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PUGET SOUND ENERGY

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May 6, 2005

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

Attn: Alan Rathbun, Pipeline Safety Director

Subject: Docket PG-040210 Puget Sound Energy – 2004 Standard Inspection for Thurston & Lewis Counties

Dear Mr. Rathbun,

This letter is in response to the "2004 Standard Natural Gas Pipeline Safety Inspection Report", the "Jackson Prairie Gas Storage Probable Violations", and the "Areas of Concern" documents you sent to me under your cover letter on March 3, 2005. This response is organized as follows:

Attachment A – "Programs and Initiatives"
Attachment B – "Response to Audit Findings, Distribution System"
Attachment C – "Response to Audit Findings, Gate Station 1874"
Attachment D – "Response to Areas of Concern"

PSE appreciates the Commission's responsibilities in auditing and enforcing pipeline safety regulations with respect to the companies that it regulates. PSE is committed to continue its efforts to construct and operate a natural gas system that is safe and meets high standards of excellence.

To accomplish this, PSE is constantly looking for ways to improve and enhance pipeline safety. In fact, PSE's own internal reviews previously identified several improvement areas that coincide with the Commission staff inspection findings and PSE had already begun to develop and implement initiatives to address these issues.

PSE operates a geographically large system, which is governed by common standards and procedures. In instances where audit findings or internal company reviews indicate opportunities for improvement that are not unique to a specific area or facility, PSE has traditionally undertaken a broad systematic approach to changes that will correct potential deficiencies throughout all the operating areas.

In most cases, multi-year programs are implemented with significant financial and resource commitments by PSE; certain programs include Washington Utility and Transportation (WUTC) review and reporting. In other cases, process improvement initiatives are largely transparent to the WUTC. The programs and initiatives currently in place or under development that address many of the audit findings under this docket are described in Attachment A – "Programs and Initiatives".

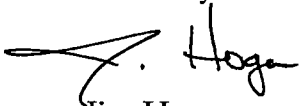
In Attachment B, PSE has responded to the specific findings related to the cited Code of Federal Regulations (CFR) or Washington Administrative Code (WAC). However, PSE does not separately address the repeated citations against 49 CFR §192.13 [following the company Operations and Maintenance (O&M) manual], since any potential non-compliance with a state or federal rule will also be a potential non-compliance with PSE's O&M manual. Therefore, the company's response to the primary CFR or WAC finding is also the company's response to 49 CFR §192.13. Where appropriate, the response in Attachment B cross-references the applicable program or initiative that is detailed in Attachment A.

Attachment C addresses the citations against Gate Station 1874 in one summary response. As noted in the response, PSE was unaware that William's Northwest Pipeline ceased maintenance activities on the facilities upstream of Gate Station 1874 in 1992. After discovering this fact, PSE promptly performed maintenance on this facility and is now evaluating the best option to remedy any compliance concerns with the facilities upstream of PSE's gate station.

Finally, Attachment D provides our comments to Staff's Areas of Concern.

PSE and Staff have agreed to meet to answer any questions Staff has regarding this audit response. If Staff has any questions prior to this meeting, please call me at (425) 462-3957.

Sincerely,



Jim Hogan
Manager, Standards & Compliance

Cc: Sue McLain
Booga Gilbertson
Duane Henderson
Kimberly Harris
Karl Karzmar

Attachments

Attachment A
Programs and Initiatives

PSE Response to Thurston-Lewis County Inspection Report
Docket No. PG-040210

Bare Steel Replacement Program

As part of the King/Pierce County Settlement Agreement, PSE and the WUTC agreed that PSE would develop and implement a Bare Steel Replacement Program. This program was developed to address operational issues associated with installing and monitoring cathodic protection on corrosion leak repairs on bare steel mains. This program requires PSE to systematically locate and replace all non-cathodically protected bare steel pipe by 2014 using a comprehensive risk based approach to prioritize the replacements.

In addition, this program requires repaired corrosion leaks on unprotected steel mains to be cathodically protected and monitored in accordance with Gas Operating Standard 2600.1900 and 2600.1500, respectively. To ensure compliance with this requirement, PSE is developing and implementing procedures for measuring and recording the current flow when utilizing net protective current criteria to measure the level of cathodic protection. This procedure will be developed and implemented by December 31, 2005.

Critical Bond Program and Isolated Facilities Program

The Critical Bond and Isolated Facilities programs are designed to verify the cathodic protection of all wrapped steel pipelines as well as to improve the efficiency in inspection, remediation and monitoring of these facilities for compliance with state and federal pipeline safety rules.

Critical Bond:

The Critical Bond Program is already in progress and will be completed by December 31, 2007. It involves records review and extensive field testing to identify non-continuous sections of metallic pipe within cathodic protection systems and to establish test sites for monitoring them in accordance with WAC 480-93 and 49 CFR §192. Due to the complexity of the Critical Bond Program, PSE is currently conducting a quality

control audit. The audit results will be used to identify any additional steps required to accomplish the program's objectives.

Isolated Facilities Program:
The Isolated Facilities program will identify short segments of electrically isolated steel facilities and steel pipelines inserted in casings that require cathodic protection and ensure these facilities are monitored to verify adequate CP. The methodology is currently being developed and will be reviewed with Staff by July 1, 2005 in accordance with the King/Pierce County Settlement Agreement. The purpose of this review is to obtain Staff's input on the scope and methodology.

The Isolated Facilities Program status will be reviewed with Staff in January 2006 and the program will be completed no later than July 1, 2009.

SAP Process Improvements Program

PSE uses the SAP software program for its financial accounting, property accounting, human resources management, and for work order management, including aspects of its pipeline safety maintenance program. SAP is the world's largest provider of enterprise resource software and is used by large companies and government agencies worldwide. As part of the King/Pierce County Settlement Agreement, PSE and the WUTC agreed that PSE will develop and implement SAP process improvements to enhance PSE's ability to identify potential missed inspection intervals before they happen. The improvements will be complete before October 1, 2005 and PSE will be providing WUTC Staff with a status update during the 2nd Quarter of 2005 as required in the King/Pierce County Settlement Agreement.

Atmospheric Corrosion Inspection and Remediation Improvement Initiatives

PSE is continually evaluating its processes that support compliance with our standards and procedures required by WAC 480-93 and 49 CFR §192. As part of this evaluation, PSE identified that process changes were necessary to ensure compliance with the atmospheric corrosion inspection and remediation requirements. The changes will ensure all aboveground facilities are inspected and that inspections and remediation are completed in a timely manner in accordance with State and Federal code requirements.

To ensure that all aboveground facilities are inspected, processes to identify and track both new and existing meterless risers and extended utility facilities (EUFs) are being developed. PSE believes that it is efficient to combine the identification of existing meterless risers and EUFs and their associated atmospheric corrosion inspection with the Isolated Facilities Program. In addition, the 2005 Gas Operating Standards now includes specific categories of aboveground facilities and the associated responsibility for inspection and remediation, including meterless risers and EUFs .

In accordance with state and federal code requirements, PSE's atmospheric corrosion monitoring program requires inspections every three calendar years not to exceed 39 months and remediation within 90 days. To ensure inspections are completed within the required interval, PSE has recently reallocated personnel to provide additional manpower for performing atmospheric corrosion inspections. In addition, PSE is developing and implementing processes and procedures for locations that are difficult to access.

To ensure that atmospheric corrosion discrepancies are remediated within the required time-frame, PSE has assigned personnel to coordinate and monitor the remediation activities, is automating the process for creating remediation work orders, and is improving the communication process with supervisors to ensure that resources are appropriately allocated.

Maps and Records Improvement Initiatives

PSE has processes in place to maintain up to date and accurate maps and continually evaluates opportunities to improve these processes. Recent process improvements have resulted in a significant reduction in the mapping backlog of new mains and services.

Currently, an initiative is underway to address the challenges of maintaining up to date CP maps in multiple locations by creating a CP overlay on PSE's on-line operation maps. This initiative will result in the ability to view all CP system boundaries on-line. This project, including the development and implementation of processes for maintaining the CP mapping records, is planned for completion in Spring of 2006.

PSE is currently assessing maps and records processes for opportunities to improve mapping accuracy. These improvements may be accomplished through

either current activities or new initiatives. For example, the map accuracy of extended utility facilities is proposed to be addressed in conjunction with the Isolated Facilities Program and trailer park facilities may be addressed as part of routine trailer park patrols. An example of an additional initiative would include development of processes to validate mapping of mains and services within school campuses and business parks. The map accuracy assessment will be completed by August 1, 2005.

Attachment B
Response to Audit Findings, Distribution System
Docket No. PG-040210

1. **49 CFR §192.199 Requirements for Design of Pressure Relief and Limiting Devices**

Except for rupture discs, each pressure relief or pressure-limiting device must:
(h) Except for a valve that will isolate the system under protection from its source of pressure, be designed to prevent unauthorized operation of any stop valve that will make the pressure relief valve or pressure-limiting device inoperative.

Finding:
Saint Martins College - Administrative Building: The overpressure protection isolation valve located on the pressure meter set (meters 994477 and 996512) was not locked in the open position allowing for possible unauthorized operation.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its Procedures Manual, Section 4650.1010 Setting Relief Pressure, step 10, which states in part, "Open relief isolation valve and lock (open)."

Response:
A lock was installed on this valve on September 27, 2004 to prevent unauthorized operation. PSE believes that this lock was inadvertently left off following routine maintenance or inspection activities. In addition to replacing the lock at this specific location, PSE will inspect all meter sets that have external overpressure protection devices and ensure that the valves are locked in the open position. This inspection will be completed by December 31, 2005. PSE will also revise its Gas Operating Standards manual to ensure that the annual inspection of fixed factor meter sets

includes verifying locks are still present or are installed on overpressure protection isolation valves. This revision will occur in the 2006 Gas Operating Standards.

2. **49 CFR §192.457 External Corrosion Control: Buried or Submerged Pipelines Installed Before August 1, 1971**

(b) Except for cast iron or ductile iron, each of the following buried or submerged pipelines installed before August 1, 1971, must be cathodically protected in accordance with this subpart in areas in which active corrosion is found:
(1) Bare or ineffectively coated transmission lines.
(2) Bare or coated pipes at compressor, regulator, and measuring stations.
(3) Bare or coated distribution line.

Finding:
Leak work order #9308610012 located at 403 Cleveland Avenue in Olympia on a bare steel gas main was repaired on April 29, 2002. A low pipe-to-soil potential (PSP) read of -.500V and isolated shallow pitting was noted on PSE's Exposed Pipe Condition Report at the time of repair. Remedial action was not taken to correct the condition.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Manual Sections 2600.1000 3.5 stating, "The following buried or submerged pipelines installed before August 1, 1971 must be cathodically protected in areas in which active corrosion is found. (Areas of active corrosion shall be determined in accordance with Operating Standard 2600.1600 "Unprotected Facilities." Section 3.5.3 refers to "Bare or coated distribution lines."

Response:
This section of main at 403 Cleveland Avenue in Olympia is scheduled for replacement in 2005 under the Bare Steel Replacement Program. The Bare Steel Replacement Program was developed to address similar issues throughout our system and is summarized in Attachment A.

In addition to implementing the Bare Steel Replacement Program, PSE has been auditing 100% of corrosion leak repairs on unprotected bare steel

pipelines since the second quarter of 2004 to verify that anodes are installed or the facility is replaced.

3. **49 CFR §192.463 External Corrosion Control: Cathodic Protection**

(a) Each cathodic protection system required by this subpart must provide a level of cathodic protection that complies with one or more of the applicable criteria contained in Appendix D of this part. If none of these criteria is applicable, the cathodic protection system must provide a level of cathodic protection at least equal to that provided by compliance with one or more of these criteria.

Appendix D reads:

A. Steel, cast iron, and ductile iron structures.

(1) A negative (cathodic) voltage of at least 0.85 volt, with reference to a saturated copper-copper sulfate half cell. Determination of this voltage must be made with the protective current applied, and in accordance with sections II and IV of this appendix.

(2) A negative (cathodic) voltage shift of at least 300 millivolts. Determination of this voltage shift must be made with the protective current applied, and in accordance with sections II and IV of this appendix. This criterion of voltage shift applies to structures not in contact with metals of different anodic potentials.

(3) A minimum negative (cathodic) polarization voltage shift of 100 millivolts. This polarization voltage shift must be determined in accordance with sections III and IV of this appendix.

(4) A voltage at least as negative (cathodic) as that originally established at the beginning of the Tafel segment of the E-log-I curve. This voltage must be measured in accordance with section IV of this appendix.

(5) A net protective current from the electrolyte into the structure surface as measured by an earth current technique applied at predetermined current discharge (anodic) points of the structure."

Finding:

PSE did not meet 49 CFR §192 Cathodic Protection Appendix D criteria. PSE had inadequate cathodic protection at the following locations:

- The portion of steel main and the associated services starting at the intersection of Maple and Railroad St. in Centralia and ending near the service to S 212 Tower in Centralia. The PSP reads on the services varied from -.730V to -.785V.

Response:
Low reads were discovered on 8/12/04 and were remediated on 9/28/04. An acceptable PSP read of –1.22 V was achieved, accomplishing remediation of the low read within 90 days as required by WAC 480-93.

- Leak work order # M01008359, on the bare steel gas main located at 1124 W. Walnut in Centralia was repaired on April 25, 2003. PSE's Exposed Pipe Condition Report for the repair showed that at the time of the repair, a low PSP read of -.400V and frequent deep pitting was noted. The report indicated that an anode was placed on the main but the PSP read remained at -.400V.

Response:
An anode was installed to provide cathodic protection for this area in accordance with the net protective current criteria provided for in 49 CFR § 192 Appendix D Paragraph I (A)(5). When net protective current is the criteria being utilized, the PSP read is not required to be at or above -0.85 V.

- 110½ S. Tower (Meter 666660, installed in 1962) had a low PSP read of -.364V on the portion of the service from the dresser fitting to the meter.

Response:
On August 31, 2004, an anode was installed resulting in an acceptable PSP read of –1.10 V. Remediation of the low read occurred within 90 days as required by WAC 480-93.

- 3811 Pacific Avenue in Lacey (Meter 473240) had a low PSP read of -.530V on the isolated steel riser.

Response:
On August 25, 2004, this location was remediated and an acceptable PSP read of –1.64 V was obtained. Therefore, remediation was achieved within the 90-day requirement specified in WAC 480-93.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:

PSE did not follow its O&M Manual Section 2600.1500 5.1 stating, "Each pipeline that is under cathodic protection shall be tested to determine whether the level of cathodic protection complies with one or more of the following criteria:

5.1.1 Voltage shall be within the range of –0.850V to –2.0V, with reference to a saturated copper-copper sulfate half-cell in contact with the electrolyte. Determination of the voltage shall be made with the protective current applied.

5.1.2 A minimum negative polarization voltage shift of 100 millivolts measured between the structure surface and a saturated copper-copper sulfate half cell in contact with the electrolyte. The polarization voltage shift must be determined by interrupting the protective current and measuring the polarization decay. The voltage shift, which occurs immediately after the current is interrupted, shall be used as the base value for measuring polarization decay.

5.1.3 A net protective current from the electrolyte into the structure surface as measured by an earth current technique applied at predetermine current discharge points of the structure

5.1.4 Other criteria may be used with the approval of the Consulting Engineer, Corrosion Control."

PSE did not follow its Procedural Manual Section 4515.1210 Scope stating, "This procedure establishes the method for taking pipe-to-soil potential (PSP) reads using a copper: copper .... Acceptable readings should exceed (be more negative than) or be equal to –0.850 volts, or meet the criteria in Operating Standard 2600.1500, "Monitoring Cathodic Protection." The section identifies an unstable read as an Abnormal Operating Condition and gives instruction to "... If unable to get stable reading, contact the Corrosion Control Department. Do not Estimate."

4. **49 CFR §192.465 External Corrosion Control: Monitoring**

(a) Each pipeline that is under cathodic protection must be tested at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of §192.463. However, if tests at those intervals are impractical for separately protected short sections of mains or transmission line, not in excess of 100 feet (30 meters), or separately protected service line, these pipelines may be surveyed on a sampling basis. At

Finding:
PSE has not followed its O&M Manual Section 2700.1100 3.1 stating, "All welding on the gas pipe system, including steel casings, shall be done by qualified welders using previously qualified welding procedures. A qualified welder will be issued a Qualification Data Card (PSE form 1943) indicating the date of qualification for a particular welding procedure or group of procedures. Only those welders with active cards will be permitted to weld on Company piping."

5. **49 CFR §192.227 Qualification of Welders.**

(a) Except as provided in paragraph (b) of this section, each welder must be qualified in accordance with section 6 of API 1104 (ibr, see §192.7) or section IX of the ASME Boiler and Pressure Vessel Code (ibr, see §192.7). However, a welder qualified under an earlier edition than listed in appendix A of this part may weld but may not requalify under that earlier edition.

Finding:
PSE did not provide documentation of welder qualifications for the pipeline and its components upstream of PSE's Gate Station #1874.

49 CFR §192.13 (c) General
Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding
PSE did not follow its O&M Manual Section 2700.1100 5.5 stating, "Other welding processes may be approved for use provided qualified welding procedures are developed in accordance with API Standard 1104 and 49 CFR §192."

6. **49 CFR §192.303 Compliance with Specifications or Standards.**
Each transmission line or main must be constructed in accordance with comprehensive written specifications or standards that are consistent with this part.

Finding:
PSE was unable to provide documentation that the lateral transmission pipeline coming off of the 14-inch transmission pipeline was constructed in accordance with 49 CFR §192 Subpart G General Construction.

49 CFR §192.13 General

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:

PSE did not follow its O&M Manual Section 2525.2700 3.1 for steel pipe and fittings and 2525.1200 for polyethylene stating, "Construct each gas facility in accordance with comprehensive written specifications or standards", and 2525.1200 1.1 states, "This Operating Standard establishes design, construction and operating policies for polyethylene (PE) gas distribution mains and services."

7. **49 CFR §192.457 External Corrosion Control: Buried or Submerged Pipelines Installed Before August 1, 1971**

(a) Except for buried piping at compressor, regulator, and measuring stations, each buried or submerged transmission line installed before August 1, 1971, that has an effective external coating must be cathodically protected along the entire area that is effectively coated, in accordance with this subpart. For the purposes of this subpart, a pipeline does not have an effective external coating if its cathodic protection current requirements are substantially the same as if it were bare. The operator shall make tests to determine the cathodic protection current requirements.

(b) Except for cast iron or ductile iron, each of the following buried or submerged pipelines installed before August 1, 1971, must be cathodically protected in accordance with this subpart in areas in which active corrosion is found:

(1) Bare or ineffectively coated transmission lines.

(2) Bare or coated pipes at compressor, regulator, and measuring stations.

(3) Bare or coated distribution line .

Finding:

Post inspection, PSE investigation showed that Gate Station #1874 was installed in 1966. PSE did not have cathodic protection records for the pipeline and its components upstream of Gate Station #1874.

49 CFR §192.13 General

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Manual Section 2600.1000 3.4 stating, "Except for buried piping at compressor, regulator, and measuring stations, each buried or submerged transmission line installed before August 1, 1971, that has an effective external coating must be cathodically protected along the entire area that is effectively coated."

8. **49 CFR §192.465 External Corrosion Control: Monitoring**
(a) Each pipeline that is under cathodic protection must be tested at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of §192.463. However, if tests at those intervals are impractical for separately protected short sections of mains or transmission line, not in excess of 100 feet (30 meters), or separately protected service line, these pipelines may be surveyed on a sampling basis. At least 10 percent of these protected structures, distributed over the entire system must be surveyed each calendar year, with a different 10 percent checked each subsequent year, so that the entire system is tested in each 10-year period.

Finding:
PSE was unable to provide documentation that the cathodic protection on the pipeline and its components upstream of PSE's Gate Station #1874 had been tested. PSE personnel stated that they have never taken cathodic protection readings on the pipeline and its components upstream of PSE's Gate Station #1874.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Manual Section 2600.1500 4.1.1 stating, "Cathodically protected pipelines greater than 100 feet in length shall be tested at least once each calendar year, but with intervals not exceeding 15 months."

9. **49 CFR §192.479 Atmospheric Corrosion Control; General**

(a) Each operator must clean and coat each pipeline or portion of pipeline that is exposed to the atmosphere, except pipelines under paragraph (c) of this section.
(b) Coating material must be suitable for the prevention of atmospheric corrosion.

Finding:

PSE had atmospheric corrosion in three areas on the regulator station upstream of PSE's gate station #1874. PSE had not cleaned and coated the pipeline and associated components exposed to the atmosphere.

49 CFR §192.13 General

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:

PSE did not follow its O&M Manual Section 2600.1800 1 stating, "This Operating Standard establishes requirements for monitoring pipelines or portions of pipelines that are exposed to the atmosphere for atmospheric corrosion."

10. **49 CFR §192.481 Atmospheric Corrosion Control: Monitoring**

(a) Each operator must inspect each pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion, as follows:
If the pipeline is located onshore then the frequency of inspection is:
At least once every 3 calendar years, but with intervals not exceeding 39 months
(b) During inspections the operator must give particular attention to pipe at soil-to-air interfaces, under thermal insulation, under disbonded coatings, at pipe supports, in splash zones, at deck penetrations, and in spans over water.
(c) If atmospheric corrosion is found during an inspection, the operator must provide protection against the corrosion as required by Sec. 192.479.

Finding:

PSE had not conducted inspections for atmospheric corrosion inspections.

49 CFR §192.13 General

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Section 2600.2600.1800 4.1 stating, "Each pipeline exposed to the atmosphere, including service risers, meter sets, piping at district regulators, propane tank farms, and CNG injection sites, shall be inspected for evidence of atmospheric corrosion at least once every three years, but at intervals not exceeding 39 months, unless more frequent surveys are specifically requested."

11. **49 CFR §192.491 Corrosion Control Records**

(a) Each operator shall maintain records or maps to show the location of cathodically protected piping, cathodic protection facilities, galvanic anodes, and neighboring structures bonded to the cathodic protection system. Records or maps showing a stated number of anodes, installed in a stated manner or spacing, need not show specific distances to each buried anode.
(b) Each record or map required by paragraph (a) of this section must be retained for as long as the pipeline remains in service.
(c) Each operator shall maintain a record of each test, survey, or inspection required by this subpart in sufficient detail to demonstrate the adequacy of corrosion control measures or that a corrosive condition does not exist. These records must be retained for at least 5 years, except that records related to §§192.465(a) and (e) and 192.475(b) must be retained for as long as the pipeline remains in service.

Finding:
PSE was unable to provide records for the cathodic protection system on the pipeline and its components upstream of PSE's Gate Station #1874.

49 CFR §192.13 General

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Section 2600.2600.1800 5.1 stating, "Records of inspections shall be retained for at least 5 years."

12. **49 CFR §192.517 Records**

(a) Each operator shall make, and retain for the useful life of the pipeline, a record of each test performed under §§ 192.505 and 192.507. The record must contain at least the following information: . . .

Finding:

PSE was unable to provide pressure test records for the pipeline and its components up stream of PSE's Gate Station #1874.

49 CFR §192.13 General

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:

PSE did not follow its O&M Manual Section 2525.3300 10.1 stating, "A record of each test performed shall be retained for the life of the pipeline. When a pipeline is installed and tested in segments, results of each test shall be recorded."

13. **49 CFR §192.619 Maximum Allowable Operating Pressure: Steel or Plastic Pipelines**

(a) Except as provided in paragraph (c) of this section, no person may operate a segment of steel or plastic pipeline at a pressure that exceeds the lowest of the following: . . .

Finding:

PSE was unable to provide records documenting that the MAOP of the pipeline and its components upstream of PSE's Gate Station #1874 had been established.

49 CFR §192.13 General

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:

PSE did not follow its O&M Manual Section 2525.1400 4.1 stating, "Except as provided in Section 4.2, no segment of a steel or plastic pipeline may be operated at a pressure that exceeds the lowest of the following pressures."

14. **49 CFR §192.705 Transmission Lines: Patrolling**

(a) Each operator shall have a patrol program to observe surface conditions on and adjacent to the transmission line right-of-way for indications of leaks, construction activity, and other factors affecting safety and operation.

Finding:

PSE did not provide documentation that the pipeline and its components upstream of PSE's Gate Station #1874 had been patrolled.

49 CFR §192.13 General

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:

PSE did not follow its O&M Manual Section 2625.1400 4.1 stating, "Transmission mains shall be patrolled to observe surface conditions on and adjacent to the transmission line right-of-way for indications of leaks, construction activity, and other factors affecting safety and operations."

15. **49 CFR §192.706 Transmission Lines: Leakage Surveys**

Leakage surveys of a transmission line must be conducted at intervals not exceeding 15 months, but at least once each calendar year. However, in the case of a transmission line, which transports gas in conformity with §192.625 without an odor or odorant, leakage surveys using leak detector equipment must be conducted-

Finding:

PSE was unable to provide records documenting that the pipeline and its components upstream of PSE Gate Station #1874 had been leak surveyed.

49 CFR §192.13 General

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:

PSE did not follow its O&M Manual Section 2625.1100 4.1 stating, "The leakage survey program shall be conducted in accordance with the following schedule unless more frequent surveys are specifically requested:"

16. **49 CFR §192.707 Line Markers for Mains and Transmission Lines**

(a) Buried pipelines. Except as provided in paragraph (b) of this section, a line marker must be placed and maintained as close as practical over each buried main and transmission line:

(1) At each crossing of a public road and railroad; and

(2) Wherever necessary to identify the location of the transmission line or main to reduce the possibility of damage or interference.

Finding:

PSE did not have pipeline markers in this class 1 location and its components upstream of PSE's Gate Station #1874.

49 CFR §192.13 General

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:

PSE did not follow its O&M Manual Section 2525.2500 4.1 stating, "Pipeline markers shall be placed and maintained as close as practical over each main in a rural area and over all transmission lines, regardless of whether they are in rural or urban areas, as follows:"

17. **49 CFR §192.709 Transmission Lines: Record Keeping**

Each operator shall maintain the following records for transmission line for the periods specified:

(c) A record of each patrol, survey, inspection, and test required by subparts L and M of this part must be retained for at least 5 years or until the next patrol, survey, inspection, or test is completed, whichever is longer.

Finding:

PSE was unable to provide transmission records for the pipeline and its associated components upstream of PSE Gate Station #1874.

49 CFR §192.13 General

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Manual Section 2525.2500 8.1 stating, "All pipeline markers shall be noted on the as built drawing or on other completion documents if no as built is prepared. The type and measured location of each marker and the reason for the installation shall be noted along with any special instruction that may assist in locating the marker in the future."

18. **49 CFR §192.739 Pressure Limiting and Regulating Stations: Inspection and Testing**
Each pressure limiting station, relief device (except rupture discs), and pressure regulating station and its equipment must be subjected at intervals not exceeding 15 months, but at least once each calendar year, to inspections and tests to determine that it is–

Finding:
PSE was unable to provide documentation that the pressure relief device was inspected.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Manual Section 2575.1000 6.1 stating, "All pressure regulating stations and pressure relief devices (except rupture discs) shall be inspected and tested once each calendar year, not to exceed 15 months."

19. **49 CFR §192.739 Pressure Limiting and Regulating Stations: Inspection and Testing**
Each pressure limiting station, relief device (except rupture discs), and Pressure regulating station and its equipment must be subjected at intervals not exceeding 15 months, but at least once each calendar year, to inspections and tests to determine that it is–
(a) In good mechanical condition;

Finding:
The vent flap on the regulator upstream of PSE's Gate station #1874 was not in good mechanical condition. Staff observed heavy corrosion on the vent flap preventing it from opening freely.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Manual Section 2575.1000 3.1.1 stating, "Inspection of pressure regulating stations and pressure relief devices (except rupture discs) shall be conducted to determine that they are: 3.1.1 Mechanically in good condition."

20. **49 CFR §192.743 Pressure Limiting and Regulating Stations: Capacity of Relief Devices**
(a) Pressure relief devices at pressure limiting stations and pressure regulating stations must have sufficient capacity to protect the facilities to which they are connected. Except as provided in §192.739(b), the capacity must be consistent with the pressure limits of §192.201(a). This capacity must be determined at intervals not exceeding 15 months, but at least once each calendar year, by testing the devices in place or by review and calculations.

Finding:
The pressure relief device was not tested for sufficient capacity in the required timeframe at the regulating station upstream of PSE's Gate Station #1874. The pressure relief device was last tested in 1992.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Manual Section 2575.1000 4.1 stating, "Pressure relief devices at pressure regulating stations must have sufficient capacity to protect the facilities to which they are connected consistent with the pressure limits set forth in Operating Standard

2525.2900. This capacity must be determined by testing the device in place or by review and calculations."

21. **49 CFR §192.745 Valve Maintenance: Transmission Lines**

(a) Each transmission line valve that might be required during any emergency must be inspected and partially operated at intervals not exceeding 15 months, but at least once each calendar year.

Finding:

PSE did not conduct inspections on the transmission line valve between the 14-inch transmission line and the regulating equipment upstream of PSE's Gate Station #1874. The last inspection date is not known but the last maintenance preformed on the pipeline and its components was in 1992. This valve should be on PSE's Emergency Operating Valve list.

49 CFR §192.13 General

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:

PSE did not follow its O&M Manual Section 2575.1200 3.1 stating, "Each valve, the use of which may be necessary for the safe operation of the system, shall be inspected to determine that the valve can be operated and is in good mechanical conditions."

Response:

As noted by Staff, PSE was unaware that in 1992 Williams Northwest Pipeline ceased maintenance activities on the facilities upstream of Gate Station 1874. Neither Williams nor PSE have been able to locate any formal correspondence that memorializes a transfer of maintenance responsibility.

Regardless of that fact, PSE is committed to accepting future maintenance and operational responsibility for these facilities.

After discovering this situation, PSE promptly performed a thorough inspection of the upstream facilities and found them to be in a safe and serviceable condition. PSE is committed to determining the best option to remedy any compliance concerns on the upstream facilities. These actions

may include further research, testing, or replacement of facilities as necessary. This evaluation will be completed by August 1, 2005.

Additionally, as a result of this finding, PSE is conducting a full review with Williams of all custody transfer points at each gate station throughout our system to verify that maintenance responsibilities are clearly defined at these facilities. This review will be completed by August 1, 2005.

Attachment D
Response to Areas of Concern
PSE Response to Thurston-Lewis County Inspection Report
Docket No. PG-040210

1. At The Evergreen State College (Evergreen), PSE tied 1,874 feet of 2-inch steel pipe onto Evergreen's 6-inch steel service pipe. Evergreen's 6-inch steel service ends at PSE's 2-inch steel connection, per 49 CFR §192.3's definition of service line, "A service line ends at the outlet of the customer meter or at the connection to a customer's piping, whichever is further downstream, or at the connection to customer piping if there is no meter."

   The portion of Evergreen's 6-inch steel service between PSE's 2-inch tie-in and PSE's meter becomes PSE's responsibility by definition and is possibly in violation of several 49 CFR §192 and Chapter 480-93 WAC requirements. Staff recommends that PSE review the Evergreen installation and all other Extended Utility Facilities to ensure all 49 CFR §192 and Chapter 480-93 WAC requirements are being met.

   Response:
   PSE is working with Evergreen State College to address this issue. The solution will ensure a clear distinction between PSE's extended utility facilities (EUF) and the customer owned piping. PSE will also ensure that the EUF complies with applicable state and federal regulations. PSE plans to review all EUFs as part of the Isolated Facilities Program to ensure any similar situations are addressed.

2. PSE's procedure is to forward the Continuing Surveillance Patrol Records form information to PSE's Engineering Department if items are identified that need attention or investigation. The Engineering Department then reviews and schedules the unsatisfactory condition for remedial action. PSE meets the regulation requirements but does not appear to follow up with items identified on the Continuing Surveillance Patrol Records form in a timely manner. The following are examples of items that PSE has identified as areas that require action:

- At Yew St & China Creek Crossing, Loc. #190, and at Marsh Ave, south of Lakeshore Dr over China Creek, Loc. #189, PSE's Continuing Surveillance Patrol Records form notations indicated that the bridge hangers in the middle of the bridge needed to be replaced. The same information was noted during patrols on 9/19/2003, 11/18/2003, 3/4/2004, 4/6/2004 and 6/10/2004. The form noted this was a high priority and needed action. In the comments section of the form, there was a comment dated 9/3/2004, that stated a maintenance request had been sent to PSE's Planning Department. PSE's form indicates that the pipeline and its associated equipment may not have adequate anchors or supports.

- At Black Lake & Black Lake-Bellmore, Loc. ID #365, the Continuing Surveillance Patrol Records form notations indicated that the "bridge continued to settle and was pushing on the 4-inch steel gas main. The road was also settling and the hangers didn't look right, they were pushing on the gas main." The same information was noted during patrols on 10/8/2003, 12/3/2003, 3/4/2004, 4/2/2004 and 6/8/2004. The form noted this was a high priority and needed action. In the comments section of the form, there was a comment dated 12/5/2003, requesting maintenance and changing the priority to high. PSE provided staff with a SAP work order number 109013107 that shows the construction to be done between 11/04/2002 and 12/28/2005. No action had been taken at the time of the records review. PSE's form indicates that the pipeline and its associated equipment may not have adequate anchors or supports.

- At the Elks Club in Centralia, Loc. #331, located at 2507 Kresky Rd., PSE's Continuing Surveillance Patrol Records form notations indicated that the road was buckling and the asphalt was breaking up by the building. The same information was noted during patrols conducted on 10/6/2004, 10/16/2003, 10/21/2004, 11/18/2004, 1/8/2004, 3/4/2004, 4/6/2004 and 6/10/2004. The form indicated that this was a high priority and no action was required.

Staff requested copies of the patrolling records that are not part of the leak surveys in an e-mail dated 8/25/2004, to be reviewed by staff on 9/7/2004. After staff's information request and before staff's records review, the maintenance request was noted on PSE's

Continuing Surveillance Patrol Records form and was sent to PSE's Planning Department on 9/3/2004. After the records review on 11/01/2004, staff was given a copy of work order number 109013107 that scheduled the work to be completed by December 2005.

- At Hawks Prairie Rd, Loc. ID. #179, the Continuing Surveillance Patrol Records form notations indicated that the 4-inch steel main wasn't sitting on the hangers at all. The same information was noted during patrols on 9/19/2003, 12/4/2003, 3/5/2004, 4/20/2004, 6/14/2004 and 8/27/04. This information was sent to PSE's Planning Department on 5/14/04. The form indicated that this was a high priority and needed action. No action had been taken at the time of the records review. PSE's form indicates that the pipeline and its associated equipment may not have adequate anchors or supports.

Response:
PSE is developing a process to ensure issues identified during bridge and slide Patrols as well as through continuing surveillance are followed up on in a timely manner and that the results of the investigation are documented to demonstrate the thoroughness of the review and remediation. This process will be developed by August 1, 2005 and will be implemented by October 1, 2005.

3. Meter 328107, located at 108 S Tower, is an isolated steel service (CP test site 011287). In 1991, the PSP read was -1.2V. On 9/23/1995, the 1991 read was entered into PSE's SAP system from the FMS system. In 1995, the SAP system test site 011287 was inspected but there was no PSP read entered into PSE's system, just a note saying, "good PSP read." PSE records were not maintained.

Response:

The September 23, 1995 date recorded in the computer system was not associated with a field inspection of this facility but rather was a record indicating that work was done on the computer system. There was no record associated with the 1995 date indicating "good PSP read." The note stating "good PSP read" is a comment that was associated with the inspection completed on August 20, 1998.

The PSP read taken during this inspection was –1.30V and was recorded in the appropriate data field in the computer record.

4. At St. Martin's College, 5800 Pacific Ave SE, Lacey, the vent was under the roofline near the roof's edge but did not extend beyond the roofline of the meter enclosure located at the main maintenance building. If gas vented to the atmosphere under a roof, a hazardous situation could result. 49 CFR §192.199 requires that in locations where gas can be discharged into the atmosphere, it should not create undue hazard. PSE extended the vent when staff informed PSE of the situation.

Response:

PSE is currently reviewing its Gas Operating Standards 2525.2900 "Pressure Regulating Station and Overpressure Protection Design" and 2550.1800 "Meter Set Assembly Location Requirements" that address the requirements of 49C CFR §192.199 to determine if additional guidelines should be provided to ensure compliance with the federal requirements. If changes are necessary based on this review, PSE will incorporate changes into the 2006 edition of the Gas Operating Standards.

least 10 percent of these protected structures, distributed over the entire system must be surveyed each calendar year, with a different 10 percent checked each subsequent year, so that the entire system is tested in each 10-year period.

Finding (a):

The following test sites had not been tested once each calendar year with intervals not exceeding 15 months:

- Test Site 044117 had test dates of 7/16/2003 and 11/17/2004.
- Test Site 048524 had test dates of 3/4/2003 and 10/26/2004.
- Test Site 048522 had test dates of 3/4/2003 and 10/26/2004.
- Test Site 048296 had test dates of 3/4/2003 and 8/13/2004.
- Test Site 029043 had test dates of 2/21/2002 and 3/5/2004.

In each of the above test sites, except Test Site 029043, PSE had not created a test site in the SAP software process system after the 2003 read.

Response:

The SAP Process Improvements Program was developed to allow PSE to better manage its maintenance work to ensure compliance with regulatory deadlines. This program is summarized in Attachment A.

Finding (b):

The following test sites had not been inspected in the required ten year time frame:

- Test Site-007113 was tested on 1/22/1986 and 4/29/1996.
- Test Site-007034 was tested on 1/07/1986 and 4/29/1996.
- Test Site-006093 was tested on 1/6/1986 and 7/11/1996.
- Test Site-006099 was tested on 1/6/1986 and 7/11/1996.
- Test Site-006156 was tested on 1/6/1986 and 7/11/1996.
- Test Site-006177 was tested on 1/6/1986 and 7/02/1996.
- Test Site-006201 was tested on 1/6/1986 and 7/02/1996.
- Test Site-006558 was tested on 3/23/1984 and 7/02/1996.
- Test Site-006653 was tested on 3/23/1984 and 1/27/1995.
- Test Site-006483 was tested on 3/23/1984 and 1/27/1995.
- Test Site-006894 was tested on 1/10/1986 and 7/02/1996.
- Test Site-006912 was tested on 1/7/1986 and 1/16/1996.
- Test Site-006934 was tested on 1/7/1986 and 4/29/1996.

Response:
In late 2003, PSE modified the maintenance plan for all facilities requiring an inspection every 10 years. The new plan prompts an inspection at a 9-year interval, thus providing scheduling flexibility while ensuring the inspection is completed within the 10-year requirement.

Additionally, the SAP Process Improvements Program was developed to allow PSE to better manage its maintenance work to ensure compliance with regulatory deadlines. This program is summarized in Attachment A.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M manual Sections 2600.1500 4.1.1 and 2600.1500 4.1.2 which states, "Cathodically protected pipelines greater than 100 feet in length shall be tested at least once each calendar year, but with intervals not exceeding 15 months." In addition, Section 2600.1500 4.1.2 states, "Separately protected mains or transmission lines, not in excess of 100 ft, or separately protected service lines may be surveyed on a sampling basis. At least ten percent of these protected structures, distributed over the entire system, shall be surveyed each calendar year, with a different ten percent checked each subsequent year, so that the entire system is tested in each ten year period."

5. **49 CFR §192.469 External Corrosion Control: Test Stations**
Each pipeline under cathodic protection required by this subpart must have sufficient test stations or other contact points for electrical measurement to determine the adequacy of cathodic protection.

Finding:
PSE had not created test sites at the following locations:
- In Centralia, at the end of the main near S 212 Tower Avenue.
- In Centralia at 110 ½ S. Tower.
- In Lacey at 3811 Pacific Ave SE.

Response:
Test sites have been created at all three locations. In addition, the Critical Bond and Isolated Facilities Programs were developed to ensure test sites are established at these types of locations. These programs are summarized in Attachment A.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M manual, Section 2600.1200 3.1 stating, "Each pipeline with cathodic protection shall have sufficient test stations or other contact points for electrical measurement to determine the adequacy of cathodic protection."

6. **49 CFR §192.481 Atmospheric Corrosion Control: Monitoring**
(a) Each operator must inspect each pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion, as follows: If the pipeline is located onshore at least once every 3 calendar years, but with intervals not to exceed 39 months.

Finding (a):
PSE does not perform atmospheric corrosion inspections on service risers without meters except in mobile home parks. PSE did not conduct atmospheric corrosion inspection for service risers without meters at the following locations:

- At the Evergreen State College, Science Building.
- In Centralia, in the alley off Maple Street between Tower Street and Pearl Street.
- In Centralia, in the alley behind 401 S. Tower.
- Two service risers found at the South Sound Mall near Pacific Ave and Sleater Kinney behind the DSHS, Vocation Rehabilitation Building.

Finding (b):
PSE did not perform atmospheric corrosion checks within the three calendar years not to exceed 39 months at the following locations:

- Meter 213099 on 11/7/2001 and again on 1/11/2005.
- Meter 340027 on 8/21/2001 and again on 1/8/2005.
- Meter 530109 on 8/6/2001 and again on 1/14/2005.

Response:
Please see the summary of the Atmospheric Corrosion Inspection and Remediation Improvement Initiatives in Attachment A for a description of actions PSE is implementing to prevent these situations from reoccurring.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Section 2600.2600.1800 4.1 stating, "Each pipeline exposed to the atmosphere, including service risers, meter sets, piping at district regulators, propane tank farms, and CNG injection sites, shall be inspected for evidence of atmospheric corrosion at least once every three years, but at intervals not exceeding 39 months, unless more frequent surveys are specifically requested."

7. **49 CFR §192.723 Distribution Systems: Leakage Surveys**
(a) Each operator of a distribution system shall conduct periodic leakage surveys in accordance with this section.

Finding:
As a result of maps not being maintained, the following services were not leak surveyed:

- The services at St. Martin's College, 5800 Pacific Ave SE Lacey, near the front of the Pavilion Building at meter 949835.
- The service at St. Martin's College in Lacey, 5800 Pacific Ave SE, Lacey, near the back of the Pavilion Building at meter 366427.
- The service to the St. Martin's College Maintenance Building
- The service to the St. Martin's Administration Building.
- At the Candlewood Mobile Manor located at 4500 Martin Way the services to space 4, space 5 of the clubhouse and the laundry room were not leak surveyed.

Response:
The maps for St. Martin's college and Candlewood Mobile Manor have been updated and leak surveys have been performed.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Manual Section 2625.1100 4.1, Survey Frequency Table, which indicates the required leak survey intervals.

8. **WAC 480-90-328 Meter Identification**
"Gas utilities must identify each meter by a unique series of serial numbers, letters or combination of both, placed in a conspicuous position on the meter, along with the utility's name or initials. Utilities must update the name or initials on its meters within three years of a name change."

Finding:
PSE had Washington Natural Gas labeled as the owner/operator of the meters located at the following locations:

- Rainer Mobile Home Park, 3800 Sleater Kinney Rd NE, Olympia, meter 340027.
- Rainer Mobile Home Park, 3800 Sleater Kinney Rd NE, Olympia, meter 456001.
- Mt. Green Estates Mobile Home Park, Yelm Highway between College and Ruddle, meter 445175.
- Across the alley from the Police Building in Centralia, meter 714452.
- Genghis Khan Restaurant located at 3811 Pacific Ave SE, Lacey meter 473240.

PSE took possession of Washington Natural Gas in 1996. Chapter 480-90-328 WAC requires all meters to be updated within three years of the name change.

Response:
When Puget Sound Power & Light and WNG merged in 1997, WAC 480-90-328 did not require meters to be updated when a company's name changed. WAC 480-93-328 was revised subsequent to the merger and effective June 3, 2001 the code required utilities to update the name or initials on their meters within three years of a name change.

PSE implemented a three-year program in 2001 to begin updating the labels on all meters to reflect the company's name change. In late 2003, however, PSE identified a problem with the adhesive material used on the labels and found that some of the labels had not remained attached to the meter. As a result, the labels have been changed to incorporate a different adhesive material with stronger holding properties. PSE is ensuring that any labels that have not remained adhered are replaced in conjunction with the ongoing atmospheric corrosion inspections.

PSE has confirmed that labels have been installed for each site listed in the findings.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Manual Section 2600.1800 3.4, stating, "As part of the above inspection process, all meters shall be relabeled with PSE's name and/or logo. If the company name changes in the future, all meters shall be relabeled within three years."

9. **WAC 480-93-018 Maps, Drawings, and Records of Gas Facilities**
All gas companies shall prepare, maintain, and provide to the commission, upon request, copies of maps, drawings, and records of the company's gas facilities.

Finding:

PSE had not been maintained its maps and/or records at each of the following locations:

- At Candlewood Mobil Manor, located at 4500 Martin Way in Lacey, PSE did not have the services to space 4, space 5 of the clubhouse, and the laundry room mapped. This resulted in the services not being leak surveyed.

- At St. Martin's College located at 5300 Pacific Avenue SE, Lacey, PSE did not have the service to meter 366427 located near the back of the Pavilion building mapped. This resulted in the service not being leak surveyed.

- At St. Martin's College located at 5300 Pacific Avenue SE, Lacey, PSE did not have the service to Meter 949835, located near the front on the Pavilion building mapped. This resulted in the service not being leak surveyed.

- At St. Martin's College located at 5300 Pacific Avenue SE, Lacey, PSE did not have the service to Meters 994477 and 996512 on the Administration mapped. This resulted in the service not being leak surveyed.

- At St. Martin's College located at 5300 Pacific Avenue SE, Lacey, PSE did not have the service meters 222413 and 233615 on the Maintenance Building mapped. This resulted in the service not being leak surveyed.

Response:

The maps for St. Martin's College and Candlewood Mobile Manor have been updated. The Maps and Records Improvement Initiatives section of Attachment A describes measures PSE is taking to address this type of issue.

- At Limerick St. and Wilderness Dr., Emergency Operating Valve VA-01853, was not checked within the calendar year not to exceed 15-months according to PSE's SAP system. The valve was checked on 6/13/2002 and PSE's SAP system showed it was checked again on 10/17/2003. 10/17/2003 was beyond the 15 months required

timeframe. PSE's investigation showed it had actually been read on 9/9/2003. 9/9/2003 is within the 15 months. SAP system records were not maintained.

Response:
As noted by Staff, PSE completed the inspection on time; however, there was a data entry error in recording the inspection date in SAP.

- The map and the street addresses for several PSE regulator stations were not accurate. On February 5, 2001, at Fones Road SE, between Boulevard Road SE and the North-south leg of Fones Road SE, the street name was changed to 18th Avenue SE. In a letter dated July 10, 2000, the City of Olympia notified PSE of the street name change and the addresses that would be affected. The notification was mailed to Puget Sound Energy at 3130 S 38th Street, Tacoma, WA 98409. On January 5, 2001, the City of Olympia sent a reminder letter. PSE's customer mailing addresses had been updated but PSE maps and records had not been updated.

Response:
The maps have been updated to reflect the new street name.

- The following regulator stations had mailing addresses rather than appropriate street addresses:
  Regulator Station 1036-Rt. 1 Box 468 Nevil Rd.
  Regulator Station 1037-Rt. 1 Box 564 Nevil Rd.
  Regulator Station 1147-Rt. 1 Box 659 Nevil Rd.
  Regulator Station 1315-Rt. 1 Box 558 Military Rd.
  Regulator Station 1543-Rt. 1 Box 560 Nevil Rd.
  Other Regulator stations located on Nevil Rd. and Military Rd. had appropriate street addresses. PSE records had not been maintained.

Response:
PSE has updated the records for these regulator stations with street addresses rather than mailing addresses.

- Test site 004251 was read on 11/13/2002, not read in 2003 and not scheduled for a 2004 test. PSE's investigation showed that the service had been cut and capped. PSE's SAP system was not updated to indicate that Test Site 004251 had been removed.

Response:
This service was physically retired subsequent to the read in 2002; therefore it was no longer required to be read as a test site. SAP has been updated to reflect this.

- PSE record F454880 for Test Station 026792 had a low PSP read of -.600V on 10/4/2002. On 1/06/2003 remedial action was completed and the PSP read was -.975V. Remedial action was completed two days late. However, in PSE's SAP system, the information was entered as completed on 3/11/2003, making it appear that the remedial action was approximately 72 days late.

  Response:
  As noted by Staff, there was a data entry error in recording the inspection date in SAP thus making the inspection appear 72 days late rather than 2 days.

- PSE's D4 card showed a service to 402 and 402 ½ N. Tower was installed 1/11/72 and the address was later changed to 105 E Maple. Meter 866004 is at this location and had severe pitting. This service is not on PSE's plat map.

Response:
The maps have been updated to reflect the service to 105 E. Maple. The Maps and Records Improvement Initiatives section of Attachment A describes measures PSE is taking to address this type of issue.

- PSE operations map 292.032 shows El Paso as the owner operator of a pipeline shown on PSE's operations maps. El Paso pipeline transferred ownership to NW Pipeline (Williams) in the 1970's.

Response:
PSE operation maps with prior reference to any specific transmission company have been updated to indicate "INTERSTATE TRANSMISSION PIPELINE SERVING PSE."

- PSE cathodic protection maps are only updated when the critical bond program in an area is completed. Other cathodic protection maps are not updated or accurate. At the Candlewood Mobil Manor located at 4500 Martin Way, the maps in PSE's trucks, the Olympia office and the Georgetown office differ. PSE's truck maps indicate the mobile home park is on an impressed current system with the rectifier located at 45th and Boulevard. PSE's Olympia office cathodic protection maps indicate that Candlewood Mobil Manor is on galvanic system, GA 037290 and the galvanic system was affected by the impressed current system with the rectifier located at 45th and Boulevard. The maps in the Georgetown office indicated that the Candlewood Mobil Manor was affected by the impressed current system located at Sleater Kinney and Pacific.

Response:
The Maps and Records Improvement Initiatives section of Attachment A describes measures PSE is implementing to prevent these situations from reoccurring.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M, Sections 2500.1000, 2500.1100, 2500.1200, 2500.1300, 2500.1500, 2525.1400, and 2575.1600. Each of the above sections refers to Chapter 480-93-018 WAC and implies that PSE will prepare and maintain its maps, drawings, and records of the company's gas facilities.

10. **WAC 480-93-110 Corrosion Control**
" . . . Every gas company shall record and retain all cathodic protection test readings taken and complete remedial action within ninety days to correct any catholic protection deficiencies known and indicated by the company's records."

Finding (a):

PSE did not complete remedial action within 90 days at the following test sites:

- Test Site-044117 had a low PSP read of -.740V on 7/16/2003, remedial action was completed on 11/17/2004.
- Test Site-34918 had a low PSP read of -.360V on 8/14/2003, remedial action was completed on 2/9/2004 with a PSP read of -1.250V.
- Test Site-046077 had a low PSP read of -.590V on 5/6/2003, remedial action was completed on 9/24/2003 with a PSP read of -1.300V.
- Test Site-042251 had a low PSP read of -.830V on 4/16/2003, remedial action was completed on 9/18/2003 with a PSP read of -1.050V.
- Test Site-044162 had a low PSP read of -.750V on 7/21/2003, remedial action was taken on 11/14/2003 with a PSP read of -1.050V.
- Test Site-044160 had a low PSP read of -.690V on 7/21/2003, remedial action was completed on 11/14/2003 with a PSP read of -.915V.
- Test Site-044172 had a low PSP read of -.590V on 7/21/2003, remedial action was completed on 11/14/2003 with a PSP read of -.930V.
- Test Site-044106 had a low PSP read of -.800V on 8/14/2001, at the time of the records review, the next record in PSE's SAP system was the annual read of 7/15/2003. No remedial action was taken.
- Test Site-044106 had a low PSP read of -.680V on 7/15/2003, remedial action was taken on 11/13/2003 with a PSP read of -.965V.
- Test Site-026792 had a low PSP read of -.600V on 10/4/2002, at the time of the inspection, PSE's SAP system records indicated that remedial action was taken on 3/11/2003. PSE's investigation showed that the actual remedial action date was 1/06/2003.

Response:

The SAP Process Improvements Program was developed to allow PSE to better manage its maintenance work to ensure compliance with regulatory deadlines. This program is summarized in Attachment A.

Finding (b):

PSE did not complete remedial action within 90 days at the following locations:

- The bridge inspected on PSE's Continuing Surveillance Patrol Form Loc. ID# 174 at the Olympia Brewery on Capital Boulevard identified an atmospheric corrosion rating of 3 (pitting per PSE standard 4515.1220). An atmospheric corrosion rating of 3 was identified during 7 separate inspections and noted as a high priority needing attention.

Response:
PSE is currently working on a capacity project in the area that will result in this particular pipeline segment being retired. The project team is working on permitting and acquiring easements for the replacement pipeline and the project is expected to be completed by early 2006. Until the replacement project is complete, PSE will perform a leak survey in conjunction with the quarterly patrol.

In addition, PSE is improving its current processes for responding to the findings on the bridge patrols. These processes will be developed by August 1, 2005 and will be implemented by October 1, 2005.

- The bridge inspected on PSE's Continuing Surveillance Patrol Form Loc. ID# 319 located at the McCallister Creek bridge, at the entrance to Salmon Ln. on Olympia-Steilacoom Hwy. identified an atmospheric corrosion rating of 3 (pitting per PSE standard 4515.1220). This rating was identified during four separate inspections. The form indicated this was a high priority and needed attention.

Response:
The work to remediate the atmospheric corrosion on this pipe has started and is expected to be completed on May 6, 2005.

- PSE's Third Party Damage Report 186510800 indicated a low PSP read of -.800V, on the service located at 10900 Kuhlman Rd. SE in Olympia. The service was cut and capped at the gas main. No documentation was provided to show that the condition was not corrected within the 90 days requirement.

Response:
PSE has begun the critical bond process for this system, which will result in ensuring adequate test sites and remediation of any low PSP reads.

The Critical Bond Program is described in Attachment A. of any low PSP reads.

- At Israel Rd. and Nicolas in Tumwater, Third Party Damage from report 186514898 was repaired on 5/21/2003 and a low PSP read of -.400V was recorded. On 8/30/2004, remedial action was taken.

Response:
The SAP Process Improvements Program was developed to allow PSE to better manage its maintenance work to ensure compliance with regulatory deadlines. This program is summarized in Attachment A.

- Leak work order #N00157251 located at 114 E 4th Avenue, in Olympia was repaired on 6/25/2004. A low PSP read of -.400V was noted at the time of repair. No documentation was provided to show that the condition was not corrected within the 90 days requirement.

Response:
PSE remediated this condition on 4/14/05 by installing PE pipe to replace the steel pipe that had shorted to the casing. The SAP Process Improvements Program was developed to allow PSE to better manage its maintenance work to ensure compliance with regulatory deadlines. This program is summarized in Attachment A.

- On 12/7/2001, a work order to correct atmospheric corrosion pitting located at 404 Washington Avenue SW in Yelm was issued. Work was completed on 9/12/2003.
- On 12/14/2001, a work order to correct atmospheric corrosion pitting located at 2051 Jackson Hwy. in Chehalis was issued. Work was completed on 6/16/2003.
- On 12/14/2001, a work order to correct atmospheric corrosion pitting located at 2161 Jackson Hwy. in Chehalis was issued. Work was completed on 6/16/2003.

- On 12/14/2001, a work order to correct atmospheric corrosion pitting located at 2485 Jackson Hwy. in Chehalis was issued. Work was completed on 6/16/2003.
- On 12/14/2001, a work order to correct atmospheric corrosion pitting located at 118 Ribelin Rd. in Chehalis was issued. Work was completed on 6/16/2003.
- On 12/14/2001, a work order to correct atmospheric corrosion pitting located at 2512 Jackson Hwy. in Chehalis was issued. Work was completed on 6/16/2003.
- On 12/14/2001, a work order to correct atmospheric corrosion pitting located at 2556 Jackson Hwy. in Chehalis was issued. Work was completed on 6/16/2003.
- On 12/21/2001, a work order to correct atmospheric corrosion pitting located at 1037 NW State St. in Chehalis was issued. Work was completed on 6/17/2003.
- On 12/21/2001, a work order to correct atmospheric corrosion pitting located at 1025 NW State St. in Chehalis was issued. Work was completed on 6/17/2003.
- On 12/21/2001, a work order to correct atmospheric corrosion pitting located at 1113 Woodland Avenue in Centralia was issued. Work was completed on 6/19/2003.
- On 12/21/2001, a work order to correct atmospheric corrosion pitting located at 1124 Woodland Avenue in Centralia was issued. Work was completed on 6/19/2003.
- On 12/21/2001, a work order to correct atmospheric corrosion pitting located at 1030 S. Tower St. in Centralia was issued. Work was completed on 6/19/2003.
- On 12/21/2001, a work order to correct atmospheric corrosion pitting located at 1009 Kresky Rd. in Centralia was issued. Work was completed on 6/19/2003.
- On 12/21/2001, a work order to correct atmospheric corrosion pitting located at 149 NE Hampe Way #B in Chehalis was issued. Work was completed on 6/26/2003.
- On 12/21/2001, a work order to correct atmospheric corrosion pitting located at 149 NE Hampe Way #A in Chehalis was issued. Work was completed on 6/26/2003.
- On 12/21/2001, a work order to correct atmospheric corrosion pitting located at 163 NE Hampe Way in Chehalis was issued. Work was completed on 6/26/2003.

- On 12/21/2001, a work order to correct atmospheric corrosion pitting located at 175 NE Hampe Way in Chehalis was issued. Work was completed on 6/26/2003.
- On 12/21/2001, a work order to correct atmospheric corrosion pitting located at 179 NE Hampe Way in Chehalis was issued. Work was completed on 6/26/2003.
- On 12/28/2001, a work order to correct atmospheric corrosion pitting located at 1610 Windsor Avenue #9 in Centralia was issued. Work was completed on 6/17/2003.
- On 12/28/2001, a work order to correct atmospheric corrosion pitting located at 1514 Oxford St. in Centralia was issued. Work was completed on 6/17/2003.
- On 12/28/2001, a work order to correct atmospheric corrosion pitting located at 1316 Logan St. in Centralia was issued. Work was completed on 6/17/2003.
- On 12/28/2001, a work order to correct atmospheric corrosion pitting located at 1403 Kulien Avenue in Centralia was issued. Work was completed on 6/16/2003.
- On 12/28/2001, a work order to correct atmospheric corrosion pitting located at 1202 Bayne St. in Centralia was issued. Work was completed on 6/16/2003.
- On 12/28/2001, a work order to correct atmospheric corrosion pitting located at 1220 St-Helens St. in Centralia was issued. Work was completed on 6/16/2003.
- On 12/28/2001, a work order to correct atmospheric corrosion pitting located at 1815 Hillview Rd. in Centralia was issued. Work was completed on 6/17/2003.
- On 12/28/2001, a work order to correct atmospheric corrosion pitting located at 1117 F St. in Centralia was issued. Work was completed on 6/17/2003.
- On 12/28/2001 a work order to correct atmospheric corrosion pitting located at 803 G St. in Centralia was issued. Work was completed on 6/18/2003.
- On 12/28/2001, a work order to correct atmospheric corrosion pitting located at 613 Jackson St. in Centralia was issued. Work was completed on 6/19/2003.
- On 12/14/2001, a work order to correct atmospheric corrosion pitting located at 1003 Orton St. in Centralia was issued. Work was completed on 6/19/2003.

- On 12/14/2001, a work order to correct atmospheric corrosion pitting located at 1010 M St. in Centralia was issued. Work was completed on 6/18/2003.
- On 12/14/2001, a work order to correct atmospheric corrosion pitting located at 821 K St. in Centralia was issued. Work was completed on 6/18/2003.
- On 12/14/2001, a work order to correct atmospheric corrosion pitting located at 819 K St. in Centralia was issued. Work was completed on 6/18/2003.

These are repeat violation of UG-011273 and PG-030080/PG-030128.

Response:
PSE has been working aggressively to address challenges in remediating atmospheric corrosion within 90 days. Please see the summary of the Atmospheric Corrosion Inspection and Remediation Improvement Initiatives in Attachment A for a description of actions PSE is implementing to prevent these situations from reoccurring.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Manual, Sections 2600.1900 5.1 and 2600.1900 5.1.1 which states, "The remedial measures set forth in this Operating Standard shall be initiated as soon as corrosion control deficiencies are discovered." In addition, Section 2600.1900 5.1.1 states, "Remedial action shall be completed within 90 days to correct any cathodic protection deficiencies known and indicated by the company's records."

PSE did not follow its Procedural Manual Section 4515.1220 Identifying Atmospheric Corrosion, which states, "Rate the condition 1, 2, or 3, according to the rating system described in the "Corrosion Rating System" section of this procedure. Record the results on a work order. AOC (Abnormal Operating Condition): If the condition of the pipe is rated 3, remedial measures shall be taken in accordance with Gas Field Procedure 4515.1330, Applying Paint to Meter Sets and Above Ground Facilities for Atmospheric Corrosion Remediation."

11. **WAC 480-93-120 Exposed Pipelines**

Proper warning signs shall be placed and other adequate protective measures taken at any point where gas pipelines and any associated equipment and facilities are exposed, and where their location presents an unusually hazardous situation. All gas pipelines attached to bridges or otherwise spanning an area shall have proper warning signs at both ends of the suspended pipeline. The gas company shall keep these signs visible and readable, and inspect all signs annually; signs, which are reported, damaged and missing shall be replaced promptly.

Finding:
PSE had signs on the meter enclosure fence at Evergreen State College naming Washington Natural Gas as the owner/operator of the facility on above ground exposed pipeline.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Manual Section 2575.1100 4.1.1 and 4.1.3 and with Section 2525.2500 5.2.2, these sections states, "4.1.1 Inspection of markers or warning signs shall be included in system patrols required by Operating Standard 2625.1400, Patrolling Program and Continuing Surveillance." In addition, Section 4.1.3 states, " Inspection shall ensure all information, including company name (or initials), and emergency contact information is current. If not, it shall be corrected at the time of inspection if feasible. If it is not corrected during the inspection, a work order shall be generated." PSE O&M Manual 2525.2500 5.2.2 states, "Above ground piping within a company owned security fence shall be marked with signs placed on the fence."

Response:
PSE has updated the signs on the meter enclosure fence at Evergreen State College to reflect that PSE is the owner of the facility. In addition, PSE is revising Operating Standard 2575.3100 "Patrolling Program" to explicitly require warning signs on company owned security fencing to be inspected and maintained as required by Operating Standard 2575.1100 "Maintaining Pipeline Markers and Warning Signs."

Attachment C
Response to Audit Findings, Gate Station 1874

PSE Response to Thurston-Lewis County Inspection Report
Docket No. PG-040210

The following probable violations of Title 49 CFR § 192 and WAC 480-93 were noted as a result of the inspection of the Puget Sound Energy Thurston/Lewis County facilities.

1. **49 CFR §192.53 General**

Materials for pipe and components must be:
(a) Able to maintain the structural integrity of the pipeline under temperature and other environmental conditions that may be anticipated;
(b) Chemically compatible with any gas that they transport and with any other material in the pipeline with which they are in contact; and,
(a) Qualified in accordance with the applicable requirements of this subpart.

Finding:
PSE was unable to provide a materials list documenting that the pipeline is able to maintain its structural integrity under temperature and other environmental conditions that may be anticipated and qualified in accordance with 49 CFR §192 Subpart B Materials.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE has not followed its O&M Manual Section 2525.1100 pertaining to design criteria for pipe and components.

2. **49 CFR §192.143 General Requirements**

Each component of a pipeline must be able to withstand operating pressures and other anticipated loadings without impairment of its serviceability with unit stresses equivalent to those allowed for comparable material in pipe in the same location and kind of service. However, if design based upon unit stresses is impractical for a particular component, design may be based upon a pressure

rating established by the manufacturer by pressure testing that component or a prototype of the component.

Finding:
PSE was unable to provide documentation that this pipeline and its components upstream of PSE's Gate Station #1874 was able to withstand operating pressures and other anticipated loadings without impairment of its serviceability in accordance with 49 CFR §192 Subpart D Design of Pipeline Components.

49 CFR §192.13 General
(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:
PSE did not follow its O&M Manual Section 2525.1100 3.3 stating, "Each component of a pipeline must be able to withstand operating pressures and other anticipated loadings without impairment of its serviceability with unit stresses equivalent to those allowed for comparable material in pipe in the same location and kind of service. However, if design based upon unit stresses is impractical for a particular component, design may be based upon a pressure rating established by the manufacturer by pressure testing that component or a prototype of the component."

3. **49 CFR §192.195 Protection Against Accidental Overpressuring.**
(a) General requirements. Except as provided in §192.197, each pipeline that is connected to a gas source so that the maximum allowable operating pressure could be exceeded as the result of pressure control failure or of some other type of failure, must have pressure relieving or pressure limiting devices that meet the requirements of §192.199 and §192.201.
(b) Additional requirements for distribution systems. Each distribution system that is supplied from a source of gas that is at a higher pressure than the maximum allowable operating pressure for the system must
(1) Have pressure regulation devices capable of meeting the pressure, load, and other service conditions that will be experienced in normal operation of the system, and that could be activated in the event of failure of some portion of the system; and
(2) Be designed so as to prevent accidental overpressuring.

Finding:

PSE was unable to provide documentation that the pipeline and its components upstream of PSE's Gate station #1874 had pressure regulation devices capable of meeting the pressure, load and other service conditions that would be experienced in normal operations of the system, and that could be activated in the event of failure of some portion of the system.

49 CFR §192.13 General

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

Finding:

PSE did not follow its O&M Manual Section 2525.2900 5.1.1 stating, "Have pressure regulation devices capable of meeting the pressure, load, and other service conditions that will be experienced in normal operation of the system, and that could be activated in the event of failure of some portion of the system."

4. **49 CFR §192.225 Welding - General.**

(a) Welding must be performed by a qualified welder in accordance with welding procedures qualified to produce welds meeting the requirements of this subpart. The quality of the test welds used to qualify the procedures shall be determined by destructive testing.

(b) Each welding procedure must be recorded in detail, including the results of the qualifying tests. This record must be retained and followed whenever the procedure is used.

Finding:

PSE was unable provide documentation of welding procedures or qualification test for the welding procedures for the pipeline and its components upstream of PSE's Gate Station #1874.

49 CFR §192.13 General

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.