



Puget Sound Energy
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State of Washington
UTC
Pipeline Safety Program

January 13, 2016

Alan Rathbun
Pipeline Safety Director
Washington Utilities and Transportation Commission
Pipeline Safety Section
1300 S. Evergreen Park Drive S.W.
PO Box 47250
Olympia, WA 98504-7250

Dear Mr. Rathbun:

RE: 2015 Natural Gas Standard Inspection- Puget Sound Energy –
Snohomish County (Insp. No 6176)

PSE has received and reviewed your letter dated December 10, 2015 regarding the 2015 Snohomish County Audit, and pursuant to your request is submitting the following written response to the area of concern noted in the letter:

AREA OF CONCERN

1. WAC 480-93-110 Corrosion control

- (2) *Each gas pipeline company 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 gas pipeline company's control the company cannot complete remedial action within ninety days. Each gas pipeline company 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 each gas pipeline company 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):

During the field portion of the inspection on November 13, 2015, we obtained a low pipe-to-soil potential reading of -356 mV (on) at 3716 Federal and -285 mV (on) at Edwards Ave and Federal Ave in Everett, WA. If uncorrected within 90 days, this condition could lead to a probable violation. PSE has indicated that they replaced a battery on a solar power source and that the readings are now more favorable, but there is still the question about whether there is interference from the City of Everett's cathodic protection system. It need (sic) to be determined if this interference is affecting the readings obtained on PSE's assets in a positive or negative way.

Additionally, reviewing pipe-to-soil potential test records since 2013 has shown that both test stations have had a history of low readings, that were remediated, and the next year when the annual check occurred they were low again. This pattern has continued to present.

PSE Response

The City of Everett's cathodic protection system is interfering with the pipe-to-soil potential measurements on PSE's gas main near the corner of Edwards Avenue and Federal Avenue. The City's pipeline crosses the PSE main at this location. Stray current from the City's system that is picked up by the gas main will discharge to the City's pipe at the crossing if the stray current is not mitigated.

Cathodic protection is one of the methods of mitigating the effect of stray current. The potential gradient around the City's pipe affects the potential measured on the gas main at the test site located at the crossing, TS-075941. This is evident when the cathodic protection is tested using the PSP-on criterion. Therefore, the 100mV polarization criterion for evaluating the effectiveness of cathodic protection was selected. On December 29, 2015, a PSE technician obtained an instant off read of -386mV and a depolarized read of -256mV at this site. The negative polarization shift of 130mV exceeds the required criterion demonstrating the pipe has adequate cathodic protection to mitigate the stray current and maintain the pipeline's integrity.

Over the years, the City has worked cooperatively with PSE to maintain the integrity of the gas main. As evidenced by the previous years' maintenance records, the City has, upon request, adjusted their system to mitigate stray current when PSP-on measurements taken by PSE dictate the necessity. PSE is taking steps to reinforce the cathodic protection of this pipeline. Field measurements indicate that a more robust system will result when the pipe in question is bonded to an adjacent impressed current system. A work order has been created to bond the systems together. Completion of construction is anticipated by the end of Q1, 2016.

We hope the information provided is responsive to the findings of the UTC inspection. PSE is committed to constructing, operating, and maintaining a safe gas pipeline system.

Sincerely,

A handwritten signature in cursive script, appearing to read "Booga K. Gilbertson".

Booga K. Gilbertson
Vice President, Operations

Cc: Cara Peterman, Director Compliance
Cheryl McGrath, Manager Compliance Programs
Cathy Koch, Director Planning
Harry Shapiro, Director Gas Operations