

UTC Incident Investigation Form

Notification ID:	3706	Investigation ID:	8204
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Inspector Name:	Dennis Ritter
Date Report Submitted to Chief Engineer:	August 17, 2020
Date Report Reviewed & Approved by Chief Engineer:	Joe Subsits August 17, 2020

Operator:	Puget Sound Energy
District/Unit:	Pierce
Location:	210 S Meridian St, Puyallup WA
Incident Date:	June 30, 2020

Description:

At approximately 1:55 on June 30, 2020, a contractor, SEFNCO, was directionally drilling west on Pioneer Ave in Puyallup WA when they hit a 4-inch PE gas main. The line was ruptured and gas began escaping. Locates were called in on June 23, 2020, Ticket No. 20251307. The locate ticket accurately depicts the location of the excavation and the white marks on site, clearly show the locate boundary and drill path. However, PSE's locate contractor, ELM, did mark the location of PSE assets at the intersection of W Pioneer and Meridian or along the drill path on W Pioneer. As noted on site, there were no conflicting PSE locate marks within the construction limits at the time of the incident--the locate contractor failed to locate PSE assets within the white locate boundary. The contractor believing there were no conflicts began drilling and hit the 4-inch PE main. The locate ticket requires a positive response and it stated "Clear, No Utility Owned Facility in Excavation Area."

The operator, PSE, responded and arrived on site at approximately 2:40. The location of the incident was in the downtown area of Puyallup at the intersection of W Pioneer and S Meridian St. Pierce County Fire responded as well as Puyallup Police and set up a hot zone perimeter approximately one-block around the leak. As it was in the early morning, none of the local businesses were open and the scene was fairly deserted. The damage occurred on the 4-inch main just south of a two-way connection to another 2-inch main running perpendicular. Valves on the 2-inch were buried and had to be excavated to operate. PSE decided to move out of the proximity to the leak and squeeze the 2-inch in other locations. All told, 4 valves on the 2-inch lines and 1 valve on the 4-inch were closed. Additionally, the 2-inch near the leak was squeezed in two locations and the 4-inch had to be squeezed in one location due to a non-operable valve (broken valve adapter). At this location the 4-inch was steel not PE, requiring a steel squeeze.

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PSE achieved shutdown of the escaping gas at 11:10 on June 30, 2020. The final repair was completed on July 1, 2020 at approximately 02:00; the system was re-pressurized and the customer relights began.

Facts/Chronology of Events:

June 23 2020

12:29-SEFNCO calls in for locate, assigned Ticket 20251307

June 24, 2020

Note-no time given-ELM, locate contractor for PSE, responds to ticket 20251307 and indicates "clear, no utility owned facility in excavation area

June 29, 2020

Approximately 22:00-SEFNCO begins drilling west on Pioneer Way towards S Meridian

June 30, 2020

Approximately 1:55-SEFNCO drills into the 4" gas main at the intersection of W Pioneer and S Meridian

Approximately 1:55-SEFNCO calls 911 reporting the incident

2:00-Central Pierce Fire and Rescue arrive on scene and establish 1 block exclusion zone

2:05-PSE receives notice of dig-in

2:40 PSE GFR arrives on scene and calls for additional response resources. Increases exclusion zone to 500 ft

6:40 PSE notifies WUTC of incident

7:40 WUTC investigator arrives on site

8:45 Additional WUTC investigator arrives on site

11:10 PSE achieves shut down of escaping gas

14:52-Last Central Pierce FD unit leaves scene

July 1, 2020

2:10 PSE completes final repairs of damaged lines

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2:10 PSE begins relights of gas customers (47 total)

Causes/Contributing Factors:

After arriving on scene and noting no PSE locate marks in the vicinity of the dig-in, the investigation focused on the locate conducted as part of ticket #20251307. SEFNCO, the contractor, called in the ticket well before work started and well within the statutory time frames (see chronology of events above). SEFNCO was directional drilling to install a cable for Comcast. PSE contracts with ELM to conduct their locating. Recent pipeline safety inspections showed over a 97% on time and accuracy trend for ELM. On this occasion, however, the locate was timely, but inaccurate. The ELM locator, did not locate PSE assets in the excavation zone and in fact indicated there were no PSE gas facilities in the area of excavation. PSE's internal investigation also found that ELM did not locate their assets within the excavation zone. The ELM locator was operator qualified to perform locates on March 28, 2020.

The root cause for this third party dig-in was an inadequate locate. The ELM locator did not locate PSE facilities within the excavation area marked in white which led SEFNCO to believe they were clear to drill.

Regulatory Analysis/ Violations:

49 CFR 192 614 Damage Prevention requires operators of buried pipelines to carry out damage prevention activities to prevent damage to their assets by excavators. PSE has a damage prevention program and is a party to the 811 Call Before You dig (Utilities Underground Location Center). PSE also contracts out its physical locating to a 3rd party, ELM. Recent inspections showed PSE is administrating their locate program in a reliable manner and achieving good results. They have achieved over 97% on time and accuracy record. It does not appear that the program is deficient in its damage prevention efforts.

However, PSE did not fulfill their obligation to locate their facilities per RCW 19.122. PSE contracts this service with ELM. It is not known why the ELM locator determined that PSE had no gas assets within the marked excavation area limits. ELM's locators have PSE's system maps which clearly show multiple lines within the excavation area marked by SEFNCO. The ELM employee was terminated and not available to be interviewed for this investigation. ELM's on-scene locator stated he looked over the ticket and PSE's system maps and does not know why the employee failed to locate PSE's asset within the defined excavation area.

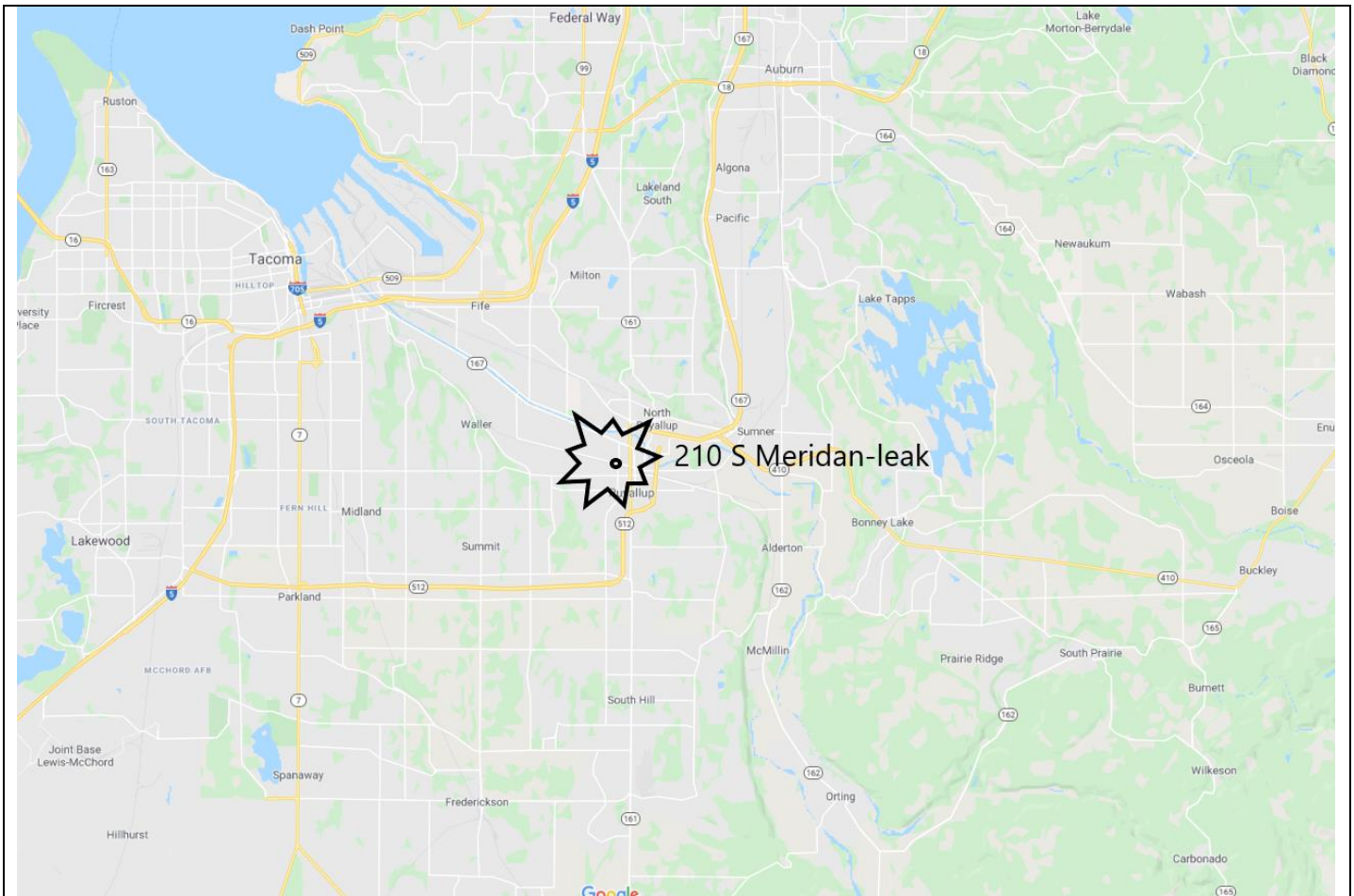
This investigation will be turned over to Pipeline Safety's Damage Prevention group for further analysis and any enforcement action.

Follow up/ Recommendations:

There is not a clear follow up task to assign PSE. It is not known why the ELM employee missed marking PSE assets on this ticket. PSE tracks and trends their locator contracted services and has excellent data. There does not appear to be a trend or a particular issue which can point to a specific course of compliance for this incident.

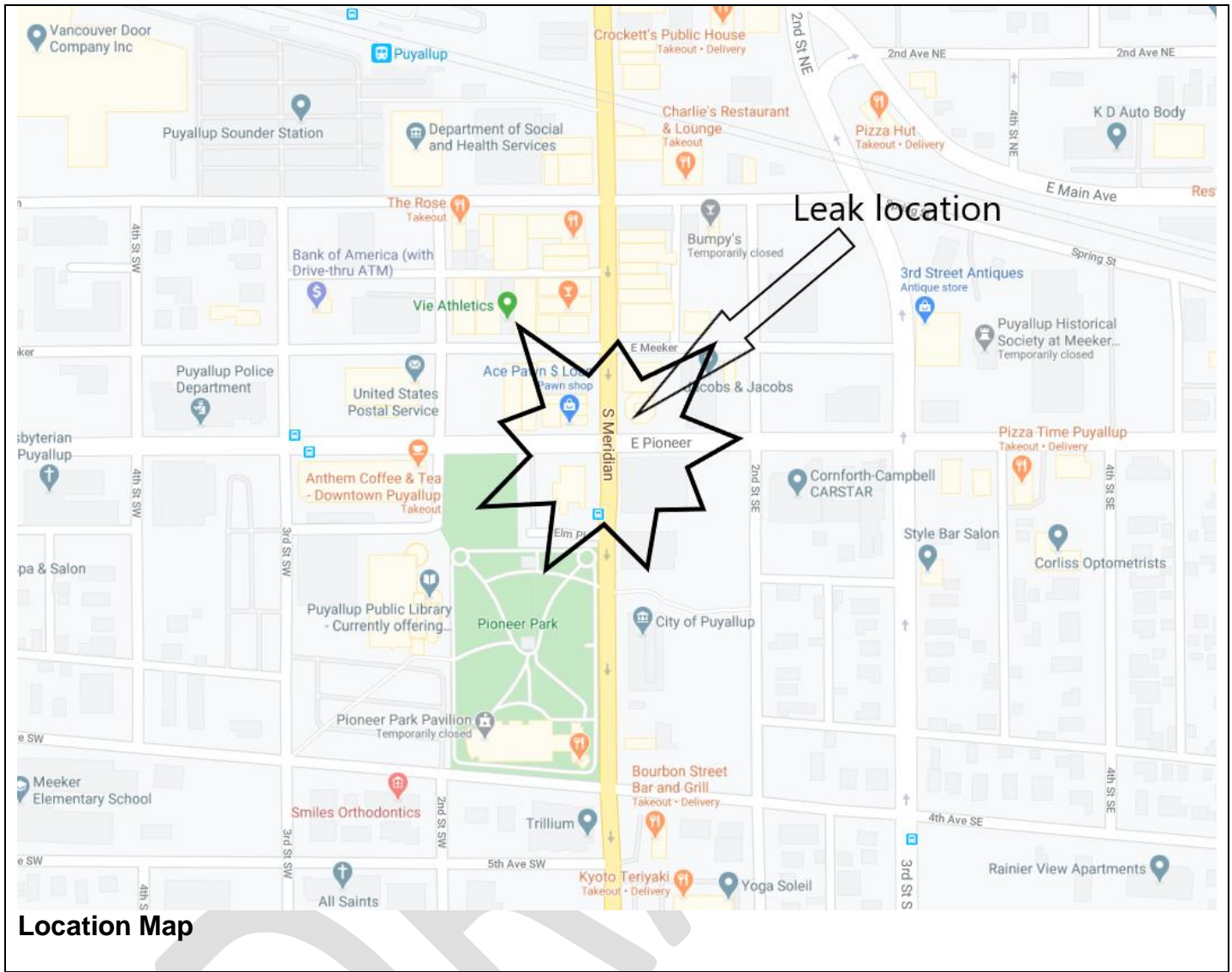
Pictures and Maps:

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Vicinity Map

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Picture Log



3748-looking SW at drill rig location on E Pioneer drilling west

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1282-looking SE no PSE locates in bore path note drill rig to the left



1343-looking S no PSE locates in bore path-cone with arrow is leak location

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1345-looking W at bore path no PSE locates- SEFNCO marked drill path with white dots



1346-looking W at bore path no PSE locates-SEFNCO white locate paint

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1347-looking W at bore path no PSE locates- SEFNCO white locate paint



1351-looking S in US Bank Parking lot-NO PSEG marking by ELM locator, SEFNCO white locate paint

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1424 looking SW, locates after incident show PSE assets-orange cone is leak location