



PUGET
SOUND
ENERGY

September 29, 2014

David Lykken
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

RECEIVED

SEP 29 2014

State of Washington
UTC
Pipeline Safety Program

Dear Mr. Lykken:

**RE: Natural Gas Standard Inspection- Puget Sound Energy –
Lewis/Thurston Counties Distribution Systems**

In response to the 2014 Lewis-Thurston Audit Probable Violation #3 regarding Atmospheric Corrosion Monitoring, PSE expressed its intent to provide two plans to the Commission by September 29, 2014, as follows:

- 1. PSE will provide refresher training on AC monitoring responsibilities and AC rating procedures to our Service Provider (Surveys and Analysis) responsible for AC Inspections, with specific attention to non-standard sets and expectations for monitoring atmospheric corrosion. PSE will also provide refresher training for all PSE Gas Operations field personnel and Service Provider (InfraSource) personnel, with specific attention to AC monitoring responsibilities. A plan for this training is being developed and will be provided to the Commission by September 29, 2014.*
- 2. PSE is performing a thorough review of its AC monitoring program - including standards, procedures, processes, and training - to identify gaps and improvement opportunities. A team has been assembled and the planning effort is underway. A plan for the review will be completed and provided to the commission by September 29, 2014.*

Attached please find the following two documents:

- 1) Training Plan for Atmospheric Corrosion Monitoring.doc
- 2) Project Plan- AC Monitoring Review.doc

Please let me know if you have any questions,

Sincerely,

Stephanie Silva

Stephanie Silva
Gas Compliance Program Manager

Cc: Cathy Koch, Director Compliance
Cheryl McGrath, Manager Compliance Programs
Jennifer Tada, Director Planning
Harry Shapiro, Director Gas Operations
Dan Koch, Director of Engineering

Training plan for Atmospheric Corrosion Monitoring

This plan is in response to probable violations found in the Lewis/Thurston Counties Audit.

Due to the complexity of the potential reasons for the probable violations, a stakeholder team has been assembled to identify gaps and improvement opportunities. This plan will change as findings and improvements are identified.

Training Timeline

Training description	Timeframe	Audience	Training level
Refresher training on AC monitoring responsibilities – Includes Monitoring Atmospheric Corrosion responsibilities, Corrosion Ratings and Continuing Surveillance	October 31st	All Gas Operations Field Personnel and leadership *InfraSource Evaluators Surveys and Analysis personnel	Level II – Documented awareness
AC Rating Procedures (Includes non-standard meter sets)	October 31st	All personnel for Surveys and Analysis	Level III – Knowledge And Level IV – Performance and skill
Specific knowledge or skills gaps identified during Atmospheric Corrosion Program review	TBD	TBD	TBD

*InfraSource evaluators will insure field personnel receive documented awareness training



PROJECT TITLE: Atmospheric Corrosion (AC) Monitoring Program Review

PROJECT LEAD: Shamish Patel

PROJECT TEAM: Jac Hand; Joe MacDuff; Jeff Anderson; Toni Imad; Stephanie Silva; Leslie Wright; John Klippert; Jace McMaster; Tony Lupo

PARTICIPANTS:

- System Planning (Gas System Integrity, Standards & Commodities)
- Gas Operations (Gas Quality, Gas System Operations, Industrial Meter Operations, Gas First Response, Maintenance programs, Cathodic Protection, Pressure Control, Instrumentation)
- Operations Performance (Mapping, Training)
- Compliance
- Contractor Management
- Service Providers (Infrasource, Surveys & Analysis)

Other participants may be added as the project progresses.

DIRECTOR SPONSORS:

Cathy Koch – Director Compliance
Harry Shapiro – Director Gas Operations
Jennifer Tada – Director Planning

DATE: September 29, 2014

PROBLEM STATEMENT:

During a 2014 Natural Gas Standard Inspection (Puget Sound Energy, Lewis/Thurston Counties Distribution Systems), significant atmospheric corrosion (AC) was found at the following industrial/commercial meter sites:

- Steam Plant meter set on the Capital Campus, Olympia, WA
- Sears meter set, Lacey, WA
- Meter set in alley at 4th and Washington, Olympia, WA
- Crown Cork meter set, Olympia, WA

The WUTC inspector cited PSE against 192.481(c) and PSE GOS 2600.1900. The inspector's comments included the following:

- Significant corrosion found; appears personnel either did not inspect per code or did not rate correctly per PSE Standards and Procedures.
- There is apparent confusion as to who is responsible for monitoring AC at these sites.
- Several PSE personnel visit these sites routinely, yet did not identify or note the condition.
- Records indicate personnel qualifications were up to date, yet conditions were missed during normal inspection.

The inspector also commented, "There is potentially several reasons why this condition occurred. The interaction of those conditions are complex enough to require a review of processes and oversight of the atmospheric corrosion monitoring requirements for industrial meter sets."

We believe the above may prevent us from achieving business excellence in terms of system integrity, efficiency, customer satisfaction, and compliance.

GOALS AND OBJECTIVES:

Correct the deficiencies that led to the audit findings (referenced in "Problem Statement") for the 2014 Lewis/Thurston County Audit. This will include a review of PSE's AC monitoring program to identify gaps and improvement opportunities in our standards, procedures, processes, controls and training. Report findings, actions already taken, and longer-term/larger scope recommendations to the responsible Directors.

Corrective actions began while the audit was taking place, shortly after we were notified of the AC on the above ground facilities at the four locations previously identified, on June 18. Gas Operations investigated the findings to identify potential causes from 6/18 – 6/24. On 6/25, PSE provided Surveys and Analysis (S&A) with photographs showing the specific issues at the four facilities, and instructed S&A to perform refresher training on AC identification and reporting requirements with special attention to the types of meter sets identified in the audit findings (and referenced in the "Problem Statement"). Training was completed by July 2. In addition, all of the AC issues at the four identified locations were evaluated by late-August and remediation had either taken place or was planned to take place by the end of September.

The remaining corrective action is to review the AC program for residential, commercial, and industrial meter sets, identify gaps, and then address the gaps.

PSE's plan for the review must be submitted to the UTC by September 29, 2014.

PROCESS OVERVIEW:

Phase 1 (complete): Remediation and training

This was initiated based on the AC findings at the following locations:

- Steam Plant meter set on the Capital Campus, Olympia, WA
- Sears meter set, Lacey, WA,
- Meter set in alley at 4th and Washington, Olympia, WA,
- Crown Cork meter set, Olympia, WA.

This began while the audit was taking place, shortly after we were notified of the AC on the above ground facilities at the four locations identified above, on June 18.

- Gas Operations investigated the findings to identify potential causes from 6/18 – 6/24.
- On 6/25, PSE provided S&A with photographs showing the specific issues at the four facilities, and instructed S&A to perform refresher training on AC identification and reporting requirements with special attention to the types of meter sets identified above.
- S&A's training was completed by July 2.
- All of the AC issues at the four identified locations were evaluated by late-August and remediation had either taken place or was planned to take place by the end of September.
- Refresher training for AC Monitoring Responsibilities will be provided to PSE Field Employees and Service Provider Personnel with delivery targeted for completion by the end of October.

Phase 2 (to be completed by 10/31/14): Identify requirements and gaps

We will examine our program for AC at residential, commercial, and industrial meter sets to determine if we are effectively implementing the requirements in our Standards and Procedures. This will include the following:

- a) Review the Standards & Procedures for clarity of the requirements, procedures and responsibilities:
 - Identify all requirements as documented in our Standards and Procedures.
 - Identify who is responsible for each requirement.
 - Identify how (i.e. what processes are in place) they meet each requirement.
 - Create matrix to link requirements, responsible parties, and processes.

- b) Review the work processes to ensure they meet the requirements within the standards and procedures:
 - Review and document each process to ensure that the requirement is met; create process map.
 - Gather additional information from sources such as QC, field observations, interviews.
 - Review training programs.

- c) Identify and document gaps

The starting point for the review will be Gas Operating Standard 2600.1800 "Monitoring Facilities for Atmospheric Corrosion". Identification of the requirements within the standard will allow the team to determine how atmospheric corrosion inspection and remediation is accomplished for residential, commercial, and industrial meter sets.

We believe that the following Standards and Field Procedures will also be reviewed as a part of this phase:

- 2600.1800 Monitoring Facilities for Atmospheric Corrosion
- 2525.1100 Pipeline Design
- 4515.1220 Monitoring Atmospheric Corrosion
- 2575.2700 Continuing Surveillance
- 2575.3100 Patrolling Program
- 2600.1900 Remedial Measures for Corrosion Control

Actionable items identified during phase 2 that are of high value and/or can be implemented quickly will be addressed immediately.

Note: This phase may lead to the discovery of gaps in other Standards, Procedures or work processes that could take us beyond the scope of this project. These gaps/processes will be evaluated and addressed as appropriate, and may require additional time and resources.

Phase 3 (to be completed by 12/31/14): Close gaps and recommend additional changes

Portions of this phase will take place concurrently with the review that is discussed in phase 2. As previously noted, gaps identified in phase 2 that are high value and/or can be implemented quickly will be addressed immediately.

The steps of this phase will be to:

- Develop plan to close identified gaps.
- Implement plan.
- Establish quality metrics to ensure each process is followed and completed as required.
- Identify and recommend program, process, or technology enhancements that may strengthen current programs or processes, but require significant additional resources which would require consultation with the Director Team.

All gaps and improvement opportunities will be prioritized based on risk, benefit, complexity, and readiness for change.

Once the plan is finalized, it (along with a listing of the actions that have already been taken to close the identified gaps) will need to be submitted to the UTC as committed to in PSE's response dated August 28, 2014.