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Confidentially Submitted for Settlement Discussions Under ER 408

Deactivated Gas Line Inspection and Remediation Program Plan

The ~~intent objective~~ of the Deactivated Gas Line Inspection and Remediation Program ("Remediation Program") is to identify, investigate, deactivate, and remediate services and mains that could potentially have similar risks or characteristics to the service piping involved in the March 2016 Greenwood incident. The Remediation Program focuses on both service piping reported to have been retired, and active aboveground service piping located in areas where it could potentially be subject to increased damage caused by human activity. Additionally, the Remediation Program focuses on mains reported to have been retired.

All functions of the Inspection and Remediation Plan referred to below shall be performed by a highly trained workforce.

<<ADD DEFINITIONS SECTION>>

Key terms should be defined in the Plan. Examples include historic, business district, hard-to-reach locations, non-business district, and high occupancy structures. While many of these terms may be defined in federal regulations, they should be defined in the Plan to avoid (1) disputes later and (2) the need to refer to several documents/sources of information.

i. Retired Service Pipe Inspections

PSE¹ will inspect, ~~and identify, and remediate (as described below)~~ ~~aboveground piping service lines~~ for conditions that were thought to have been previously deactivated, but were not. Retired service lines that are identified for inspection will be investigated to determine if there is gas-carrying ~~aboveground~~ pipe not properly deactivated.

- 1) PSE has utilized GIS to identify a total population of 40,789 retired service pipe locations.
- 2) PSE will prioritize and conduct inspections. The inspection populations, inspection rates, and inspection durations are as follows:
 - i. **Population 1:** Work performed by ~~Pilchuck Contractors, Inc. ("Pilchuck")~~ during 2000-2010 and located in the historic business districts of ~~Seattle, Everett, Tacoma and Olympia~~ (3,060 Locations)
 - i. PSE will inspect 100% of the population
 - ii. PSE will complete the inspections within 18 months of the Commission's order approving the settlement agreement in WUTC Docket PG-160924.

Comment [LG1]: Consider including other cities, including Bellevue and Puyallup. Explain why other cities were not included. Explain whether other cities were considered.

Comment [LG2]: Does removing "by Pilchuck" change this number? In other words, were there service lines abandoned during this time period by other workers?

¹ Where the Remediation Program refers to PSE, it is intended to mean either PSE or its contractor, or both.

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- ii. **Population 2:** Work performed by Pilchuck during 2000-2010 and located near High Occupancy Structures, former Hard-to-Reach Locations, in business districts, and in non-business districts (10,907 Locations)
- i. PSE will inspect based on a sampling plan with a confidence level of 99% and agreed upon confidence interval and precision criteria
 - ii. PSE will complete the inspections within 18 months of the order approving the settlement agreement in WUTC Docket PG-160924.
 - iii. In the event PSE discovers a gas-carrying service thought to be deactivated, PSE will inspect the entire population.
- iii. **Population 3:** Work performed prior to 2000 and located near High Occupancy Structures, in business districts, and in non-business districts (15,131 Locations)
- i. If PSE discovers a gas-carrying service thought to be deactivated within Population 1 or 2, PSE will begin inspection based on a sampling plan with a confidence level of 99% and agreed upon confidence interval and precision criteria
 - ii. Inspections will be completed within 36 months of initiation the order approving the settlement agreement.
 - iii. In the event PSE discovers a gas-carrying service thought to be deactivated, PSE will inspect the entire population.
- iv. **Population 4:** Work performed after 2010 and located near High Occupancy Structures, in business districts, and in non-business districts (11,691 Locations)
- i. If PSE discovers a gas-carrying service thought to be deactivated within Population 3, PSE will begin inspection based on a sampling plan with a confidence level of 99% and agreed upon confidence interval and precision criteria
 - ii. PSE will complete the inspections within 36 months of initiation the order approving the settlement agreement.
 - iii. In the event PSE discovers a gas-carrying service thought to be deactivated, PSE will inspect the entire population.

Comment [LG3]: Does removing "by Pilchuck" change this number? In other words, were there service lines abandoned during this time period by other workers?

Comment [LG4]: Identify what sample amount, confidence interval, and precision criteria PSE proposes. Identify the sampling methodology PSE proposes. This term is incomplete without this information.

Comment [LG5]: Identify what sample amount, confidence interval, and precision criteria PSE proposes. Identify the sampling methodology PSE proposes. This term is incomplete without this information.

Comment [LG6]: Identify what sample amount, confidence interval, and precision criteria PSE proposes. Identify the sampling methodology PSE proposes. This term is incomplete without this information.

- 3) The type of remediation required, if any, will be determined by the characteristics of the identified facility. Remediation will be determined based on the inspection results and could include excavation to confirm whether a facility is deactivated.
- i. Upon discovery of a gas-carrying service thought to be deactivated, the service will be properly deactivated in compliance with then-current rules, practices, policies, and procedures, as revised and in effect. If one or more permits are required PSE will apply for such permit(s) within five ten (5-10) business days identification. Within five ten (10-5) business days after receiving such permit(s), PSE will begin required construction work.

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vii. Upon discovery of a non-gas-carrying service that was deactivated, but not removed, the deactivated aboveground pipe, including any risers from below ground service lines, will be scheduled to be removed. Such removal will be performed within 90 days.

3)4) PSE will document inspection results, including photographic evidence, such that a third party can review to confirm the results. PSE will also investigate to determine how the situation came to exist and incorporate any process and/or procedural improvements to prevent future reoccurrences.

4)5) PSE will report on the inspection results and mitigation plans in the Continuing Surveillance Annual Report beginning with an interim report during the second quarter before December of 2017, followed by the first annual report in 2018~~the 2018 edition~~, there shall be no less than six months between the two reports. The reports will be filed in Docket PG-160924, and copies are provided to Commission Staff and Public Counsel. PSE will also prepare an annual report card to customers summarizing the inspection results and mitigation plans; Public Counsel will review this language, similar to review that is conducted of the SQI report card. ~~This annual report is shared with the Commission Staff.~~ PSE will continue reporting on the findings until this condition no longer requires additional mitigation.

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ii. PSE Quality Management

PSE will undertake a review of its Quality Management program consistent with the essential elements defined in API Recommended Practice (RP) 1173 for determining gaps and improvements to demonstrate confidence in adherence to PSE Gas Operating Standards and Gas Field Procedures.

- 1) PSE will perform an internal review of pipeline safety activities to determine baseline alignment with API RP 1173 Pipeline Safety Management System (PSMS). The review will include the following company elements:
 - a. Leadership and management commitment
 - b. Stakeholder engagement
 - c. Risk management
 - d. Operational controls
 - e. Incident investigation, evaluation and lessons learned
 - f. Safety assurance
 - g. Management review and continuous improvement
 - h. Emergency preparedness and response
 - i. Competence, awareness, and training
 - j. Documentation and record keeping
- 2) Upon completion of the review, PSE will file with the Commission and submit a summary report along with revisions to Gas Operating Standards and Gas Field Procedures to WUTC Staff and to Public Counsel. The summary report and proposed revisions will be submitted by June 30, 2017.
- 3) PSE will address improvements to PSE's Gas Operating Standards and Gas Field Procedures that are targeted to confirm the work to deactivate facilities was performed and documented as instructed. PSE will complete the identified improvements by December 31, 2017.
- 4) PSE will review the following current standards and practices and update, as necessary, the required documentation by March 30, 2017:
 - a. Job completion records responsibility such as D-4.
 - b. Temporary and permanent deactivation of facilities. Revised standards so that no permanent or temporary deactivation above ground is permitted and remove all inactive above ground service lines that have been abandoned or are inactive.
 - ~~b-c.~~ Revise standards so that all service lines above ground that are active are remediated for protection or relocated below ground.
- 5) 5. PSE will implement training and certification of impacted personnel by June 30, 2017- and perform refresher training at least annually of PSE and contractor personnel involved with main and service line cut and cap and deactivation.
- 6) PSE will implement an inspection program of contractor work that includes the following:

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- a. Inspection of all work performed by a contractor supervisor of deactivated main or service line, including purging of line before site is backfilled.
- b. Inspection by PSE employee inspector of at least 10% of all deactivated sites before site is backfilled.
- c. Recorded documentation of work performed by identified PSE or contractor employee, contractor supervisor performing inspection and PSE inspector where applicable with date and time information and related comments on inspection procedure performed.

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iii. Above Ground Service Pipe Inspections

Above ground services will be evaluated as part of PSE’s Distribution Integrity Management Program (“DIMP”). As locations are identified through targeted inspections or ongoing routine maintenance and construction activity, each will be assessed for potential damage due to unauthorized human activity.

Comment [LG7]: PSE is supposed to inspect 100% of pipe under DIMP. DIMP is not limited to outside force above ground, but also below ground. PSE is required to identify abandoned pipe in its system that is at risk for outside force damage. 49 C.F.R. 192.1007. Therefore, while this is fine to reflect as part of the plan, it seems like this is part of PSE’s existing obligation.

a. Metered Services

PSE will inspect and identify above ground service piping for conditions that have a potential for outside force damage due to unauthorized human activity.

1) PSE will conduct the initial inspections in conjunction with routine survey and patrols consistent with the existing priority as established in the Gas Operating Standards.

a. The following locations will be inspected within the next 12 months:

- i. Hard-to-Reach Locations (H2RL) sites
- ii. Business districts
- iii. High Occupancy Structures (HOS) including schools and hospitals

b. All other remaining locations will be inspected within 36 months

Comment [LWG8]: The population of these locations needs to be defined.

Comment [LWG9]: 12 months of a commission order accepting settlement?

Comment [LWG10]: The population needs to be defined.

Comment [LWG11]: 36 months of a commission order accepting settlement?

2) Results for the initial inspections and any subsequent routine inspections will be routed to Gas System Integrity and will be evaluated for follow up using processes and methods established by PSE’s DIMP. PSE will evaluate the necessity to relocate above ground services to below ground where there is a medium to high risk of potential damage and rupture to the service line by external forces.

3) PSE will consider the need to modify survey and patrols depending on findings.

Comment [LWG12]: What does this mean? Does this refer to frequency of inspections or type of inspections?

4) PSE will update its continuing surveillance program to incorporate the possibility of potential damage due to activities of unauthorized individuals.

Comment [LWG13]: More specificity is needed here. Identify the inspection cycle (i.e., annual, etc.). Again, the regulations require PSE to monitor its lines for such risks already.

5) PSE will report on the inspection results and mitigation plans in the Continuing Surveillance Annual Report beginning with an interim report during the second ½ before December of 2017, followed by the first annual report in 2018, there shall be no less than six months between the two reports. The annual report is filed in Docket PG-160924, and copies are provided to Commission Staff and Public Counsel. PSE will also prepare an annual report card to customers summarizing the inspection results and mitigation plans; Public Counsel will review this language, similar to review that is conducted of the SQL report card the 2018 edition. This annual report is shared with the Commission Staff.

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b. Unmetered Services

PSE will inspect and identify above ground service piping, including below ground service lines and meter riser above ground, that is unmetered (customer not yet connected, or previously served customer not currently using gas) for conditions that have a potential for outside force damage due to unauthorized human activity. For each unmetered location, PSE will identify whether it has installed a shut-off valve at the main.

- 1) A total population of 4,381 services that do not have a meter has been identified utilizing GIS. A records review is underway to confirm the population and it will be completed by April 1, 2017.
- 2) PSE will conduct initial inspections in conjunction with routine survey and patrols consistent with the existing priority as established in the Gas Operating Standards.
 - a. The following locations will be inspected within the next 12 months:
 - i. Hard-to-Reach Locations (H2RL) sites
 - ii. Business districts
 - iii. High Occupancy Structures (HOS) including schools and hospitals
 - b. All other remaining locations will be inspected within 36 months
- 3) Results for the initial inspections and any subsequent routine inspections will be routed to Gas System Integrity and will be evaluated for follow up using and methods established by PSE's DIMP. PSE will evaluate the necessity to relocate above ground services to below ground where there is a medium to high risk of potential damage and rupture to the service line by external forces.
- 4) PSE will consider the need to modify survey and patrols depending on findings.
- 5) PSE will update its continuing surveillance program to incorporate the possibility of potential damage due to activities of unauthorized individuals.
- 6) PSE will report on the field verification results and mitigation plans in the Continuing Surveillance Annual Report beginning with the 2018 edition. This annual report is shared with the Commission Staff, an interim report during the second quarter before December of 2017, followed by the first annual report in 2018, there shall be no less than six months between the two reports. The reports will be filed in Docket PG-160924, and copies are provided to Commission Staff and Public Counsel. PSE will also prepare an annual report card to customers summarizing the inspection results and mitigation plans; Public Counsel will review this language, similar to review that is conducted of the SQI report card.

Comment [LWG14]: 12 months of a commission order accepting settlement?

Comment [LWG15]: 36 months of a commission order accepting settlement?

Comment [LWG16]: What does this mean? Does this refer to frequency of inspections or type of inspections?

Comment [LWG17]: More specificity is needed here. Identify the inspection cycle (i.e., annual, etc.). Again, the regulations require PSE to monitor its lines for such risks already.

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iv. Abandoned Main Inspections

Identify and inspect all inactive mains to ensure they were properly disconnected and gas was purged from the line. Perform the inspection and any remediation within 24 months from an order approving the settlement agreement.