Karl Karzmar
Bert Valdman
Duane Henderson
Shamish Patel

Exhibit A Beaver Lake Gate Station and WNWP Piping Schematic

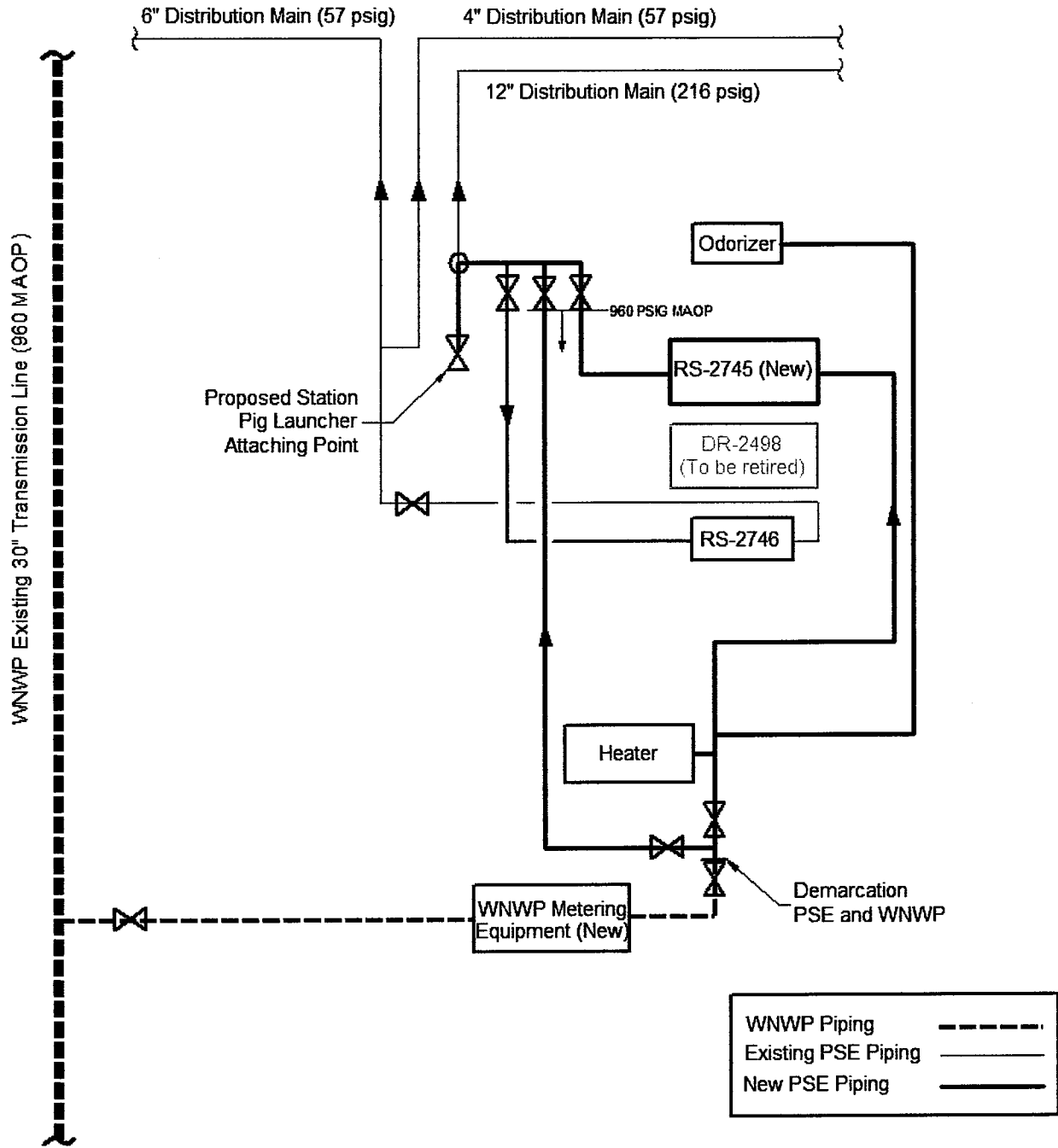


Exhibit B - GENERAL INFORMATION

Beaver Lake Gate Station

Background:

For capacity reasons, PSE is requesting Williams NW Pipeline (WNWP) to increase their delivery pressure to the Beaver Lake Gate Station from 300 psig to 550 psig. In order to do so, PSE will construct a new gate station (RS 2745) to replace the existing one (RS 2498) and modify the intermediate pressure station (RS 1343, to be upgraded and renumbered to RS-2746). These two facilities will be co-located at this property. WNWP will rebuild their metering facilities and retire and remove their regulating facilities.

Scope:

The piping included in this request extends from the inlet custody transfer point to the outlet valve of district regulator RS 2745 and its by-pass outlet valve. This also includes the odorizer and 8" heater coil piping.

Proximity Survey:

RS 2745 will be located at 24403 SE 32 St. in Sammamish, Washington. A parcel review of the area within 500 feet of the existing station fence line was conducted. There are no well-defined areas where buildings with four or more stories aboveground are prevalent. The closest public right of way to PSE's facilities is adjacent to the north side of PSE's property. The zoning for this station is Urban Residential. Information on parcels and buildings intended for human occupancy within 500 feet of the existing fence surrounding the station is presented in Exhibit C. This site is classified as a Class 3 Location.

Design Specifications:

The gate station has been designed and will be constructed and operated in accordance with the requirements for Class 4 locations. The piping layout and configuration is typical of a gate station on property owned by PSE. All of the piping is on either PSE or WNWP property and located within a secure fence enclosure.

Operating Pressures:

The new gate station (RS 2745) will receive unregulated gas from WNWP at a pressure ranging from 550 to 960 psig. The gate station then reduces the pressure to 216 psig to serve a downstream distribution system. The Maximum Operating Pressure (MOP), as determined by the 12" downstream distribution main's MAOP, is 225 psig.

Pipe and Fitting Specifications:

The pipe and fitting specifications with the corresponding percentage of specified minimum yield strength at MAOP/MOP are shown in the table below.

Material Specification	% SMYS @ MAOP/MOP (960 psig)
Pipe: 6" x 0.432", X-42	17.53
Pipe: 8" x 0.500", X-42	19.72
Pipe: 12" x 0.500", X-65	18.84
Weld Fittings 4" x 0.237" Y-52	12.33
Weld Fittings 4" x 0.337" Y-42	15.27
Weld Fittings 4" x 0.337" Y-65	9.87
Weld Fittings 6" x 0.432" Y-42	17.53
Weld Fittings 8" x 0.500" Y-42	19.72
Weld Fittings 8" x 0.500" Y-65	12.74
Weld Fittings 12" x 0.500" Y-65	18.84

All welded branch connections (i.e. purges and blow downs) have sufficient reinforcement not to increase the stress level of the pipe. All other pipeline components (valves, regulators, strainers, etc.) have a working pressure rating of at least 960 psig.

Cathodic Protection:

The cathodic protection is provided by a galvanic system. The system is monitored and maintained in accordance with the requirements of section 2600 of the PSE Gas Operating Standards. The following standards are applicable to the station:

- 2600.1000 Cathodic Protection Requirements
- 2600.1200 Test Station Requirements
- 2600.1300 Designing and Installing Cathodic Protection Systems
- 2600.1400 Electrical Isolation and Grounding Requirements
- 2600.1500 Monitoring Cathodic Protection
- 2600.1900 Remedial Measures for Corrosion Control

Pressure Testing:

RS 2745 is to be tested to 1440 psig. All testing will be done in accordance with PSE Gas Operating Standard 2525.3300 and in accordance with the approved test procedure.

Operation and Maintenance:

Damage Prevention:

Pipeline facility warning signs are installed and monitored in accordance with PSE Gas Operating Standards 2525.2500 and 2575.1100. PSE is an active member in the local One-Call System and works closely with the local municipalities and permitting agencies prior to any construction starting in the vicinity of its facilities. In addition, it is PSE standard practice to monitor construction work taking place in the vicinity of its high pressure odorizers and regulating stations. These facilities are expected to be at low risk from third party damage since they will be enclosed within a fence and located on property owned by either WNWP or PSE.

Leakage Surveys:

Leakage surveys are conducted annually in accordance with PSE Operating Standard 2625.1100 and PSE Gas Field Procedure 4700.1600.

Pressure Monitoring:

Remote telemetry units (RTU) monitor the pressures in the system. The RTU polls system pressures every 3 seconds. The pressure will be monitored 24-hours a day in PSE's 24-Hour Operations Center.

Exhibit C – Addresses, Land Use, and Distance of Structures from Beaver Lake Gate Station

#	Distance (feet) of Structure from Property line	Address	City	State, Zip	Land Use	Zoning
1	121	24416 SE 32ND ST	SAMMAMISH	WA, 98075	RESIDENTIAL	R-4, FOUR DWELLING UNITS PER ACRE
2	137	24256 SE 32ND ST	SAMMAMISH	WA, 98075	RESIDENTIAL	R-4, FOUR DWELLING UNITS PER ACRE
3	254	24242 SE 32ND ST	SAMMAMISH	WA, 98075	RESIDENTIAL	R-4, FOUR DWELLING UNITS PER ACRE
4	314	3042 245TH AVE SE	SAMMAMISH	WA, 98075	RESIDENTIAL	R-4, FOUR DWELLING UNITS PER ACRE
5	404	3023 245TH AVE SE	SAMMAMISH	WA, 98075	RESIDENTIAL	R-4, FOUR DWELLING UNITS PER ACRE
6	420	3034 245TH AVE SE	SAMMAMISH	WA, 98075	RESIDENTIAL	R-4, FOUR DWELLING UNITS PER ACRE
7	423	24224 SE 32ND ST	SAMMAMISH	WA, 98075	RESIDENTIAL	R-4, FOUR DWELLING UNITS PER ACRE
	461	3026 245TH AVE SE	SAMMAMISH	WA, 98075	RESIDENTIAL	R-4, FOUR DWELLING UNITS PER ACRE