PG-041534

PSE PUGET SOUND ENERGY

August 16, 2004

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

Attn: Alan Rathbun

RE: Rainier Terrace Gate Station Pressure Authorization

Dear Mr. Rathbun:

Pursuant to WAC 480-93-020, Puget Sound Energy (PSE) requests authorization to operate the Rainer Terrace Gate Station at a pressure exceeding 500 psig. The proposed station replaces an existing gate station at the same location.

The new Rainer Terrace Gate Station will be constructed by PSE on the same parcel of land as the Williams Northwest Pipeline metering facilities. The gate station will consist of an odorizer, heater, and two-stage regulation with downstream overpressure protection provided by monitor regulators. A HP to IP regulator station is also located at this site. (Refer to Exhibit A).

The station is designed for a Maximum Allowable Operating Pressure (MAOP) of 960 psig through the HP outlet valve (see Exhibit A). The MAOP downstream of the HP outlet valve will be 500 psig. All station piping upstream of the HP outlet valve will be tested to a minimum of 1440 psig and the components will be ANSI 600 with a rating of 1480 psig. All station piping downstream of the HP outlet valve will be tested to a minimum of 750 psig and the components will be ANSI 300 with a rating of 740 psig. PSE proposes to operate the inlet of the station at a Maximum Operation Pressure (MOP) of 960 psig (the maximum delivery pressure from Williams) and the outlet of the station at a MOP of 200 psig. The station will operate at less than 20% SMYS at the MOP and MAOP.

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 or less location. (192.5)

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- **Design Factor** – PSE's design factor of 0.20 exceeds the 0.40 factor for a Class 4 location. (192.111)
- **Nondestructive Testing** – PSE's radiographic inspection plan is identical to the Class 3 and Class 4 requirements for transmission lines. Thus PSE's plan far exceeds the minimum federal safety regulations which do not require nondestructive testing of pipelines operating below 20% SMYS. (192.241 and 192.243)

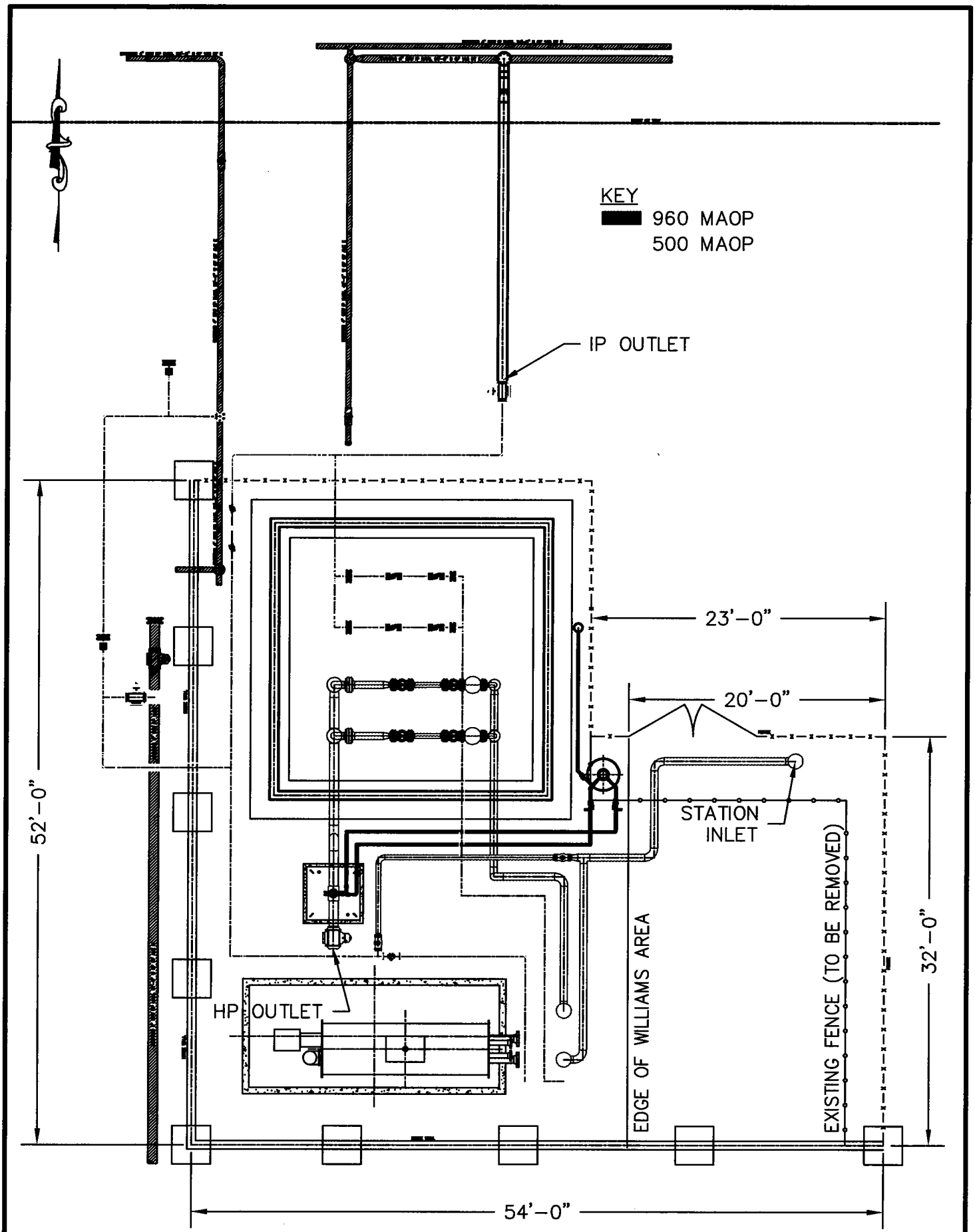
Exhibit B provides additional information regarding the design, construction, operation and maintenance plans for the proposed gate station. If you require any additional information, please call me at (425) 462-3748

Sincerely,

Kaaren Daugherty, PE
Consulting Engineer, Standards and Compliance

Attachments

cc: Kimberly Harris
Karl Karzmar
Sue McLain
Booga Gilbertson
Greg Zeller
Jim Hogan



RAINIER TERRACE GATE STATION
EXHIBIT A

Exhibit B - GENERAL INFORMATION
Rainier Terrace Gate Station

Background:

The Rainier Terrace Gate Station is undersized for current demand and future growth. A new gate station will be built at the location of the existing gate station. Williams will build a new metering facility at the site to replace the existing metering facility. PSE's scope of work for 2004 includes the installation of the gate station; this will include heating, odorizing, high-pressure to high-pressure regulation, and high-pressure to intermediate pressure regulation.

Scope:

The piping included in the request consists of all station piping downstream of the FERC regulated meter station piping which will be operated and maintained by Williams Northwest Pipeline and extending to the outlet valves of the gate station.

Proximity Survey:

The Rainier Terrace Gate Station is located in the South Hill Puyallup area near the intersection of 128th ST E and 97th AVE E in Puyallup Washington. The zoning for the gate station property is moderate high density residential and the surrounding area within 500 feet is zoned moderate high-density residential and moderate density single family. A survey of the area within 500 feet of the station property was conducted and is shown in Exhibit C. There are no well-defined outside areas that are occupied by twenty or more people, sixty days in any twelve month period. Information on structures intended for human occupancy within 500 feet of the proposed fence surrounding the gate station is presented in Exhibit C.

Design Specifications:

The gate station facilities will be designed, constructed and operated in accordance with the requirements for Class 4 locations. The piping layout and configuration is typical of gate 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 new Rainier Terrace Gate Station will receive unregulated and unodorized gas from the Williams Northwest Pipeline at pressures up to 960 psig. PSE's regulators will reduce the pressure to 200 psig (to serve the HP system) and 45 psig (to serve the IP system). The entire station from the station inlet through the HP outlet valve will be designed and tested for a Maximum Allowable Operating Pressure (MAOP) of 960 psig and the MOP will be 960 psig. From the HP outlet valve to the station connection with the high-pressure main and intermediate pressure main the station will have a MAOP of 500.

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 High Pressure Outlet Valve	% SMYS @ MAOP (960 psig)	% SMYS @ Normal Operating Pressure (960 psig)
Pipe 6" x .432" X-42	17.53	17.53
Weld Fittings 6" x .432" wall, Y-42	17.53	17.53
Weld Fittings 8" x .500" wall, Y-42	19.72	19.72
Pipe 8" x .500" wall, X-42	19.72	19.72
Pipe 4" x .337" wall, X-46	13.94	13.94
Weld Fittings 4" x .337" wall, Y-46	13.94	13.94
All Flanges ANSI 600	N/A	N/A

Material Specification Downstream of High Pressure Outlet Valve to High Pressure Main or Intermediate Pressure Regulators	% SMYS @ MAOP (500 psig)	% SMYS @ Normal Operating Pressure (200 psig)
Pipe 4" x .237" wall, X-42	11.31	4.53
Weld Fitting 4" x .237" wall, Y-42	11.31	4.53
Weld Fitting 4" x .237" wall, Grade B	13.57	5.43
Weld Fitting 8" x .322" wall, Y-42	15.95	6.38
Pipe 6" x .280" wall, X-42	14.09	5.64
Pipe 8" x .322" wall, X-42	15.95	6.38
Weld Fitting 8" x .322" wall, Grade B	19.14	7.66
All Flanges ANSI 300	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 where the MAOP is 960 psig, and 500 psig where the MAOP is 500 psig.

Construction Specifications:

All construction shall conform to Class 4 Standards.

Cover:

All buried 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 ½" unless an approved rock shield material is used.

Clearance:
At least 12 inches of separation will be maintained between the station piping and other non-gas 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 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

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:
All station piping upstream of the HP outlet valve will be tested to a minimum pressure of 1440 psig. All station piping downstream of the HP outlet valve will be tested to a minimum pressure of 750 psig. All testing will be done in accordance with PSE Gas Operating Standard 2525.3300 and in accordance with an 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 Qualification Test Requirements and Procedure

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, 4900.1400, 4900.1410, 4900.1430, and 4900.1910, and 4900.1920.

Operation and Maintenance:

Corrosion Control:

Corrosion control monitoring and remediation will be done in accordance with the following standards.

2600.1500	Monitoring Cathodic Protection
2600.1700	Examining Buried Pipelines and Monitoring for Corrosion
2600.1800	Monitoring Facilities for Atmospheric Corrosion
2600.1900	Remedial Measures for Corrosion Control Discrepancies

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 gate stations. The gate 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 2575.1000 and PSE Gas Field Procedure 4700.1600.

Pressure Monitoring:

A remote telemetry unit (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 the Edge of the Rainier Terrace Property

Route Street	Address	Side of Street (N, E, S, or W)	Distance (feet) of Structure from Edge of Property	Land Use
97th	12734 97th Ave E. Puyallup WA 98373-5033	West	255'	Residential
97th	12726 97th Ave E. Puyallup WA 98373-5033	West	320'	Residential
97th	12616 97th Ave E. Puyallup WA 98373-5035	West	435	Residential
97th	12617 97th Ave E. Puyallup WA 98373-5034	East	402'	Residential
97th	12656 97th Ave E. Puyallup WA 98373	East	294'	Residential
128th	9601 128th St E. Puyallup WA 98373-5684	North	204'	Residential
128th	9615 128th St E. Puyallup WA 98373-5684	North	156'	Residential
128th	9707 128th St E. Puyallup WA 98373-5682	North	168'	Residential
128th	9723 128th St E. Puyallup WA 98373-5682	North	247'	Residential
128th	9712 128th St E. Puyallup WA 98373-5683	South	126'	Residential
128th	9724 128th St E. Puyallup WA 98373-5683	South	317'	Residential
128th	9808 128th St E. Puyallup WA 98373-5681	South	442'	Residential
128th	9702 128th St E. Puyallup WA 98373	South	53'	Church
128th	9608 128th St E. Puyallup WA 98373	South	38'	Residential
97th	12902 to 12904 97th Ave E. Puyallup WA 98373	North	483	Residential
95th Ave CT	12802 95th Ave Ct E. Puyallup WA 98373	West	360	Residential
95th Ave CT	12806 95th Ave Ct E. Puyallup WA 98373-9174	West	440'	Residential
95th Ave CT	12810 95th Ave Ct E. Puyallup WA 98373-9174	West	446'	Residential
95th Ave CT	12814 95th Ave Ct E. Puyallup WA 98373-9174	West	341'	Residential
95th Ave CT	12818 95th Ave Ct E. Puyallup WA 98373-9174	West	450'	Residential
95th Ave CT	12822 95th Ave Ct E. Puyallup WA 98373-9174	West	480'	Residential
95th Ave CT	12826 95th Ave Ct E. Puyallup WA 98373-9174	West	407'	Residential
95th Ave CT	12904 95th Ave Ct E. Puyallup WA 98373-9174	West	415'	Residential
95th Ave CT	12908 95th Ave Ct E. Puyallup WA 98373-9174	West	498'	Residential
95th Ave CT	12912 95th Ave Ct E. Puyallup WA 98373-9174	West	444'	Residential
95th Ave CT	12916 95th Ave Ct E Puyallup WA 98373-9174	West	482'	Residential
95th Ave CT	12715 to 12717 95th Ave Ct E. Puyallup WA 98373	East	276'	Duplex
95th Ave CT	12701 to 12703 95th Ave Ct E. Puyallup WA 98373	East	317'	Duplex
95th Ave CT	12718 to 12720 95th Ave Ct E. Puyallup Wa 98373	West	378	Duplex
95th Ave CT	12704 to 12706 95th Ave Ct E. Puyallup WA 98373	West	437'	Duplex
95th Ave CT	12625 to 12627 95th Ave Ct E. Puyallup WA 98373	East	445'	Duplex

WAC 480-93-020 Proximity considerations. (Greater than 500 psig/500 feet)

Gas facilities having a maximum operating pressure greater than five hundred psig shall not be operated within five hundred feet of the places described below without prior written authorization of the commission, unless a waiver previously approved by the commission continues in effect:

(1) A building intended for human occupancy which is in existence or under construction prior to the date authorization for construction is filed with the commission, and which is not owned and used by the petitioning gas company in its gas operations;

(2) Property which has been zoned as residential or commercial prior to the date authorization for construction is filed with the commission;

(3) A well-defined outside area, such as a playground, recreation area, outdoor theater, or other place of public assembly, which is occupied by twenty or more people, sixty days in any twelve-month period which is in existence or under construction prior to the date authorization for construction is filed with the commission; and

(4) A public highway, as defined in RCW 81.80.010(3).

In requesting prior written authorization of the commission, the petitioning gas company shall certify that it is not practical to select an alternative route which will avoid such locations and further certify that management has given due consideration to the possibility of the future development of the area and has designed its facilities accordingly. The petition shall include, upon request of the commission, an aerial photograph showing the exact location of the pipeline in reference to places listed above that are within five hundred feet of the pipeline right of way.

Commission Action: Commission Order as a Consent agenda item at an Open Meeting

Request a docket number from the Records Center and ask for the item to be added to the consent agenda.

Documents to be completed by staff:

1. Letter to company notifying them of the receipt of the request and the date of the Open Meeting
2. Order (see template library)

Attend the Commissioner's briefing?