www.pse.com

PG - 061768 (P)

PUGET SOUND ENERGY

Puget Sound Energy, Inc.
P.O. Box 90868
Bellevue, WA 98009-0868

November 17, 2006

Carole J. Washburn, Secretary
Washington Utilities and Transportation Commission
PO Box 47250
Olympia, WA 98504-7250
Attn: Alan Rathbun

RE: South Tacoma Town Border Station Pressure Authorization

Dear Mr. Rathbun:

Pursuant to WAC 480-93-020, Puget Sound Energy (PSE) requests approval to operate the new South Tacoma Town Border Station (TBS) at a pressure exceeding 500 psig. The proposed station replaces the existing TBS at the same location. The new station is planned to be constructed and commissioned by December 15, 2006.

This station is located at the end of the 8" South Tacoma Lateral owned and operated by Williams Northwest Pipeline (WNWP). The new station will be constructed by PSE on the same parcel of land as the existing TBS and is being rebuilt for higher capacity and an increased pressure rating. Pressure reduction through the station will occur through a single stage of regulation and a relief valve will provide downstream overpressure protection.

The new station is designed for a Maximum Allowable Operating Pressure (MAOP) of 960 psig. All station piping upstream of the outlet and bypass valves will be tested to a minimum of 1440 psig and station components are ANSI 600 with a rating of 1480 psig. PSE proposes to operate the inlet of the station at a Maximum Operating Pressure (MOP) of 562 psig (the MAOP of the 8" WNWP lateral) and the outlet of the station at a MOP of 250 psig (the MAOP of the downstream system). The station will operate at less than 20% SMYS at an MOP of 562 psig. In addition, the MAOP of 960 psig produces a hoop stress less than 20% SMYS. Refer to Exhibit A for schematic of the system.

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)
- **Design Factor** – the design factor of this 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 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 distribution mains, this exceeds the minimum federal requirements of 24". (192.327(b)) All buried piping at the station will have a minimum cover of 36".

Exhibit B provides additional information regarding the design, construction, operation and maintenance plans for the proposed gate station. If you require any additional information, please call me at (425) 462-3748.

Sincerely,

Kaaren Daugherty

Kaaren Daugherty, PE
Consulting Engineer – Standards and Compliance

Attachment
cc: Kimberly Harris
Karl Karzmar
Sue McLain
Booga Gilbertson
Duane Henderson
Jim Hogan

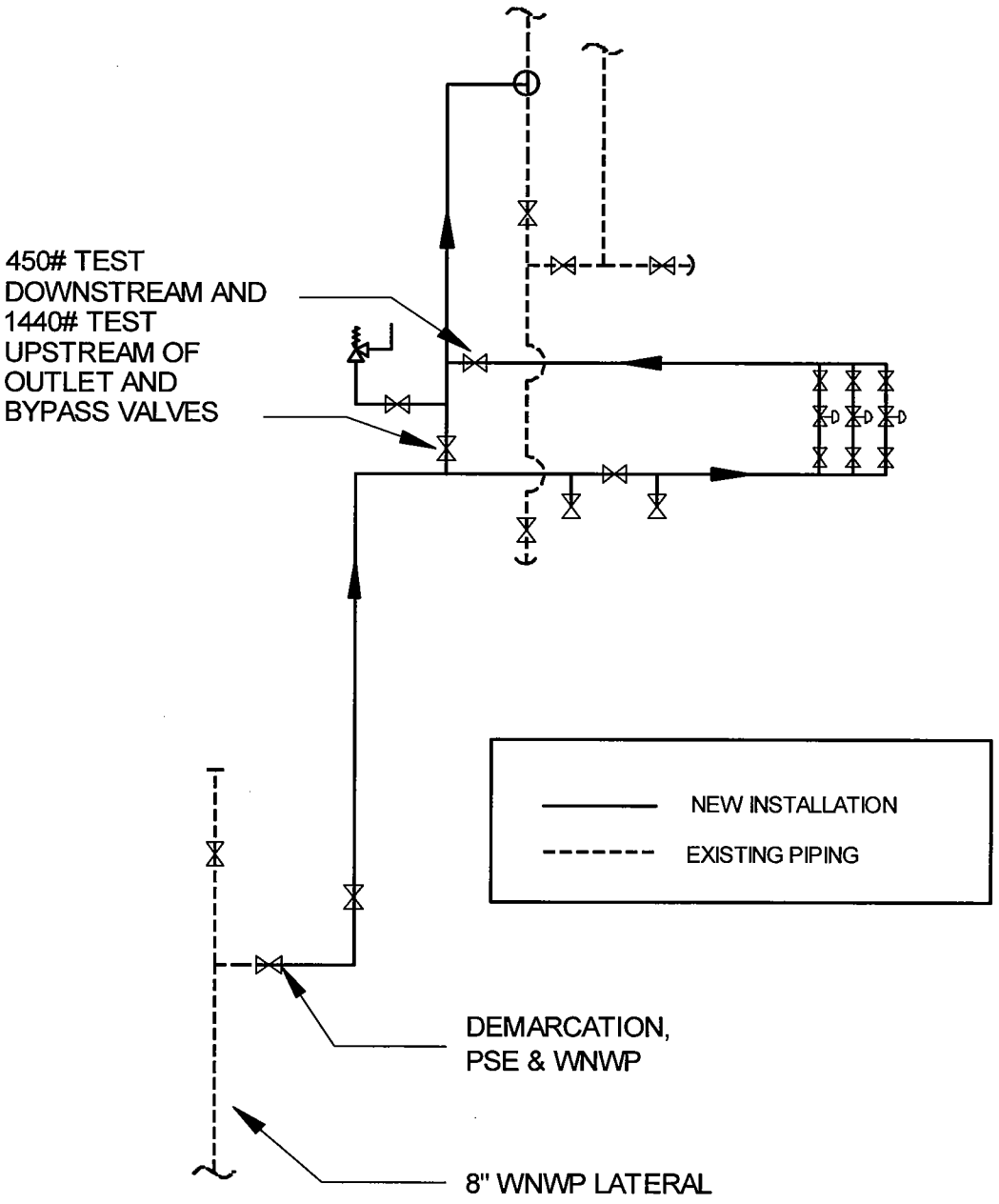

EXHIBIT A
SOUTH TACOMA TBS SCHEMATIC

Exhibit B - GENERAL INFORMATION
South Tacoma Town Border Station (TBS)

Background:

For capacity reasons, PSE is requesting Williams NW Pipeline (WNWP) to increase their operating pressure on the 8" South Tacoma Lateral from 458 psig to 562 psig. PSE has two facilities on the 8" lateral. The South Tacoma Gate Station, consisting of an odorizer and an IP District Regulator (DR), is located at the tie in of the lateral, at the 6100 block of 176th St E, Puyallup, and the South Tacoma Town Border Station (TBS) is located at the terminus of the lateral, at 13311 Chesney Rd, Puyallup. The existing TBS will be rebuilt and the odorizer and DR at the gate station will be uprated before the pressure is increased in the lateral.

Scope:

The piping included in the request includes the inlet station piping for the new TBS downstream of the FERC regulated 8" lateral, which is operated and maintained by WNWP, and extending to the outlet and bypass valves as shown in Exhibit A.

Proximity Survey:

The South Tacoma Town Border Station is located in the Puyallup area at 13311 Chesney Rd in Puyallup, Washington. A tax parcel review of the area within 500 feet of the proposed station was conducted and is shown in Exhibit C. There are no well-defined outside areas that are occupied by 20 or more people, sixty days in any twelve month period. The closest public right of way to PSE's facilities is approximately 275'. The zoning for this station is Rural Separator. Information on tax parcels and buildings intended for human occupancy within 500 feet of the station property is presented in Exhibit C. This site is classified as a Class 3 Location.

Design Specifications:

The station facilities have 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 station piping on property owned by PSE. All of the piping will be on PSE property and located within a secure fence enclosure.

Operating Pressures:

The TBS will receive regulated and odorized gas from WNWP at a pressure up to 562 psig. PSE's regulators will reduce the pressure to a maximum of 250 psig. The station piping upstream of the outlet and bypass valves will be designed and tested for a Maximum Allowable Operating Pressure (MAOP) of 960 psig. The Maximum Operating

Pressures, as determined by this application, will be 562 psig and 250 psig for the inlet and outlet respectively.

Pipe and Fitting Specifications:
The proposed pipe and fitting specifications with the corresponding percentage of specified minimum yield strength at MAOP and at MOP is shown in the table below. Any changes to the pipe size, grade or wall thickness will be verified by PSE engineering staff to meet the requirements to operate below 20% SMYS.

Material Specification to Outlet of Second Regulator	% SMYS @ MAOP (960 psig)	% SMYS @ Normal Operating Pressure (562 psig)
Pipe 12.75" x 0.562", X-65	16.8	9.8
Weld Fittings 12.75" x 0.562" Y-65	16.8	9.8
Pipe 8.625" x 0.500", X-52	15.9	9.3
Weld Fittings 8.625" x 0.500", Y-52	15.9	9.3
All Flanges ANSI 600	N/A	N/A

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

Construction Specifications:

All construction shall conform to Class 4 Standards.

Cover:
All buried station piping will be installed with a minimum of 3 feet of cover.

Backfill:
All shading and bedding material will be free of sharp rocks with a maximum particle size of 1/2" unless an approved rock shield material is utilized. When rock shield material is used, the backfill material shall be free from sharp objects and large clods that could damage the pipe.

Clearance:
At least 12 inches of separation will be maintained between the station piping and other underground facilities. If 12 inches separation is not possible, the pipeline will be protected from damage caused by proximity to the other structure, by using a bare steel casing, a split PVC or PE pipe or a fiberglass shield.

Cathodic Protection:
Cathodic Protection will be designed and installed in accordance with the requirements of PSE Gas Operating Standards. The following standards are applicable to the station:

2575.2800 Examining Buried Pipelines

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

Coating:
As outlined in Operating Standard 2600.1000 an external protective coating shall be applied to the pipeline. Any field joints and fittings not supplied with protective coatings will have field applied coating. All above-ground piping will be painted in accordance with written specifications. Field applied coatings will meet the requirements of Operating Standard 2600.1100, Field Coatings for Pipe and Fittings.

Pressure Testing:
The test pressure up to the pressure demarcation point as shown in Exhibit A will be at least 1440 psig. The test pressure downstream pressure demarcation point will be a minimum of 450 psig. All testing will be done in accordance with PSE Gas Operating Standard 2525.3300 and in accordance with the approved procedure.

Welding:
All welding and welding inspection will conform to the following PSE Gas Operating Standards:

2525.2700 Installation Requirements for Steel Pipe and Fittings
2700.1100 Welder Qualification Requirements
2700.1200 Weld Inspection and Repair
2700.1300 Weld Inspector Qualification Requirements
2700.1400 Welder and Procedure Qualification Test Requirements

In addition, PSE has a comprehensive set of welding procedures that are included in the Gas Field Procedures Manual. All welding to be done on this project will be governed by these procedures. If any new procedures are required for the welding on this project, they will be qualified in accordance with PSE Operating Standards and added to the Gas Field Procedures Manual. A number of different welds will be performed using Gas Field Procedures that may include 4900.1300, 4900.1310, 4900.1320, 4900.1340, 4900.1400, 4900.1410, 4900.1430, 4900.1445, 4900.1910, and 4900.1920.

Operation and Maintenance:

Damage Prevention:
Pipeline facility warning signs will be 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 regulating stations. The town border station 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 PSE.

Leakage Surveys:
Leakage surveys will be conducted annually in accordance with PSE Operating Standard 2625.1100 and PSE Gas Field Procedure 4700.1600.

Pressure Monitoring:
Remote telemetry units (RTU) will monitor the pressure in the system. The RTU will poll 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 South Tacoma Town Border Station

Address	City	State, Zip	Distance (feet) of Structure from Station Property line	Land Use
13512 30TH AVE E	TACOMA	WA, 98446	101	RESIDENTIAL
13312 30TH AVE E	TACOMA	WA, 98446	253	RESIDENTIAL
13310 WALLER RD E	TACOMA	WA, 98446	121	RESIDENTIAL
13320 WALLER RD E	TACOMA	WA, 98446	233	RESIDENTIAL
13324 WALLER RD E	TACOMA	WA, 98446	428	RESIDENTIAL
13328 WALLER RD E	TACOMA	WA, 98446	452	RESIDENTIAL
13319 WALLER RD E	TACOMA	WA, 98446	268	COMMERCIAL/RESIDENTIAL
2522 CHESNEY RD E	TACOMA	WA, 98446	489	RESIDENTIAL
13501 WALLER RD E	TACOMA	WA, 98446	208	RESIDENTIAL
13319 WALLER RD E	TACOMA	WA, 98446	90	RESIDENTIAL
13517 WALLER RD E	TACOMA	WA, 98446	391	RESIDENTIAL
13517 WALLER RD E	TACOMA	WA, 98446	285	RESIDENTIAL
13619 WALLER RD E	TACOMA	WA, 98446	484	RESIDENTIAL
2711 136TH ST CT E	TACOMA	WA, 98446	280	RESIDENTIAL
13613 WALLER RD E	TACOMA	WA, 98446	379	RESIDENTIAL
2903 136TH ST CT E	TACOMA	WA, 98446	265	RESIDENTIAL
2915 136TH ST CT E	TACOMA	WA, 98446	374	RESIDENTIAL
2915 136TH ST CT E	TACOMA	WA, 98446	425	RESIDENTIAL