

CALIFORNIA PUBLIC UTILITIES COMMISSION
Safety and Enforcement Division
Gas Safety and Reliability Branch
Whistle-blower Investigation –
PG&E Cross Bore Program
CONFIDENTIAL

Final Report

Report Date: March 1, 2016

Whistle-blower Complaint Number: GW2015-01

Utility Involved: Pacific Gas & Electric Company (PG&E)

Location(s) associated with the Whistle-blower Complaint:

Specific locations associated with the allegations are not known, but the cross bore inspection program covers cities throughout PG&E's service territory where pipeline replacement projects have taken place. The potential for cross bores exists in [?].

Summary of Whistle-blower Complaint:

The whistle-blower complaint was sent to US Representative Jackie Speier's office, and subsequently forwarded to the Gas Safety and Reliability Branch (GSRB) on July 11, 2014. The complaint includes a series of emails that express concern about numerous issues related to PG&E's cross bore program. Some of the issues discussed in the emails are beyond the scope of the CPUC's regulatory authority, such as wage concerns. There are, however, other issues that are within the scope of the regulatory authority of the CPUC's Safety and Enforcement Division (SED), and that do present a concern. Those issues are:

1. Some emails allege a lack of Operator Qualification (OO) for individuals performing gas pipeline locating for so called "proximity clearances."
2. Crews at [REDACTED]: *"have been caught shooting erroneous GPS points corresponding with inspection. Shooting points without knowledge of camera traverse..."*¹
3. Crews at [REDACTED]: *"have been instructed to falsify video if complete inspection was unattainable..."*

¹ When underground video inspections of the sewer lines are conducted, surface marks are made so that GPS coordinates can subsequently be recorded. If there are no above ground marks, then any GPS coordinates taken would be guess work based on other above ground indications.

Utility Facilities Involved: The facilities include PG&E gas mains and laterals.

Witnesses/Person(s) Involved:

1. [REDACTED] (Witness #1), [REDACTED]
2. [REDACTED] (Witness #2), [REDACTED]
3. [REDACTED] (Witness #3), [REDACTED]
4. [REDACTED] (Witness #4), [REDACTED]
5. [REDACTED] (Witness #5), [REDACTED]
6. [REDACTED] (Witness #6), [REDACTED]
7. [REDACTED] (Witness #7), [REDACTED]
8. [REDACTED] (Witness #8), [REDACTED]
9. [REDACTED] (Witness #9), [REDACTED]
10. [REDACTED] (Witness #10), [REDACTED]
11. [REDACTED] (Witness #11), [REDACTED]
12. Paul Penney, CPUC, SED investigator.

Evidence:

1. Letter from Jackie Speier with email attachments from a whistle-blower
2. PG&E, Data Request Response #1, Dated: 4-2-15
3. PG&E, Data Request Response #2, Dated: 4-9-15
4. PG&E, Data Request Response #3, Dated: 5-8-15
5. Interview #1, Interview Date: 9-3-14, Witnesses #1 and #2
6. Interview #2, Interview Date: 1-28-15, Witnesses #1 and #2
7. Interview #3, Interview Date: 2-27-15, Witness #3
8. Interview #4, Interview Date: 3-16-15, Witness #4
9. Interview #5, Interview Date: 3-26-15, Witnesses #5, #6, #7 and #8
10. Interview #6, Interview Date: 4-7-15, Witness #9
11. Interview #7, Interview Date: 4-17-15, Witness #10
12. Interview #8, Interview Date: 4-21-15, Witnesses #1 and #2

Background Information:

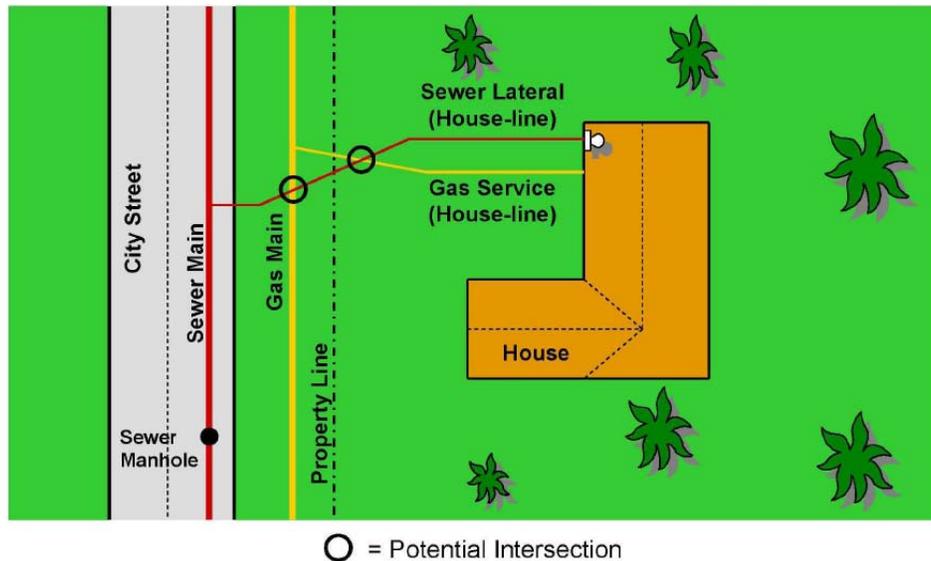
Gas cross bores happen when “trenchless technology” is used to install gas mains and services. This construction technique involves drilling through the ground horizontally to install mains and services. It can result in the drills piercing and going through sewer lines and any other conflicting underground facilities such as storm drains (see the figure below²). When this happens, mechanical clearing equipment used to unclog a sewer or storm drain can damage and cause leaks on the gas pipelines, potentially resulting in a hazard to life and property³.

² From a Powerpoint presentation entitled “Mitigating the Risk of Cross-Bores,” Paul Armstrong, Gas Technology Institute (GTI), October 4, 2012

³ Trenchless boring technology is also used to install underground electric lines.

PG&E initiated a cross-bore inspection program in 2011 to find conflicts with other underground facilities and remediate those conflicts. PG&E has estimated the scope of the program, as solid information and records do not appear to be available. PG&E does not know exactly when PG&E started to use trenchless technology, but based on conversations with long term employees and equipment vendors, PG&E estimates that it started using horizontal directional drilling and earth piercing tools in the late 1980's. PG&E estimates there are 500,000 services where the potential for cross bores exist. This number is based on the Gas Pipeline Replacement Program (GPRP), copper service replacement program, and other pipeline replacement programs and jobs. Assuming 25,000 to 50,000 inspections per year, it will take approximately 10 to 20 years to complete inspection of all 500,000 services and associated mains.

PG&E initiated the cross bore program in response to the Distribution Integrity Management Program (DIMP) rule, which was codified into 49 CFR, Part 192, in 2011. The DIMP rule imposes certain requirements on operators related to risk management of gas distribution facilities. These requirements include identifying threats to pipeline integrity, evaluating and ranking risk, and identifying and implementing measures to address risk, etc. The cross-bore inspection program is an example of a measure to address risk.



The process of the cross bore inspection program includes doing video inspections of all sewer mains and services where PG&E believes the potential for cross bores exist. Service inspections (a.k.a., laterals) are visual inspections that go from the tap point on the main to the wall of the home or business. The inspections can be accomplished in a number of ways, depending on whether there are any blockages on a lateral. If necessary, a camera can push in from the home either at a sewer clean out (if there are any), a sewer vent line or at a toilet in the home.

If a video inspection cannot be done along the entire lateral, then a “proximity clearance” can be done. This is a non-visual inspection method that is intended to ensure that a lateral does not have a cross bore. It involves locating the sewer main and lateral, and then locating the gas line using pipe locating equipment to rule out the possibility of a cross bore existing. It also includes looking for above ground visual indications of clearance between a sewer line and a gas line (i.e., a meter set at a home). As a last resort, a cleanout can be installed on the lateral sewer line to complete a visual inspection.

With very few exceptions, cities in California have separate storm drain and sewer systems, and prior to November 2, 2014, PG&E did not do any storm drain inspections. This means PG&E would not have found any conflicts between gas lines and storm drains prior to that date, which is when PG&E added a contract requirement to include the inspection of storm drains.

Observations and Findings:

Allegation #1 –Lack of Operator Qualification:

Some emails allege a lack of Operator Qualification (OQ) for individuals performing gas pipeline locating using “proximity clearances.”

Findings:

An individual performing a “covered task” must be qualified to do that task. Pipeline locating done for proximately clearances is a covered task, so an individual performing it must be qualified.

A “covered task” is defined in Part 192.801 as a task that meets a four part test. A covered task:

1. Is performed on a pipeline facility;
2. Is an operations or maintenance task;
3. Is performed as a requirement of this part; and
4. Affects the operation or integrity of the pipe.

The proximity clearances are a covered task based on this test.

With regard to part 1, [REDACTED] staff must hook onto the pipe with pipe locating equipment to identify the location of the gas mains and laterals. With regard to part 2, it can be identified as an operations and/or maintenance task, because the cross bore inspections are intended as damage prevention and maintenance (i.e., rerouting of the gas pipe) when a cross bore is discovered. With regard to part 3, the cross bore program is performed as a requirement of the DIMP rule. It is covered in Part 192.1007(d); this requires operators to identify and implement measures to address risk, referred to in PG&E’s DIMP

program as Programs and Activities to Address Risk (PAARs). This is also covered under 192.613(a), which requires an operator to have a procedure for continuing surveillance to determine and take appropriate action with regard to “unusual operating and maintenance conditions.” With regard to part 4, the proximity clearances clearly affect the integrity of the pipeline. Therefore, the pipe locating that is done for proximity clearances is covered under the four part test. This means that the individual performing the proximity clearance must be qualified to do the task.

Several [REDACTED] employees were interviewed about their qualifications and doing proximity clearances. Two of the interviewed field inspectors (Witnesses #3 and #9) thought the locating training provided by [REDACTED] was inadequate. Another field inspector (Witness #4) stated that he used proximity clearances, but did so only when he had above ground visual indications to confirm there was adequate clearance between the sewer lines and gas lines. During an interview with [REDACTED] management, they stated that they did train the inspectors before they went out. In some cases, pipe locating personnel working for [REDACTED], who normally work at Southwest gas doing pipe locating, were used to do pipe locating.

During interview #8 on 4-21-15, while not conceding that proximity clearances were a covered task, a PG&E representative (Witness #2) stated that they would train [REDACTED] personnel to locate the pipe at PG&E’s training center. In addition, the relatively small number of services cleared with proximity clearances were not being accepted by PG&E as being cleared.

To summarize, PG&E is required to ensure that individuals performing covered tasks are qualified to do so per the requirements of 192.805(a) and (b), which states:

“Each operator shall have and follow a written qualification program. The program shall include provisions to:

- (a) Identify covered tasks;*
- (b) Ensure through evaluation that individuals performing covered tasks are qualified...”*

PG&E did not identify the covered task, and did not ensure through evaluation that the individuals performing the “proximity clearances” were qualified through a method acceptable to PG&E.⁴ Therefore, PG&E is in violation of 192.805(a) and (b).

⁴ Acceptable methods of evaluation are defined in 192.803. PG&E’s evaluation method must also meet the requirements in this section.

As noted above, PG&E has not accepted these clearances as being completed. Therefore, they must be re-inspected with individuals properly qualified to do "proximity clearances" or be visually inspected.

Sources of Information:

- Data Request #1, #2 and #3
- Interview #3, #5, and #8

Allegation #2 – [REDACTED] crews shooting erroneous GPS points:
Crews at [REDACTED] *"have been caught shooting erroneous GPS points corresponding with inspection. Shooting points without knowledge of camera traverse..."*

Findings:

During interview #6 on 4-7-15, a former [REDACTED] inspector confirmed that he observed [REDACTED] employees shooting erroneous GPS points. As he explained, the inspection companies would inspect the mains and laterals for cross bores, leaving markings on the ground associated with critical features. The company would go back to the surface markings later on and identify the GPS points at these critical features on the sewer system such as tap points off of the main, locations of P-traps and the location of where the sewer pipe crossed the wall of the residence. However, [REDACTED] employees were taking GPS points without having any above ground markings.

During interview #5 on 3-26-15, [REDACTED] management indicated that [REDACTED] had been discontinued as a subcontractor because [REDACTED] had to continually have them re-do inspections. It was not possible to confirm this allegation, and it would appear that issues with [REDACTED] are not ongoing, since [REDACTED] is no longer a subcontractor working on the cross-bore program.

Nonetheless, PG&E must take steps to ensure that future subcontractor work is conducted per PG&E's scope of work contract, is conducted to PG&E's standards, contains accurate information and is free from fraud.

Sources of Information:

- Interviews #5 and #6

Allegation #3 –Falsifying Video Inspections:

Crews at [REDACTED] *"have been instructed to falsify video if complete inspection was unattainable..."*

Findings:

Two of the three individuals referenced in this allegation did not confirm that [REDACTED] had in fact falsified video. During interview #3 on 2-27-15, the witness did not confirm the allegation, but did state that he thought the allegation was made because one of the referenced individuals in this allegation (Witness #11) had been fired by [REDACTED] and may have made the allegation after being fired. During interview #7 on 4-17-15, witness #10, who was also referenced in this allegation, denied the allegation. This individual worked for [REDACTED] at one time, but no longer works there. Therefore, there is insufficient evidence to confirm this allegation.

Sources of Information:

- Interviews #3 and #7

Conclusion:

PG&E violated 192.805(a) and (b) because it failed to ensure that individuals performing pipeline locating for proximity clearances, which is a covered task, were qualified to do so.

There is insufficient evidence to confirm the allegation that PG&E contractors or subcontractors improperly shot erroneous GPS points or falsified video inspections. Accordingly, there is an inadequate basis to find any violations by PG&E regarding these allegations.

END OF REPORT