PUGET SOUND ENERGY
*The Energy To Do Great Things*

May 13, 2010



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

Attn: David Lykken, Pipeline Safety Director

**Subject: Notice of Construction for approximately 140 feet of pipeline segment part of the North Seattle Town Border Station**

Dear Mr. Lykken,

Pursuant to WAC 480.93.160, Puget Sound Energy (PSE) hereby submits this notice of construction of a new transmission pipe segment at the North Seattle town border station (NTBS).

To improve the natural gas system serving King and Snohomish County, PSE plans to install a new natural gas heater at the NTBS located east of I-5 and south of the SR 405 junction in unincorporated Lynnwood at 18928 24th Ave. W. Approximately one hundred and forty feet of 20" pipeline, mostly underground, will be added to connect the new heater to the existing system. Construction of this segment of pipe is the subject of this notice.

The new NTBS inlet will operate at a proposed Maximum Operating Pressure of 600 psig. This pressure increase was authorized under Docket UG-9611298, order granting waiver to operate the North Seattle regulator station at pressures up to 809 psig.

PSE proposes to construct the project entirely on its existing property. Construction activities are tentatively scheduled to begin early August 2010 and take up to three months.

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

Sincerely,

Helge Ferchert
Manager, Gas Compliance and Regulatory Audits

Attachment
cc: Michael Hobbs
Duane Henderson
Erik Markell
Bert Valdman
Sue McLain

Exhibit A

# Schematic of North Seattle Town Border Station

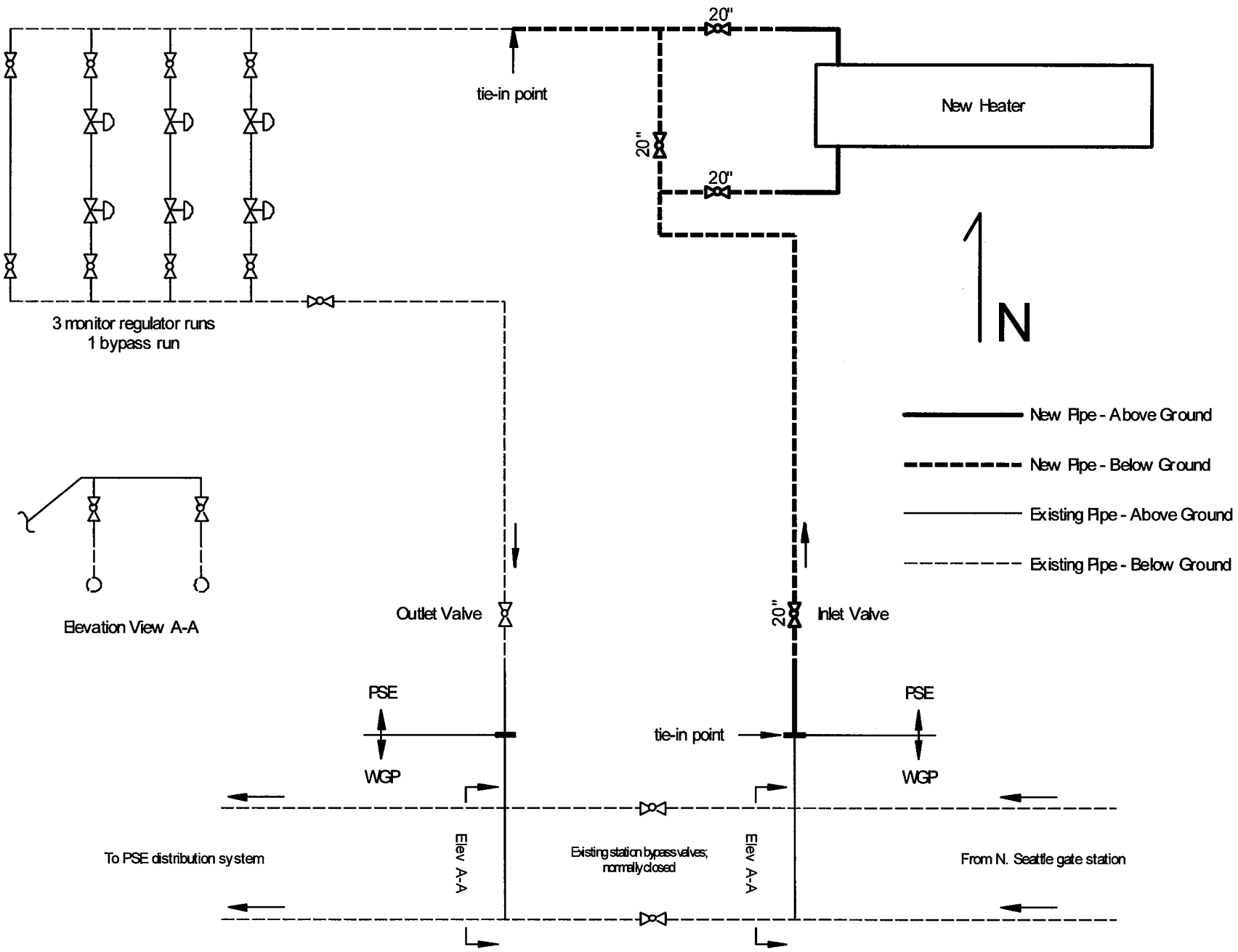

**Exhibit B**

# GENERAL INFORMATION
# North Seattle Town Border Station

## Background:

The existing North Seattle Town Border Station (NSTBS) feeds natural gas into a portion of PSE's high pressure supply system which serves the central/north Seattle and south Everett areas. Because of the current pressure reduction and high gas volumes flowing through the station, combined with a planned increase in inlet pressures, heating of the gas is now required to prevent operational problems including frost heave and icing over valves and regulators. This project will install a heater and connection piping on the inlet piping to the existing NSTBS.

The NSTBS is the farthest downstream (west) station on Williams' Gas Pipeline (WGP) North Seattle lateral, which receives gas from North Seattle gate station located in Cathcart at 12400 Elliott Rd, Snohomish, WA. At the gate station, gas is currently regulated to 500 psig before entering the laterals. At the NSTBS, gas is regulated to 250 psig, and a portion of the gas is further regulated to 60 psig by neighboring stations, one of which is adjacent to the NSTBS.

It is estimated that during a design day, peak demand would cause gas inlet pressures to the NSTBS to decline sufficiently to cause outlet pressures from the station to droop enough to adversely effect the performance of facilities downstream of the NSTBS. As a result, PSE will request Williams pipeline to increase the gate station delivery pressure from 500 psig to 525 psig for the winter of 2010 – 2011 (Williams has agreed to this). Shortly after that, it is expected that the gate station outlet pressure will be changed to 600 psig. These current and future changes will increase the cooling effect at all stations receiving gas from the lateral (downstream of the gate station to the NSTBS). PSE is installing a heater at the inlet to the NSTBS to counter this increased cooling effect and prevent related problems at the NSTBS and nearby downstream intermediate pressure (IP) stations.

The MAOP of the inlet to the NSTBS is currently 960 psig. At 600 psig, the proposed Maximum Operating Pressure (MOP) downstream of the North Seattle gate station up to and including the NSTBS inlet will be operating at 20 percent of specified minimum yield strength (SMYS).

## Scope:

The project scope includes the installation of a new indirect-fired natural gas pipeline heater with a coil rated at 960 psig, and approximately 140 feet of 20" pipe, grade X-60, and wall thickness 0.500". In addition, four 20" ANSI class 600 valves will be installed. The pipe and four valves will replace approximately 60 feet of 16" and 20" pipe, and one 16" valve. All new piping and unrated fittings will be tested at a minimum pressure of 1440 psig. Aside from the installation of two new thermowells on one station regulator run, the existing regulator runs will not be modified.

The pressure authorization request for the station, under docket UG-961298 approved by the WUTC on December 30, 1996, allows PSE to operate the NSTBS up to 809 psig within five

hundred feet of any proximity area as defined in WAC 480-93-020 including highways and buildings intended for human occupancy. In the event that the operating pressure is increased above 600 psig, PSE shall advise the Commission, in writing at least 60 days in advance.

**Design Specifications:**

The piping has been designed and will be installed and tested in accordance with the requirements for Class 4 locations. All of the piping is on either PSE or WGP property and located within a secure fence enclosure.

**Operating Pressures:**
The NSTBS receives regulated gas from WGP at a pressure up to 500 psig, and in the future up to 600 psig. The NSTBS then reduces the pressure to 250 psig to serve a High Pressure (HP) supply system. The MOP of the new piping will be 600 psig.

**Pipe and Fitting Specifications:**
The pipe and fitting specifications with the corresponding percentage of SMYS at MAOP/MOP are shown in the table below.

| Material Specification | % SMYS @ MAOP/MOP (960/600 psig) |
|---|---|
| Pipe: 20" x 0.500", X-60 | 32.0 / 20.0 |
| Weld Fittings 20" x 0.500" Y-60 | 32.0 / 20.0 |

All welded branch connections (i.e. purges and blow downs) have sufficient reinforcement not to increase the stress level of the pipe. Excluding the heater itself, all pipeline components (valves, flanges, etc.) have a minimum working pressure rating of 1480 psig.

**Welding Specifications:**
The pipe and fitting weld specifications will be in accordance with PSE's Gas Field Procedures:

| | |
|---|---|
| 4900.1330 | Shielded Metal Arc Butt Welding Pipe Diameters Over 12_/Pipe Grades X46 thru X60 |
| 4900.1440 | Shielded Metal Arc Fillet Welding Pipe Diameters Over 12_/Pipe Grades X46 thru X60 |
| 4900.1730 | Gas Metal Arc Butt Welding Pipe Diameters Over 12_/Pipe Grades X46 thru X60 |

**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 |
| 2600.1100 | Coatings for Pipe and Fittings |
| 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:**
All new piping will be tested to 1440 psig 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 facilities such as; pipe, heaters, odorizers and regulating stations. These new 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 WGP 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.

| | | |
|---|---|---|
| In the Matter of the Request by | ) | |
| | ) | |
| WASHINGTON NATURAL GAS COMPANY | ) | |
| | ) | |
| for a Waiver to operate the inlet piping to the | ) | DOCKET UG-961298 |
| Cathcart Odorizer, Clearview, N. Bothell, and | ) | |
| N. Seattle regulator stations at pressures up to | ) | ORDER GRANTING |
| 809 psig within five hundred feet of highways | ) | WAIVER |
| and buildings intended for human occupancy | ) | |
| under WAC 480-93-020 | ) | |
| | ) | |

On October 11, 1996, Washington Natural Gas Company (WNG), a Washington Corporation, filed a request for a waiver of WAC 480-93-020, Proximity Considerations, to set the maximum allowable operation pressure (MAOP) for the inlet piping to the Cathcart Odorizer, Clearview, North Bothell, and North Seattle regulator stations at 809 psig. The odorizer and regulator stations are connected to the existing Northwest Pipeline transmission lines (laterals) and are within five hundred feet of highways and buildings intended for human occupancy.

## FINDING OF FACT

1. WNG has provided documentation for increased demand of natural gas within the greater North Seattle/Everett area due to population growth. WNG stations are currently served through the existing Northwest Pipeline Company (NWP) 8 inch and 16 inch North Seattle laterals.

2. NWP owns and operates the 11.11 miles of laterals that provide natural gas to WNG Cathcart Odorizer, Clearview, North Bothell, and North Seattle regulator stations.

3. NWP's laterals cannot provide adequate capacity to meet the existing gas load during cold weather conditions at the current operating pressure of 400 pounds per square inch gage (psig).

4. WNG evaluation of options has determined that the best method to augment supply is to request additional gas pressure from NWP rather than building another pipeline. It is not practical to select an alternative route in this area which would avoid proximity considerations as listed in WAC 480-93-020.

5. Commission staff recommended that NWP review the operating pressures of the laterals and confirm that the established MAOP of 809 psig is consistent with 49 CFR Part 192.619. NWP determined that the provisions of the code overrides the pressure test for segments tested prior to 1965 and agreed to follow the uprating requirement of 49 CFR Part 192. NWP has performed a comprehensive uprate including leak surveys in four pressure increments of 56.25 psig as required by 49 CFR, Part 192.555. NWP established a revised maximum allowable operating pressure of 600 psig for the North Seattle Laterals.

6. Because of the age, class location, and proposed increase in pressure of the laterals, Commission staff also recommended to NWP that the laterals be monitored for corrosion using a close interval WaveForm Analyzer/Pulse Generator corrosion control survey or equivalent system, and the laterals be inspected using an instrumented internal inspection devices (smart pig) within 24 months of this order. Any defects, abnormality, or condition found in the pipe, that could cause an unsafe condition, be repaired, replaced, or the segment involved be phased out.

7. NWP indicated that the laterals are part of the interstate transmission pipeline under Federal U.S. DOT-Office of Pipeline Safety jurisdiction. In 1990 a close interval survey was completed. The laterals are under cathodic protection and meet all federal safety requirements. The interstate lateral should not be subjected to additional state safety requirements. Additional testing and smart psig plans are tentatively scheduled for 1998 but implementation of NWP's risk management program may result in a change in this schedule.

8. WNG has completed modifications on the inlet piping, replaced the Clearview regulator station; and established a maximum allowable operating pressure on the inlet piping from 896 to 1000 psig.

9. WNG has submitted a request for a waiver of WAC 480-93-020 to allow WNG to set the maximum operating pressure for the inlet piping at 809 psig and operate the inlet pipeline at pressures up to 600 psig within five hundred feet of highways and buildings intended for human occupancy.

10. Staff has reviewed the requirements of WAC 480-93-020 and found nothing that would preclude the safe operation of the inlet piping to WNG's odor and regulator stations at pressure above five hundred psig.

## ORDER

THE COMMISSION ORDERS:

1. The request by Washington Natural Gas Company for a waiver of WAC 480-93-020 Proximity Considerations, shall be granted to allow the operation of the inlet piping to Cathcart Odorizer, Clearview, North Bothell, and North Seattle regulator stations at pressures up to 809 psig within five hundred feet of any proximity area as defined in WAC 480-93-020 including highways and buildings intended for human occupancy.

2. Washington Natural Gas Company shall advise the Commission, in writing at least 60 days in advance, of any increase in operating pressure above 600 psig.

3. The Commission retains jurisdiction over this matter to effectuate the provisions of this order.

DATED at Olympia, Washington and effective this 30th day of December 1996.

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

STEVE McLELLAN
Secretary