

Appendix A



STATE OF WASHINGTON

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WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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Ref. No. Docket PG-050331

CERTIFIED MAIL

August 16, 2006

Jim Hogan
Standards and Compliance Manager
Puget Sound Energy
PO Box 90868, EST-07W
Bellevue, Washington 98009-0868

Dear Mr. Hogan:

Subject: 2005 Standard Inspection of Pierce County Distribution System

We conducted a natural gas inspection from October 2005 through June 2006, of Puget Sound Energy's (PSE), Pierce District. The inspection included a records review and inspection of pipeline facilities. In addition, we conducted follow-up activities related to commitments previously made by PSE under terms of the January 2005 settlement agreement.

Our inspection indicates 11 series of probable violations, as noted in the enclosed report. We also noted six areas of concern, which unless corrected, could potentially lead to future violations of state and/or federal pipeline safety rules.

Your response is needed.

Please review the attached report and respond in writing by September 18, 2006. The response should include a letter of intent and the date you plan to bring the probable violations into full compliance. The response should also detail how the probable violations relate to the previous settlement agreement. We are also requesting that you respond to the seven areas of concern in the same response.

What happens after you respond to this letter?

The attached report presents staff's decision on probable violations and does not constitute a finding of violation by the commission at this time.



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After you respond in writing to this letter, there are several possible actions the commission, in its discretion, may take with respect to this matter. For example, the commission may:

- Issue an administrative penalty under RCW 80.04.405, or
- institute a complaint, seeking monetary penalties, changes in the company's practices, or other relief authorized by law and justified by the circumstances, or
- consider the matter resolved without further commission action.

We have not yet decided whether to pursue a complaint or penalty in this matter. Should an administrative law judge decide to pursue a complaint or penalty, your company will have an opportunity to present its position directly to the commissioners.

If you have any questions, or if we may be of any assistance, please contact Scott Rukke at (360) 664-1241. Please refer to docket number PG-050331 in any future correspondence regarding this inspection.

Sincerely,



Alan E. Rathbun
Pipeline Safety Director

Enclosure

The Washington Utilities and Transportation Commission (Commission) has the authority to enforce the minimum safety regulations per Chapter 490-93 of the Washington Administrative Code (WAC) pertaining to the construction, maintenance and operation of pipelines transporting natural gas in the state of Washington. In addition, the Commission adopts the Code of Federal Regulations (CFR) Title 49, Part 191 and 192.

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION
2005 Natural Gas Pipeline Standard Inspection Report
Puget Sound Energy - Pierce County District
Docket No. PG-050331

The following violations of WAC 480-93, which adopts 49 CFR Part 192, were noted as a result of the 2005/2006 pipeline safety inspection of Puget Sound Energy (PSE) Pierce County District natural gas distribution system. The inspection included a review of the procedures, records, inventory, and field operations and maintenance of the natural gas facilities.

PROBABLE VIOLATIONS

1. **49 CFR §192.465(a) 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(s):

- a) PSE has a main serving approximately 13 services located at 919 Valley Ave (11105 Valley Ave.) in Puyallup. We met on-site with PSE personnel on November 28, 2005, to take pipe-to-soil potential readings. PSE personnel conducted electrical isolation tests and determined that there are two separate segments of isolated steel main in excess of 100 feet each. Pipe-to-soil potential readings indicate that cathodic protection (CP) levels meet the minimum requirements set forth in Appendix D of the CFR. PSE records and employees both indicate that these two segments are not on the annual survey as required but are instead on PSE's 10% survey list which only requires that they be tested once every 10 years.
- b) PSE has an isolated steel wrapped service extension located at 4445 185 Ave E, Sumner. We met on-site with PSE personnel and verified that this service extension had adequate levels of CP applied. PSE personnel were not able to provide any records indicating that this isolated steel wrapped service has been monitored for proper CP levels at least once every 10 years as required. PSE installed a test site (TS-051563) at this location on 11/23/2005. (We believe this is related to the settlement agreement and that this facility would have been found by the isolated facilities program).

- c) PSE has an isolated steel wrapped service riser located at 22225 Mountain Highway E in Spanaway which has not been monitored for proper levels of CP. PSE added a test site (TS-051872) at this location on 01/19/2006. (We believe this is related to the settlement agreement and that this facility would have been found by the isolated facilities program).
- d) PSE has an isolated steel wrapped service riser located at 22225 Mountain Highway E in Spanaway which has not been monitored for proper levels of CP. PSE added a test site (TS-051868) at this location on 01/19/2006. (We believe this is related to the settlement agreement and that this facility would have been found by the isolated facilities program).
- e) PSE has an isolated steel wrapped service riser located at 22219 Mountain Highway E in Spanaway which has not been monitored for proper levels of CP. PSE added a test site (TS-051867) at this location on 01/19/2006. (We believe this is related to the settlement agreement and that this facility would have been found by the isolated facilities program).
- f) PSE has an isolated steel wrapped service located at 302 S. 9 St in Tacoma. We met on-site with PSE personnel on 12/01/2005 to verify whether the service had adequate CP. Reads obtained were -1.382 v. PSE personnel were unable to find a test site for this location and were also unable to provide evidence this service had been monitored for proper levels of CP as required. (We believe this is related to the settlement agreement and that this facility would have been found by the isolated facilities program).
- g) PSE has an isolated steel wrapped service located at 714 Pacific Ave in Tacoma. PSE personnel were unable to find a test site for this location and were also unable to provide evidence this service had been monitored for proper levels of CP as required. (We believe this is related to the settlement agreement and that this facility would have been found by the isolated facilities program).
- h) PSE has an isolated steel wrapped service located 317 S. 7th St. We met on-site with PSE personnel on 12/01/2005 to verify whether the service had adequate CP. Reads obtained were -1.410v. PSE personnel were unable to find a test site for this location and were also unable to provide evidence this service had been monitored for proper levels of CP as required. (We believe this is related to the settlement agreement and that this facility would have been found by the isolated facilities program).
- i) PSE has an isolated steel wrapped service located at 629 St Helens Ave, Tacoma (Meter #389484). We met on-site with PSE personnel on 12/01/2005 to verify whether the service had adequate levels CP. Adequate reads were obtained. PSE personnel were unable to find a test site for this location and were also unable to provide evidence this service had been monitored for proper levels of CP as

required. (We believe this is related to the settlement agreement and that this facility would have been found by the isolated facilities program).

- j) PSE has a CP test site (TS-004408), located at S Pearl St & S 19 St in Tacoma. Records indicate that tests were performed on 05/02/2003 and again on 08/03/2005. No test was performed in calendar year 2004 and the 15 month maximum timeframe was also exceeded between tests. (We believe this to be SAP related and that it would have been remedied by the SAP reprogramming in 2005).

2. **49 CFR §192.463(a) 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.*

Finding(s):

- a) PSE owns and operates a service downstream of the meter, also known as an Extended Utility Facility, (EUF) located at 17206 33 St. Ct. E. in Sumner. This EUF is serving a pool boiler and has 2 isolated sections of steel that do not have cathodic protection applied. We met on-site with PSE personnel on November 29, 2005, and took pipe-to-soil potential readings on the 2 steel sections. PSE personnel obtained readings of -354 mv at the section nearest the pool boiler and -250 mv at the section nearest the house. These readings do not meet the minimum levels of CP required by 49 CFR §192 Appendix D. (We believe this is related to the settlement agreement and that this facility would have been found by the isolated facilities program).
- b) PSE has a ½-inch steel service line located at 6012 195th Ave E in Bonney Lake. This service line is served off of a segment of steel main. We met on-site with PSE personnel on November 29, 2005, to take pipe-to-soil potential reads and conduct tests to determine whether the service is electrically isolated from the steel main serving it. The service line appears to be isolated from the main. Cathodic protection test readings obtained by PSE personnel were -839 mv. This does not meet the minimum levels of CP required by 49 CFR §192 Appendix D. (This is an isolated steel service found by PSE during the critical bond program. The read was good at that time the service was determined to be isolated)
- c) PSE has a steel wrapped service serving 742 and 744 S. Broadway Tacoma. The meter set is located inside the building and the regulator is outside. There is an insulator located at the regulator. The portion of the service between the outside regulator and the inside meter set appears to be steel wrapped. CP reads taken on 12/01/2005, by PSE personnel were -452 mv. This does not meet the minimum level of CP required by 49 CFR §192 Appendix D. (We believe this is related to

the settlement agreement and that this facility would have been found by the isolated facilities program).

- d) PSE has a steel wrapped service at 2306 A St., Tacoma. We met on-site with PSE personnel on 12/01/2005, and took pipe-to-soil potential readings on this service. The pipe-to-soil potential reading on this service was found to be -495' mv. This does not meet the minimum level of CP required by 49 CFR §192 Appendix D. (We believe this is related to the settlement agreement and that the facility would have been found during the critical bond program).
- e) PSE has a steel wrapped service at 2310 A St., Tacoma. We met on-site with PSE personnel on 12/01/2005, and took pipe-to-soil potential readings on this service. The pipe-to-soil potential reading on this service was found to be -245 mv. This does not meet the minimum level of CP required by 49 CFR §192 Appendix D. (We believe this is related to the settlement agreement and that the facility would have been found during the critical bond program).
- f) PSE has a steel wrapped service at 2312 A St., Tacoma. We met on-site with PSE personnel on 12/01/2005, and took pipe-to-soil potential readings on this service. The pipe-to-soil potential reading on this service was found to be -535 mv. This does not meet the minimum level of CP required by 49 CFR §192 Appendix D. (We believe this is related to the settlement agreement and that the facility would have been found during the critical bond program).
- g) PSE has a steel wrapped service at 2316 A St., Tacoma. We met on-site with PSE personnel on 12/01/2005, and took pipe-to-soil potential readings on this service. The pipe-to-soil potential reading on this service was found to be -810 mv. This does not meet the minimum level of CP required by 49 CFR §192 Appendix D. (We believe this is related to the settlement agreement and that the facility would have been found during the critical bond program).
- h) PSE exposed pipe condition reports indicate that approximately 238 segments of main or services had levels of CP that did not meet the minimum requirements of 49 CFR §192, Appendix D.

3. **49 CFR §192.739(a) Pressure Limiting and Regulating Stations: Inspection and Testing**

- (a) *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(s):

- a) Records indicate that district regulator station #RS-0219, located at S. 56 and Fife in Tacoma was inspected on 01/10/2003 and again on 10/28/2004. This exceeds

the maximum time limit of 15 months between inspection and maintenance activities. (We believe that this scheduling issue would have been remedied by SAP reprogramming changes made by PSE in 2005).

- b) Records indicate that district regulator station #RS-0235, located at S.12 and Proctor in Tacoma was not inspected and maintained during calendar year 2004. (We believe that this scheduling issue would have been remedied by SAP reprogramming changes made in 2005).
- c) Records indicate that regulator assembly RS-2201, located at 1211 A ST NW in McChord AFB became a district regulator in 1999 but the regulator station was not inspected and maintained as a district regulator station until June 29, 2004.
- d) Records indicate that district regulator #RS-0903, located at 6414 Bridgeport Way in Tacoma has only been inspected and maintained one time on 08/15/2005, even though it became a district regulator station as early as 2002 when main was constructed from it.

4. **49 CFR §192.481(a) 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:*

| <i>If the pipeline is located:</i> | <i>Then the frequency of inspection is:</i> |
|------------------------------------|---|
| <i>Onshore.....</i> | <i>At least once every 3 calendar years, but with intervals not exceeding 39 months</i> |
| <i>Offshore.....</i> | <i>At least once each calendar year, but with intervals not exceeding 15 months</i> |

Finding(s):

- a) PSE has an idle service with no meter located at 10712 62 St. Ct. E. (space 18) in Puyallup. The service is located in the Golden Rose mobile home park. The riser has heavy atmospheric corrosion. PSE was unable to provide records that this riser was surveyed for atmospheric corrosion within the 3 year, not to exceed 39 month timeframe as required.
- b) PSE has a roof top service located at 1306 E. Pioneer Ave in Puyallup. The riser is in front of the building and the service goes up and over the roof to the meter set which is located in back of the building. PSE was unable to provide records indicating that the rooftop service has ever been surveyed for atmospheric corrosion.

5. **49 CFR §192.747(a) Valve Maintenance: Distribution systems.**

(a) *Each valve, the use of which may be necessary for the safe operation of a distribution system, must be checked and serviced at intervals not exceeding 15 months, but at least once each calendar year.*

Findings:

- a) Records indicate that emergency valve #VA-01113, located at S. 112 St and I-5 in Tacoma was not operated during calendar year 2004. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).
- b) Records indicate that emergency valve #VA-06209, located at 1120 Milwaukee Way in Tacoma was checked and serviced on 09/02/2003 and again on 12/06/2004. This exceeds the 15-month maximum time limit allowed. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).
- c) Records indicate that emergency valve #VA-05831, located at S. 25th and Yakima in Tacoma was not operated during calendar year 2003. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).
- d) Records indicate that emergency valve #VA-05812, located at 23 Ave SE and Shaw Rd in Puyallup has a start up date of 12/11/1995 but that it was not checked and serviced until 08/13/2004. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).
- e) Records indicate that emergency valve #VA-04282, located at Plant Rd & Dutch Rd in Fort Lewis had a required start date of 10/14/1995 but was not serviced and checked until 08/05/2005. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).
- f) Records indicate that emergency valve #VA-02135, located at Bridgeport Way and Mt Tacoma Dr SW in Tacoma was checked and serviced on 02/27/1997 and again on 04/08/2004. If these records are correct it indicates that over 7 years elapsed between maintenance. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).

6. **49 CFR §192.465(b) External Corrosion Control: Monitoring**

- (b) *Each cathodic protection rectifier or other impressed current power source must be inspected six times each calendar year, but with intervals not exceeding 2 1/2 months, to insure that it is operating.*

Finding(s):

- a) Records indicate that rectifier #PS-0205, located at 1302 Magnolia Dr. in Fircrest was inspected on 12/11/2003 and again on 03/25/2004. This timeframe exceeds the maximum time limit of 2-1/2 months between inspections. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).
- b) Records indicate that rectifier #PS-0205, located at 1302 Magnolia Dr. in Fircrest was only inspected 5 times in 2004. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).

- c) Records indicate that rectifier #PS-0214, located at Wildwood Park Dr and King in Puyallup was inspected on 05/21/2004 and again on 08/11/2004. This exceeds the maximum time limit of 2-1/2 months between inspections. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).
- d) Records indicate that rectifier #PS-0215, located at Firgrove Dr and 108 Ave E in Puyallup was inspected on 05/21/2004 and again on 08/12/2004. This exceeds the maximum time limit of 2-1/2 months between inspections. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).
- e) Records indicate that rectifier #PS-0218, located at 24 St E and 142 Ave E in Sumner was inspected on 05/21/2004 and again on 08/09/2004. This exceeds the maximum time limit of 2-1/2 months between inspections. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).
- f) Records indicate that rectifier #PS-0220, located at E Valley Hwy and 24 St E in Sumner was inspected on 05/19/2004 and again on 08/09/2004. This exceeds the maximum time limit of 2-1/2 months between inspections. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).
- g) Records indicate that rectifier #PS-0229, located at 7 Ave SE and 14 St SE in Puyallup was inspected on 05/21/2004 and again on 08/09/2004. This exceeds the maximum time limit of 2-1/2 months between inspections. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).
- h) Records indicate that rectifier #PS-0237, located at Washington St and Wood Ave in Sumner was inspected on 05/21/2004 and again on 08/09/2004. This exceeds the maximum time limit of 2-1/2 months between inspections. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).
- i) Records indicate that rectifier #PS-0240, located at S 40 St and S Fawcett Ave in Tacoma was inspected on 09/13/2004 and again on 12/07/2004. This exceeds the maximum time limit of 2-1/2 months between inspections. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).
- j) Records indicate that rectifier #PS-0257, located at 18 St NW and 10 Ave NW in Puyallup was inspected on 05/21/2004 and again on 08/09/2004. This exceeds the maximum time limit of 2-1/2 months between inspections. (We believe that this scheduling issue would have been remedied by the SAP reprogramming in 2005).

7. **49 CFR §192.355(b)(1) Customer Meters and Regulators: Protection from Damage**
(b) *Service regulator vents and relief vents. Service regulator vents and relief vents must terminate outdoors, and the outdoor terminal must:*
(1) *Be rain and insect resistant;*

Finding(s):

The following service regulators have relief vents which are installed in a manner that could potentially allow rain and moisture accumulation which may affect the proper operation of the device.

- a) 1306 E Pioneer Ave, Puyallup.
b) 3706 S. Pine St., Tacoma. Mtr #338668. (There are 2 regulators here with horizontal vents).

8. **WAC 480-93-188(1)(a) Gas Leak Surveys**

- (1) *Operators must perform gas leak surveys using a gas detection instrument covering the following areas:*
(a) *Over all mains, services, and transmission lines including the testing of the atmosphere near other utility (gas, electric, telephone, sewer, or water) boxes or manholes, and other underground structures;*

Finding(s):

- a) PSE leak survey contractor, Heath Consultants, conducted residential leak surveys in a development known as Crystal Ridge in Puyallup, OP map number 248.074. Records indicate that the mains in the development were surveyed starting on 02/06/2003 by mobile flame ionization equipment and that the services were surveyed between the dates of 02/24/2003 and 04/19/2003 by portable walking flame ionization equipment. Records do not show that the main was walked with portable flame ionization equipment but PSE personnel indicated that it was. PSE personnel also stated that not all of the main would have been walked with portable equipment but that most of it would have because the survey technician leaves the equipment on while walking between services.

WAC 480-93-188 requires that leak surveys be conducted "over" all mains and services. The main in this development is in a joint trench easement located in the front yards of the residences approximately 15 to 20 feet from the paved street where the mobile leak survey was conducted. Between the main and the street is a curb, grass strip, sidewalk and more grass. A mobile survey can't be conducted over the main as required because the main is approximately 15 to 20-feet from the street.

- b) 919 Valley Ave, Puyallup (11105 Valley Ave) PSE provided several maps indicating what was leak surveyed at this address. The maps indicate that portions of the main serving this address were thought to be in a different location and were not leak surveyed as required.

- c) PSE has a rooftop service to Spinning Elementary located at 1306 E. Pioneer Ave. in Puyallup. PSE was unable to provide documentation showing that the service has been leak surveyed on an annual basis as required for high occupancy structures.

9. **WAC 480-93-188(2) Gas Leak Surveys**

- (2) *Gas detection instruments must be maintained, tested for accuracy, calibrated, and operated in accordance with the manufacturer's recommendations. If there are no manufacturer's recommendations, then instruments must be tested for accuracy at least monthly, but not to exceed forty-five days between testing, and include testing at least twelve times per year. Any instrument that fails its applicable tolerances must be calibrated or removed from service.*

Finding(s):

The following instruments were not calibrated according to the schedule outlined in PSE's procedure manual, procedure 2450.1600.

Note: PSE procedure 2450.1600 requires monthly calibration after 6/1/2005 and 4X year prior to this date for MSA-60 gas scopes.

Pilchuck Contractors, 100% record review:

- a) Pilchuck records indicate that Gascope #475 was calibration checked on 12/13/2003 and then sent for repair on 06/15/2004. This exceeds the maximum 4 month timeframe between calibration checks in effect at the time.
- b) Pilchuck records indicate that Gascope #5425 was calibration checked on 08/25/2003 and sent in for calibration again on 02/14/2004. This exceeds the maximum 4-month timeframe between calibration checks in effect at the time.
- c) Pilchuck records indicate that Gascope #5729 was calibration checked on 08/02/2004 and sent in for calibration again on 02/25/2005. This exceeds the maximum 4-month timeframe between calibration checks in effect at the time.
- d) Pilchuck records indicate that Gascope #5729 was calibration checked on 02/25/2005 and sent in for calibration again on 06/29/2005. This exceeds the maximum 4-month timeframe between calibration checks in effect at the time.
- e) Pilchuck records indicate that Gascope #6359 was calibration checked on 07/23/2004 and sent in for calibration again on 01/31/2005. This exceeds the maximum 4-month timeframe between calibration checks in effect at the time.
- f) Pilchuck records indicate that Gascope #6758 was calibration checked on 02/03/2004 and sent in for calibration again on 06/09/2004. This exceeds the maximum 4-month timeframe between calibration checks in effect at the time.

- g) Pilchuck records indicate that Gascope #12160 was calibration checked on 10/02/2004 and sent in for calibration again on 03/14/2005. This exceeds the maximum 4-month timeframe between calibration checks in effect at the time.

Puget Sound Energy crews, approximately 15% of records reviewed:

- a) PSE records indicate that Gascope #6241 was calibration checked on 09/30/2004 and again on 11/02/2005. This exceeds the maximum 4 month timeframe between calibration checks in effect at the time.
- b) PSE records indicate that Gascope #4652 was calibration checked on 03/30/2004 and again on 09/02/2004. This exceeds the maximum 4-month timeframe between calibration checks in effect at the time.
- c) PSE records indicate that Gascope #9970 was calibration checked on 02/09/2005 and again on 06/29/2005. This exceeds the maximum 4-month timeframe between calibration checks in effect at the time.
- d) PSE records indicate that Gascope #1282 was calibration checked on 04/28/2004 and again on 09/09/2004. This exceeds the maximum 4-month timeframe between calibration checks in effect at the time.
- e) PSE records indicate that Gascope #11081 was calibration checked on 04/19/2004 and sent in for calibration again on 10/05/2004. This exceeds the maximum 4-month timeframe between calibration checks in effect at the time.

Potelco Contractors, 100% of records reviewed: (10/2005 thru 5/2006)

The following combustible gas indicators (CGI) missed the monthly NTE 45 day calibration requirements as outlined in PSE procedure 2450.1600.

- a) CGI #960, missed 11/05, 02/06 and 04/06.
- b) CGI #963, missed 11/05, 01/06, 02/06 and 04/06.
- c) CGI #1013, missed 11/05, 01/06, 02/06 and 04/06.
- d) CGI #1018, missed 10/05, 12/05, 01/06, 03/06, 04/06 and 05/06
- e) CGI #1023, missed 11/05, 01/06, 02/06 and 04/06.
- f) CGI #1109, missed 11/05, 01/06, 02/06, 04/06 and 05/06.
- g) CGI #1121, missed 10/05, 12/05, 02/06 and 04/06.
- h) CGI #1124, missed 10/05, 12/05, 02/06 and 04/06.
- i) CGI #1217, missed 10/05, 11/05, 12/05, 02/06 and 04/06.
- j) CGI #1240, missed 11/05, 01/06, 02/06, 03/06 and 05/06.
- k) CGI #1248, missed 11/05, 01/06 and 03/06.
- l) CGI #1390, missed 10/05, 11/05, 01/06 and 03/06.
- m) CGI #1699, missed 10/05, 12/05, 02/06 and 04/06.
- n) CGI #2140, missed 10/05, 11/05, 01/06, 02/06 and 04/06.
- o) CGI #2305, missed 11/05, 01/06, 02/06, 04/06 and 05/06.
- p) CGI #2467, missed 11/05, 12/05, 01/06 and 03/06.
- q) CGI #2701, missed 11/05, 01/06, 02/06, 03/06, 04/06 and 05/06.
- r) CGI #3564, missed 11/05, 12/05, 01/06, 02/06, 03/06, 04/06 and 05/06.

- s) CGI #3821, missed 11/05, 01/06, 02/06, 03/06 and 05/06.
- t) CGI #3882, missed 11/05, 12/05, 01/06, 03/06 and 04/06.
- u) CGI #3999, missed 11/05, 12/05, 01/06, 02/06 and 03/06.
- v) CGI #4433, missed 10/05, 12/05 and 02/06.
- w) CGI #4606, missed 11/05, 12/05, 01/06, 02/06, 03/06 and 05/06.
- x) CGI #5188, missed 10/05, 12/05, 01/06, 03/06 and 04/06.
- y) CGI #5411, missed 11/05, 01/06, 02/06 and 04/06.
- z) CGI #5707, missed 11/05, 01/06, 03/06 and 05/06.
- aa) CGI #5708, missed 11/05, 01/06, 02/06, 03/06 and 05/06.
- bb) CGI #5723, missed 10/05, 12/05, 01/06, 02/06 and 03/06.
- cc) CGI #5737, missed 10/05, 12/05, 01/06, 02/06, 03/06 and 05/06.
- dd) CGI #6072, missed 10/05, 11/05, 02/06 and 04/06.
- ee) CGI #6225, missed 10/05, 11/05, 01/06, 02/06, 04/06 and 05/06.
- ff) CGI #6405, missed 10/05, 12/05 and 02/06.
- gg) CGI #6780, missed 10/05, 12/05, 01/06, 03/06 and 04/06.
- hh) CGI #7641, missed 11/05, 01/06, 02/06 and 04/06.
- ii) CGI #8060, missed 11/05, 01/06, 02/06 and 04/06.
- jj) CGI #9977, missed 10/05, 11/05, 12/05, 02/06 and 04/06.
- kk) CGI #9988, missed 10/05, 11/05, 12/05, 02/06, 03/06 and 05/06.
- ll) CGI #9933, missed 10/05, 12/05, 01/06, 02/06, 04/06 and 05/06.
- mm) CGI #9998, missed 01/06, 03/06 and 05/06.
- nn) CGI #11377, missed 11/05, 12/05, 01/06, 03/06, 04/06 and 05/06.

10. **49 CFR §192.475(b) Internal Corrosion Control: General**

- (b) *Whenever any pipe is removed from a pipeline for any reason, the internal surface must be inspected for evidence of corrosion.*

49 CFR §192.491 goes on to require the following:

- (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.*

Finding(s):

PSE personnel provided us with inspection records for the 16-inch re-locate project located at 24th St E and 138th Ave E in Sumner, job #109001662. We were given a list of 6 areas that had sections of the existing 16-inch pipeline removed during the course of construction. They included exposed pipe condition reports (EPCR's) with the following identification numbers: 75643, 75644, 75645, 75646, 75647 and 75648. Of the six areas identified, PSE records indicate that only one site, 75646, had an internal corrosion assessment completed.

11. **WAC 480-93-110(2) Corrosion Control**

- (2) *Each operator must complete remedial action within ninety days to correct any cathodic protection deficiencies known and indicated by any test, survey, or inspection. An additional thirty days may be allowed for remedial action if due to circumstances beyond the operator's control it is not possible to complete*

remedial action within ninety days. Each operator must be able to provide documentation to the commission indicating that remedial action was started in a timely manner and that all efforts were made to complete remedial action within ninety days. (Examples of circumstances allowing operators to exceed the ninety-day time frame include right of way permitting issues, availability of repair materials, or unusually long investigation or repair requirements).

Finding(s):

Records indicate that for the following cathodic protection deficiencies, PSE exceeded the 90 day remedial action timeframe allowed.

- a) EPCR – ID #77004, low read found on 1/20/2004 and remediated on 9/17/2004.
- b) EPCR – ID #78572, low read found on 1/26/2004 and remediated on 7/30/2004.
- c) EPCR – ID #78574, low read found on 1/26/2004 and remediated on 7/30/2004.
- d) EPCR – ID #78571, low read found on 1/26/2004 and remediated on 7/30/2004.
- e) EPCR – ID #77319, low read found on 1/27/2004 and remediated on 5/12/2004.
- f) EPCR – ID #78109, low read found on 3/10/2004 and remediated on 7/19/2004.
- g) EPCR – ID #77680, low read found on 3/11/2004 and remediated on 9/14/2004.
- h) EPCR – ID #77892, low read found on 3/15/2004 and remediated on 12/06/2004.
- i) EPCR – ID #77934, low read found on 3/18/2004 and remediated on 06/23/2004.
- j) EPCR – ID #78056, low read found on 3/31/2004 and remediated on 2/09/2005.
- k) EPCR – ID #78899, low read found on 4/5/2004 and remediated on 8/10/2004.
- l) EPCR – ID #78568, low read found on 4/12/2004 and remediated on 9/9/2004.
- m) EPCR – ID #78616, low read found on 4/27/2004 and remediated on 8/2/2004.
- n) EPCR – ID #78630, low read found on 5/4/2004 and remediated on 8/9/2004.
- o) EPCR – ID #78651, low read found on 5/4/2004 and remediated on 8/9/2004.
- p) EPCR – ID #78817, low read found on 5/4/2004 and remediated on 10/18/2004.
- q) EPCR – ID #80645, low read found on 5/5/2004 and the main was replaced on 4/12/2006.
- r) EPCR – ID #78739, low read found on 5/17/2004 and remediated on 9/30/2004.
- s) EPCR – ID #78977, low read found on 5/17/2004 and remediated on 10/26/2004.
- t) EPCR – ID #80384, low read found on 6/2/2004 and remediated on 11/9/2004.
- u) EPCR – ID #79500, low read found on 6/3/2004 and remediated on 9/16/2004.
- v) EPCR – ID #78039, low read found on 6/9/2004 and remediated on 11/3/2004.
- w) EPCR – ID #79449, low read found on 6/22/2004 and remediated on 10/12/2004.
- x) EPCR – ID #79406, low read found on 6/23/2004 and remediated on 5/9/2005.
- y) EPCR – ID #79409, low read found on 6/23/2004 and remediated on 10/22/2004.
- z) EPCR – ID #79559, low read found on 7/8/2004 and remediated on 11/11/2004.
- aa) EPCR – ID #79787, low read found on 7/20/2004 and remediated on 11/9/2004.
- bb) EPCR – ID #79935, low read found on 7/26/2004 and remediated on 11/13/2004.
- cc) EPCR – ID #79989, low read found on 8/9/2004 and remediated on 4/27/2005.
- dd) EPCR – ID #79970, low read found on 8/17/2004 and remediated on 1/12/2005.
- ee) EPCR – ID #80272, low read found on 8/26/2004 and remediated on 1/25/2005.
- ff) EPCR – ID #80843, low read found on 9/1/2004 and remediated on 1/24/2005.
- gg) EPCR – ID #80842, low read found on 9/1/2004 and remediated on 1/24/2005.
- hh) EPCR – ID #80849, low read found on 9/1/2004 and remediated on 12/7/2004.
- ii) EPCR – ID #80389, low read found on 9/2/2004 and remediated on 8/8/2005.

- jj) EPCR – ID #86179, low read found on 10/28/2005 and remediated on 3/24/2006.
- kk) EPCR – ID #81725, low read found on 10/19/2004 and remediated on 2/14/2005.
- ll) EPCR – ID #81052, low read found on 10/21/2004 and remediated on 3/17/2005.
- mm) EPCR – ID #81135, low read found on 10/22/2004 and remediated on 3/17/2005.
- nn) EPCR – ID #81724, low read found on 10/23/2004 and remediated on 2/14/2005.
- oo) EPCR – ID #81270, low read found on 11/8/2004 and remediated on 3/23/2005.
- pp) EPCR – ID #81343, low read found on 11/9/2004 and remediated on 3/23/2005.
- qq) EPCR – ID #81389, low read found on 11/16/2004 and remediated on 3/8/2005.
- rr) EPCR – ID #81695, low read found on 12/2/2004 and remediated on 3/8/2005.
- ss) EPCR – ID #81743, low read found on 1/5/2005 and remediated on 5/25/2005.
- tt) EPCR – ID #81757, low read found on 2/2/2005 and remediated on 5/6/2005.
- uu) EPCR – ID #81809, low read found on 2/2/2005 and remediated on 5/26/2005.
- vv) EPCR – ID #81773, low read found on 2/7/2005 and remediated on 5/9/2005.
- ww) EPCR – ID #81828, low read found on 2/17/2005 and remediated on 6/1/2005.
- xx) EPCR – ID #81796, low read found on 2/22/2005 and remediated on 6/1/2005.
- yy) EPCR – ID #82506, low read found on 4/15/2005 and remediated on 7/19/2005.
- zz) EPCR – ID #83826, low read found on 4/29/2005 and appears to still have low cathodic protection levels according to records.
- aaa) EPCR – ID #83808, low read found on 7/18/2005 and remediated on 11/15/2005.
- bbb) EPCR – ID #83584, low read found on 7/21/2005 and remediated on 11/14/2005.
- ccc) EPCR – ID #85216, low read found on 8/5/2005 and remediated on 11/28/2005.
- ddd) EPCR – ID #85219, low read found on 8/17/2005 and remediated on 12/19/2005.
- eee) EPCR – ID #85041, low read found on 9/29/2005 and remediated on 1/4/2006.

AREAS OF CONCERN

1. PSE has a distribution system in the Tacoma tideflats industrial area that has a maximum allowable operating pressure (MAOP) that PSE indicated was 100 psig. PSE procedure 6.14, section 6.2, dated 04/07/1997, requires each steel service line less than 2-inches in diameter, and installed from mains designed to operate above 60 psig to be tested to 450 psig. Records indicate that a 1-inch steel service line at 2000 Taylor Way, Tacoma was tested to 96 psig and not 450 psig as required. This service was installed in 1998. In addition to not meeting the requirements of PSE's procedure manual, this service line cannot have a 100 psig MAOP due to the requirements of 49 CFR §192.619(a)(2)(ii). The MAOP of this distribution system cannot exceed 99 psig.
2. PSE procedure 2600.1500, section 4.4 requires that electrical isolation tests be performed between casings and carrier pipe annually not to exceed 15 months. This requirement is for the purposes of complying with 49 CFR §192.467(d) and WAC 480-93-115 (now 480-93-110(5)). At the time these casings were installed, WAC 480-93-115 required only that casings be tested annually. PSE met this requirement but did not conduct electrical isolation tests at a frequency not to exceed 15 months for the following casing test sites as required by its own procedure.

- a) Records indicate that casing test site #TS-049330, located at 218th Ave E & 64th St E was tested on 01/27/2004 and again on 08/31/2005. Records indicate that on 05/10/2005, the test site was unreadable.
 - b) Records indicate that casing test site #TS-049329, located at 218th Ave E & 64th St E was tested on 01/27/2004 and again on 08/31/2005. Records indicate that on 05/10/2005, the test site was unreadable.
 - c) Records indicate that casing test site #TS-049327, located at 218th Ave E & 64th St E was tested on 01/27/2004 and again on 08/31/2005. Records indicate that on 05/10/2005, the test site was unreadable.
 - d) Records indicate that casing test site #TS-049325, located at 218th Ave E & 64th St E was tested on 01/27/2004 and again on 08/31/2005. Records indicate that on 05/10/2005, the test site was unreadable.
3. PSE procedure 2625.1100, section 4, Table 4 requires that leak surveys be conducted annually not to exceed 15 months on "High Occupancy Structures." PSE procedure 2625.1100 section 3.2.1 defines multi family housing as a "High Occupancy Structure" when it is occupied by 20 or more people on at least 5 days per week for 10 weeks in any 12 month period. The multi family units listed here appear to meet this definition. Records provided by PSE indicate that the following multi family housing units located within the Ft. Lewis military base were only surveyed once every 5 years. PSE did indicate that in late 2005, their CLX database identified these areas as "High Occupancy Structures" and that they would now be leak surveyed annually.
- a) 4290 N. 1st St (mtr#918544)
 - b) 2021 N. 6th St C (mtr #604751)
 - c) 2021 N. 6th St D (mtr #656005)
4. Records indicate that PSE has a 2-inch steel wrapped main inserted in an 8-inch cast iron casing located at S 7th St and St Helens Ave in Tacoma. WAC 480-93-115 prohibits the installation of steel in anything other than bare steel due to shielding which may affect the application of cathodic protection.
5. PSE has several pipeline markers with Washington Natural Gas (WNG) logos on them. In addition, PSE did not have pipeline markers at certain locations as required by WAC 480-93-124(2)(b).
- a) 49 CFR §192.707(a) requires that markers be installed over each main and transmission line in class 1 and 2 locations and in areas where potential damage could occur to the pipeline. These areas of concern could become probable violations if it is found that markers with improper company names are found in these areas.

The following are areas where WNG markers were present at the time of this inspection:

- (1) 7th St Se and 11th Ave SE, (SE corner) Puyallup.
 - (2) 18th Ave E and 152nd St E, (NE corner) Puyallup.
 - (3) 25th St SE and 12th Ave SE, (SW corner) Puyallup.
 - (4) 83rd Ave E and 160th St E, (NE corner) Puyallup.
 - (5) 17 East Valley Hwy, (W side) Pacific.
 - (6) North of 17 East Valley Hwy, (W side) Puyallup.
- b) PSE did not have pipeline markers at the following locations as required by WAC 480-93-124(2)(b).
- (1) Railroad crossing at 5th St SE between E. Main Ave and E. Pioneer, Puyallup.
 - (2) Railroad crossing at 7th St SE between E. Main Ave and E. Pioneer, Puyallup.
 - (3) Railroad crossing at 10th St SE between E. Main Ave and E. Pioneer, Puyallup.
 - (4) Railroad crossing at 23rd St SE between E. Main Ave and E. Pioneer, Puyallup.
 - (5) Railroad crossing at approx. 142 Ave E and 136 St Ct E (approx. 500' north), McMillan.

Note:

The new WAC rule does not specify a timeframe for completing installation of markers in newly required locations.

6. PSE has a service located at 9914 119th St SW in Lakewood. A portion of the steel service line is exposed to the atmosphere. The service line shows indications of pitting and moderate to severe atmospheric corrosion.

Appendix B



STATE OF WASHINGTON

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

1300 S. Evergreen Park Dr. S.W., P.O. Box 47250 • Olympia, Washington 98504-7250
(360) 664-1160 • TTY (360) 586-8203

Ref. No. Docket PG-050516

CERTIFIED MAIL

May 8, 2006

Jim Hogan
Standards and Compliance Manager
Puget Sound Energy
PO Box 90868, EST-07W
Bellevue, Washington 98009-0868

Dear Mr. Hogan:

Subject: 2005 Standard Inspection of King County Distribution System

Commission pipeline safety staff conducted a natural gas inspection from November 14 to 18, 2005. The inspection included a review of the operating & maintenance, emergency plans, records review and inspection of the pipeline facilities. Enclosed is our report containing the results of the inspection including four probable violations of state and federal pipeline safety codes and one area of concern.

We are most concerned about the probable violation related to the vent piping on a pressure relief regulator at Mark Twain Elementary School. You will recall the program initiated by PSE resulting from a 1998 apartment fire in Lakewood. Under this docket (UG-980098), PSE committed to a comprehensive inventory and remediation plan including the elimination of all PVC vent piping. We are very concerned that PSE missed a PVC vent pipe at an elementary school in this program. Further, we are not satisfied with how PSE mitigated this situation following our inspection. This relief is located in a sheltered area with limited air circulation. The vent pipe's replacement with a short downward directed nipple does not meet the intent of "discharge into the atmosphere without undue hazard."

The referenced findings of probable violation constitute our position at this time, based on our investigation. These findings of probable violations do not constitute commission findings of violations. There are several possible actions the commission, in its discretion, may take with respect to this matter. For example, the commission may consider the matter resolved without further commission action. Or, the commission may issue an administrative penalty under RCW 80.04.405. Or, the commission may institute a complaint, seeking monetary penalties, changes in the company's practices, or other relief authorized by law, and justified by the circumstances. This list of possible actions is not exhaustive, but it is intended to give the normal range of



Puget Sound Energy-King County
Docket PG-050516
May 8, 2006
Page 2

actions the commission typically considers. Regardless what actions the commission decides to take, if any, the company will have the opportunity to present its position on the merits of the matters involved. As of this date, I have not made a recommendation to the commission regarding the appropriate action in this matter.

Please review the attached report and respond in writing by June 12, 2006. The response should include a letter of intent and the date you plan to address the areas of probable violations noted. We are also requesting that you respond to the area of concern in the same response. If you have any questions, or if we may be of any assistance, please contact Al Jones at (360) 664-1321. Please refer to docket numbers PG-050516 in any future correspondence regarding this inspection.

Thank you for your cooperation and interest in pipeline safety and integrity.

Sincerely,



Alan E. Rathbun
Pipeline Safety Director

Enclosure

The Washington Utilities and Transportation Commission (Commission) has the authority to enforce the minimum safety regulations per Chapter 480-93 of the Washington Administrative Code (WAC) pertaining to the construction, maintenance and operation of pipelines transporting natural gas in the state of Washington. In addition, the Commission adopts the Code of Federal Regulations (CFR) Title 49, Part 191 and 192.

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION
2005 Natural Gas Pipeline Standard Inspection Report
Puget Sound Energy - King County District
Docket No. PG-050516

The following violations of WAC 480-93, which adopts 49 CFR Part 192, were noted as a result of the 2005 pipeline safety inspection of Puget Sound Energy (PSE) King County District natural gas distribution system. The inspection included a review of the procedures, records, inventory, and field operations and maintenance of the natural gas facilities.

PROBABLE VIOLATIONS

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

Each pressure relief or pressure limiting device must; "Have discharge stacks, vents, or outlet ports designed to prevent accumulation of water, ice, or snow, located where gas can be discharged into the atmosphere without undue hazard."

Finding A:

A hazard existed with the vent piping for the pressure relief regulator at Mark Twain Elementary School at 2450 South Star Lake Drive in Federal Way (Meter Nos. 556349, 528284, & 629477) constructed with PVC material, cracked pipe section, and fittings not glued. PSE's Standards has never included PVC as an acceptable material for natural gas piping. The school is a single story building with roof eaves that extends approximately 3 feet 6 inches from the exterior walls. A continuous perimeter vent to the attic space is located where the soffit meets the exterior wall. Several pipe fittings were not glued and the pipe section under the soffit was broken at the building intake vent. The PVC pipe extended above the roof gutter and equipped with a weather cap.

A PVC vent pipe was attributed to an apartment fire in Lakewood, Washington on January 11, 1998. PSE agreed to complete an extensive field survey to locate and remove all PVC vent piping in response to the commission letter dated November 16, 1999, in Docket UG-980098. PSE's letter of July 16, 2004, reported the completion for the PVC vent pipe remediation project. It is staff's opinion, after locating the vent pipe at Mark Twain Elementary School, that PSE's remediation efforts were not comprehensive and the possibly for other locations with similar material is likely to exist.

During a follow-up field inspection on March 29, 2006, the plastic piping at Mark Twain Elementary School was removed and a new 8-inch long steel extension pipe and fitting were attached to the regular. The extension pipe was necessary for the regulator opening to be at least 6-feet from the soffit intake pursuant to PSE standard (2550.1800, Table 5-1). Staff recommends that PSE revise their standard and restore the regulator vent pipe at Mark Twain Elementary School with steel piping that extends past the soffit.

Finding B:

The regulator vent at the South End Auto at 3400 S. Valley Hwy (Meter No. 429159) is located in the horizontal position. The Fisher manufacture recommends the vent be directed downward to prevent moisture from entering the regulator.

2. **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.*

Findings:

Staff's inspection of the cathodic protection system on Vashon Island found low cathodic protection voltage at:

- 1726 Vashon Hwy (Meter # 101105) P/S -0.751 volt dc.
- 10105 SW Bank Road at the Heritage Museum (Meter # 936157) P/S -0.413 volt dc. During the exit interview, this service was identified by PSE as a PE service line yet no documentation was provided to substantiate the claim.

3. **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.*

Findings:

Approximately 300 feet of pipeline connecting the Swarr propane/air facility to a PSE's regulator station has not been included as part of PSE's leak survey program.

AREA OF CONCERN

An electrical ground wire was found to be attached to the natural gas service piping at the Heritage Museum located at 10105 SW Bank Road on Vashon Island, and if not corrected, could potentially introduce high voltage current onto the natural gas distribution system.

Appendix C



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

Alan
DAVID L
AL
File

RECEIVED

APR 04 2007

WUTC
Pipeline Safety Division

April 3, 2007

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

Attn: Alan Rathbun, Pipeline Safety Director

RE: 2005 Standard Inspection of King County Distribution System PG-050516

Dear Mr. Rathbun,

In a letter dated January 25, 2007, PSE provided a copy of the Relief Vent Program that was developed to identify and remediate both PVC and horizontal relief vent piping. This version of the program was revised to incorporate a requirement to remediate PVC and horizontal vents within 90 days of identification.

Subsequently, PSE has identified significantly more horizontal vents than were anticipated. Currently, we are projecting that approximately 4,000 locations may be identified with horizontal vent piping, out of our total meter population of over 700,000.

As a result of the significant increase in the number of regulators with horizontal relief vent terminations, we are proposing a revision to the program to allow more flexibility in horizontal relief vent remediation timeframes, while not substantially altering the end result of the program. A revised program document is attached. The revisions include:

- Horizontal Vents - Eliminating the requirement to remediate regulator vents that terminate horizontally within 90 days. Specifying that all regulators with relief vents that terminate horizontally will be remediated within 6 months of the date the inspections are required to be completed by.
- PVC Vents - The requirement to remediate all PVC vents within 90 days of identification remains and the end date for PVC remediation has been modified to align with this requirement.

We appreciate Staff's review and comments on this revised program document and will continue to work collaboratively with Staff to incorporate this program into a formal settlement agreement. If you have any questions or would like to discuss next steps, please call me at (425) 462-3957.

Sincerely,

Jim Hogan
Manager, Standards & Compliance

Attachment

cc: Sue McLain
Duane Henderson
Kimberly Harris
Karl Karzmar

RMS
K

Relief Vent Program

1. Scope

- 1.1 This document defines the requirements for the inspection of relief vents at PSE meter set assemblies (MSA) to identify relief vents that require remediation and ensure they are remediated. The inspection includes relief vents on service regulators with internal relief, relief vents on external relief valves, and relief vents of service regulators on idle risers.

2. Responsibilities

- 2.1 *Manager Standards and Compliance* is responsible for:
 - 2.1.1 Ensuring that the requirements of the program are met.
 - 2.1.2 Submitting reports, as required under Section 8.
- 2.2 *Manager Gas System Operations* is responsible for:
 - 2.2.1 Ensuring field inspections of Fixed Factor, Permanent ID, Large and Small MSAs and Idle Risers are performed and documented to identify the presence of vent piping requiring remediation.
 - 2.2.2 Ensuring vent piping requiring remediation on Large and Small MSAs and Idle Risers is completed as required by this program.
- 2.3 *Manager System Control and Protection* is responsible for:
 - 2.3.1 Ensuring vent piping requiring remediation on Fixed Factor and Permanent ID MSAs is completed as required by this program.

3. Inspection Requirements

- 3.1 For Fixed Factor MSAs (including both those that have met the fixed factor criteria and those that have not yet met the criteria), the vent inspection shall be done in conjunction with the annual fixed factor check.
- 3.2 For Permanent ID MSAs, the vent inspection will be done in conjunction with the annual instrument accuracy check.
- 3.3 For Large MSAs, the vent inspection shall be performed as a dedicated inspection.
- 3.4 For Small MSAs and Idle Risers, the vent inspection shall be performed in conjunction with the atmospheric corrosion inspection.

4. Remediation

- 4.1 Relief vents that are constructed of PVC piping shall be remediated within 90 days of identification.
- 4.2 Relief vents constructed of PVC piping shall be remediated by one of the following methods:
 - 4.2.1 Replace the PVC vent piping with steel pipe;
 - 4.2.2 Remove the PVC vent piping and do not replace it if vent piping is not required by PSE Gas Operating Standards; or

Relief Vent Program

- 4.2.3 Remove the PVC vent piping and relocate the MSA to eliminate the need for vent piping.
- 4.3 Relief vents that terminate horizontally shall be remediated by one of the following methods:
 - 4.3.1 Install a 90 degree elbow that terminates downward; or
 - 4.3.2 Install vent piping and terminate in accordance with PSE Gas Operating Standards.

5. Training

- 5.1 Inspection personnel shall be trained to identify relief vents constructed of PVC piping and relief vents that terminate horizontally.
- 5.2 Inspection personnel shall be trained on the processes for documenting the findings to ensure locations requiring remediation are appropriately identified.

6. Records

- 6.1 The inspection of each Fixed Factor MSA, Permanent ID MSA, and Large MSA shall be documented.
 - 6.1.1 The inspection records shall indicate the results of each inspection including the address, meter number, date of inspection, whether any PVC vent piping was found, and whether any vents terminate horizontally.
- 6.2 The inspection of each Small MSA and Idle Riser that identified a relief vent constructed of PVC piping or a relief vent that terminates horizontally shall be documented.
 - 6.2.1 The inspection records shall include the address, meter number, date of inspection and the vent configuration that requires remediation (PVC vent piping or horizontal vent termination).
- 6.3 A record indicating the date remediation was performed and the remediation method shall be kept for all locations requiring remediation.

7. Schedule

- 7.1 The inspection of Fixed Factor and Permanent ID MSAs shall be completed by December 31, 2007. The remediation of PVC vent piping shall be completed by April 1, 2008 and the remediation of horizontal vent piping shall be completed by July 1, 2008.
- 7.2 The inspection of Large MSAs of this program shall be completed by the March 1, 2008. The remediation of PVC vent piping shall be completed by June 1, 2008 and the remediation of horizontal vent piping shall be completed by September 1, 2008.
- 7.3 The inspection of Small MSAs and Idle Risers shall be completed by May 1, 2010 and the remediation of PVC vent piping shall be completed by August 1, 2010 and the remediation of horizontal vent piping shall be completed by November 1, 2010.

Relief Vent Program

8. Reporting Requirements

- 8.1 PSE shall file annual reports by March 15th of each calendar year, starting in 2008, for progress during the prior calendar year.
 - 8.1.1 The report shall include the number of MSAs inspected, the number of PVC vents found and remediated, and the number of horizontal vents found and remediated.

9. Definitions

- 9.1 *Fixed Factor MSA* means a meter set assembly with a meter size larger than an A425 but less than a D16,000 that delivers pressures from 2 psig to 15 psig inclusive.
- 9.2 *Permanent ID MSA* means a meter set assembly with a meter size equal to or greater than a D16,000 and any meter set assembly that delivers pressures greater than 15 psig as well as some fixed factor accounts that have been assigned a permanent ID as they have not met the criteria to be a fixed factor account.
- 9.3 *Large MSA* means all MSAs with A1000 meters and larger that are not inspected as part of the Fixed Factor or Permanent ID inspection.
- 9.4 *Small MSA* means a MSA not classified as Fixed Factor, Permanent ID, or Large MSA.
- 9.5 *Idle Riser* means an inactive account where the meter has been removed but the riser and regulator are still present.

Appendix D



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

October 4, 2005

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 a request received from Pipeline Safety Staff to provide additional information on issues discussed in Puget Sound Energy's (PSE) response to the 2004 Standard Inspection for Thurston and Lewis Counties dated May 6, 2005.

Staff has requested follow-up information on 14 items. These requests, as well as PSE's responses are provided below.

1. Request: Probable Violation (PV) 6. Please provide a current copy of PSE's Atmospheric Corrosion Inspection and Remediation Improvement Initiative, including the detailed associated procedures for accomplishing the initiative.

Response: Attachment A of the audit response dated May 6, 2005 is a summary of the Atmospheric Corrosion Inspection and Remediation Improvement Initiatives that PSE has implemented and is still working on implementing. PSE has not identified any additional elements to this initiative. Therefore, the summary in the May 6, 2005 audit response is the most current. The detailed information on each element of the initiative is provided in response to staff's requests 2 through 4 below.

2. Request: In PSE's Atmospheric Corrosion Inspection and Remediation Improvement Initiative PSE committed to include the identification of existing meterless risers and EUFs and their associated atmospheric corrosion inspections into the Isolated Facilities Program. Please provide the associated procedures for identification of existing meterless risers and EUFs and how that will be included into the Isolated Facilities Program.

Response: The Isolated Facilities Program is still under development. The procedures for the Isolated Facilities Program will be provided to Staff by January 30, 2006 in accordance with the Settlement Agreement.

3. Request: In PSE's Atmospheric Corrosion Inspection and Remediation Improvement Initiative. Please provide a copy of the portion of the 2005 Gas Operating Standards that include the specific categories of aboveground facilities and the associated responsibility for inspection and remediation.

Response: Attachment A to this letter is a copy of Gas Operating Standard 2600.1800 "Monitoring Facilities for Atmospheric Corrosion."

4. Request: In PSE's Atmospheric Corrosion Inspection and Remediation Improvement Initiative. Please provide a copy of the processes and procedures that PSE developed and implemented for locations that are difficult to access.

Response: On September 23, 2005, PSE sent a letter to Pipeline Safety Staff to communicate information on PSE's process for disconnecting customers when PSE representatives are unable to gain access to our facilities on the customer's property in order to perform compliance-related activities. These processes and procedures are being finalized and will be implemented shortly. Additional processes and procedures for inspecting and remediating atmospheric corrosion on locations that are difficult to access due to location are being developed. PSE will have these completed and will provide copies to the WUTC by July 1, 2006.

5. Request: PV 7. Please provide documentation that the maps for St Martin's College and Candlewood Mobile Manor have been updated and leak surveys have been performed.

Response: PSE provided copies of the updated maps to Staff and reviewed the leak surveys for St Martin's College and Candlewood Mobile Manor on October 4, 2005.

6. Request: PV 9. Please provide a current copy of PSE's Maps and Records Improvement Initiatives.

Response: Attachment A of the audit response dated May 6, 2005 is a summary of the Maps and Records Improvement Initiatives that PSE has implemented and is still working on implementing. Additional elements to this initiative were identified in PSE's Map Accuracy Assessment. This assessment is provided in Attachment B of this letter.

7. Request: In PSE's Maps and Records Improvement Initiatives. Please provide a copy of PSE's Map Accuracy Assessment that PSE committed to complete by 8-1-2005.

Response: This assessment is provided in Attachment B.

8. Request: In PSE's Maps and Records Improvement Initiatives. Please provide a copy of all PSE's current activities that have been changed or new initiative that resulted from the Map Accuracy Assessment i.e. EUFs, validity of mapping and trailer Parks. Please include the procedures for each initiative.

Response: The Map Accuracy Assessment provided in Attachment B provides information on PSE's plans to develop procedures and timeframes for updating Staff on these procedures.

9. Request: PV 10, finding b, bullet one, 2nd paragraph of PSE's Response. Please provide a copy of the new process for responding to findings on the bridge patrols. PSE committed to develop this process by 8-1-2005 and implement it by 10-1-2005.

Response: These processes are provided in Attachment C. PSE is on track to implement these processes by October 1, 2005.

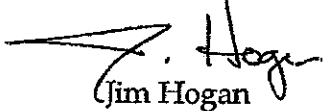
10. Request: PV 10, Finding b, bullet 2. Please provide documentation that the atmospheric corrosion remediation was completed on or before 5-6-2005.
- Response: On October 4, 2005 PSE provided Staff a copy of the as-installed showing that this work was completed on 5-11-05. PSE's audit response indicated this work "was expected to be completed on May 6, 2005." Construction completion was slightly longer than anticipated due to limited availability of construction equipment.
11. Request: PV 10, Finding b, bullet 3. Has the critical bond program for this system been completed?
- Response: Yes, PSE completed the critical bond work on this system on June 27, 2005. The SAP record indicating the critical bond work on this system was completed is included in Attachment D, Critical Bond Record.
12. Request: PV 10, Finding b, bullet 5. Please provide documentation that the steel was replaced with pe.
- Response: On October 4, 2005 PSE provided Staff a copy of the as-installeds for this job showing that the steel was replaced with PE.
13. Request: Please provide an update of PSE's plans for it Jackson Prairie Gate Station #1874 and the upstream facilities.
- Response: PSE plans to replace the facilities originally built by Williams to ensure that adequate design and construction records are available. PSE is coordinating this work with Williams. Williams will do the work to replace the tap on the lateral and the inlet valve and PSE will replace inlet piping and first stage regulation. The outlet flange of the valve will be the point of demarcation between the Jackson Prairie laterals and PSE's distribution system. PSE and Williams are evaluating the feasibility of completing this work in 2005. Due to operational constraints, this work may only be done during certain windows. If the work is not able to be performed this fall, it will be completed at the earliest opportunity in 2006.
14. Request: Please provide a copy of all maintenance records for the upstream

facilities located at the Jackson Prairie Gate Station #1874 since January of 2005.

Response: PSE performed the inspection of the upstream facilities, the first stage regulators, on November 9, 2004. Copies of these maintenance records are included as Attachment E.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Hogan". The signature is stylized with a long horizontal stroke at the beginning and a loop at the end.

Jim Hogan

Manager, Standards & Compliance

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

Attachments

Attachment B

“Map Accuracy Assessment”

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. For services, the backlog has been reduced from approximately 25,000 services at the beginning of 2004 to approximately 3,000 services at the beginning of 2005. The average backlog for 2005 is approximately 3,800 services which is just over a month of service installations. This far exceeds the new WAC rule which requires records to be updated within 6 months of completion of construction activity.

In addition, there is currently an initiative underway to address the challenges of maintaining up to date cathodic protection (CP) maps in multiple locations. This initiative will result in overlays on PSE's on-line operation maps with CP information including CP system boundaries and system number. This project is over 80% complete and is on track to be completed in 2005 which exceeds the initial goal to complete the work in the Spring of 2006.

In the third quarter of 2005, PSE completed a map accuracy assessment to determine if additional map accuracy initiatives should be undertaken. This assessment concluded that there are three areas that provide additional opportunities to improve the accuracy of PSE maps; map omissions, address accuracy, and special service accuracy. The findings and conclusions of this assessment are described below.

The assessment included a detailed analysis of over 14,000 service records for a variety of typical services that included both commercial and residential customers. Records that were analyzed included PSE's customer information database (CLX), service records (D-4's), and plat maps. Based on this analysis, PSE concluded that while PSE maps are generally accurate and complete, there are still opportunities to improve the accuracy of these records. These improvements would address map omissions and accuracy of addresses.

In addition to the evaluation of several thousand typical services, PSE evaluated the adequacy of processes for capturing maps and records information for more

unique services such as services to trailer parks, business parks, and campus type installations. This assessment revealed that there are additional opportunities to improve business processes associated with capturing and maintaining this information.

Based on the opportunities identified in this assessment, PSE has begun developing more formal processes to address these improvement opportunities. PSE will provide Staff a status report on the development and implementation of these processes by June 30, 2006.

Appendix E

Attachment B

Summary of Corrosion Control Process Improvements

PSE has worked aggressively to improve the processes associated with remediating low pipe to soil potential (PSP) reads in a timely manner and we continue to evaluate opportunities to improve processes. The improvements implemented over the last few years are summarized below.

The most significant improvements involved providing additional resources to resolve low PSP reads and providing additional training and expertise to the corrosion control workforce. In late 2004, PSE began transitioning most of the work to remediate low PSP reads to its service provider. This work is the routine work and includes installing anodes and test leads, adding or removing insulators, and clearing identified shorts. By having this work performed by the service provider, PSE corrosion control personnel were able to focus on the more complex activities of testing and troubleshooting low PSP reads to identify the cause and more quickly determine a solution to low reads.

This transition was fully implemented in spring of 2005. Currently, the service provider completes approximately 90% of the work orders initiated to resolve low PSP reads and PSE completes the remainder of the work orders that require more complex resolution.

As the service provider performed more of the work to remediate low PSP reads, we identified the need for a project manager to oversee this work to ensure completion in a timely manner. In mid-2005, the service provider assigned a project manager to manage cp remediation work. This resulted in immediate improvements in the time it took to complete jobs and by early 2006, most of the backlog had been addressed and new work was being completed in a timely manner.

As the service provider took over the more routine work, PSE provided additional training including on-site NACE classes, rectifier training, and additional NACE certification for corrosion control employees. A new position titled Corrosion Technologist was created and two employees were promoted to recognize that they had attained a higher skill level and were certified at the NACE II and NACE III level. An additional corrosion engineer was also hired that had significant experience in troubleshooting low cathodic protection reads.

In addition, PSE began a process to evaluate low PSP reads that were not resolved within 90 days to determine the cause and identify additional opportunities for process improvements. As a result of this evaluation, PSE created standard drawings for anode beds which reduced the design time for replacement or supplemental anode installations; developed and implemented new tools to streamline troubleshooting low reads including a tool to calculate pipe coating effectiveness; streamlined the permitting process to reduce the lead time on permits to the extent possible; and implemented a new process for addressing low PSP reads.

The new process requires corrosion control personnel to create a notification in SAP after they are notified verbally of a low PSP read. This ensures that work to troubleshoot the low read begins in a timely manner and eliminates the previous situation where paperwork on low PSP reads would not be received until all the job paperwork had been processed.

PSE continues to evaluate low PSP reads that are not resolved within 90 – 120 days to identify additional opportunities to improve its processes. Most of the low reads that are not resolved within this timeframe are due to permitting issues, low reads that require more than one remediation activity, and resolution that involves replacement rather than repair.

PSE will continue to work aggressively to remediate low PSP reads in a timely manner and appreciates the opportunity to work with Staff to discuss these improvements as well as ongoing challenges.