

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



February 13, 2009

Mr. Glen Carter, Director
Gas Engineering
Pacific Gas & Electric Company
California Public Utilities Commission
375 N. Widget Lane
Walnut Creek, CA 94598

Re: Issues from PG&E-- USRB Meeting of October 30, 2008

Dear Mr. Carter:

Thank you for your December 30, 2008 letter which provided follow-up information on six items discussed during our meeting of October 30, 2008. Based on our review of the information you provided, we are concerned about the apparent deficiencies within the Pacific Gas & Electric (PG&E) Gas Distribution System (System). These include issues related to PG&E's historical operations and, in particular, its efforts to train its field personnel on its procedures, and to confirm that personnel follow these procedures in the course of their work activities. These deficiencies impact public safety and are, in addition, violations of California Public Utilities Commission (CPUC) General Order 112-E (GO-112E).

It is apparent to us that the failure of PG&E to provide adequate procedures, or the failure of PG&E personnel to follow established procedures, has resulted in safety risks that would most likely not have been created had the safety regulations (GO 112-E and 49 CFR, Part 192) been complied with. Although PG&E has implemented programs to address these safety risks going forward, we see no reason why PG&E should not have been able to address these risks during the course of normal construction, operations, and maintenance activities occurring in past years. We are also concerned about the length of time PG&E intends to allow to complete these programs, and the reduced level of safety existing until PG&E's programs are completed.

1. Gas Leak Re-Survey Project:

During our October 30th meeting, PG&E updated the Utilities Safety and Reliability Branch (USRB) on its plans to leak re-survey those areas originally leak surveyed in 2006 and 2007 in all Divisions. The leak re-surveys resulted from a PG&E consultants finding that statistically valid sampling of five PG&E Divisions showed leak surveys conducted by PG&E, as far back as year 2004, were not effective. This finding clearly indicated that all PG&E divisions required re-surveying to find potentially dangerous leaks that had been missed on earlier surveys and to comply with PG&E standards and procedures which are established to meet federal and state regulations.

PG&E began the process of re-surveying all divisions in October 2008. During a meeting on September 17, 2008, PG&E had detailed plans to complete re-surveys by the end of 2010. Based on the findings of the statistical survey performed by PG&E, the USRB expressed concerns about leaks that might not have been found during previous leak surveys and the length of time PG&E planned to take in finding them. The USRB questioned whether PG&E had exhausted all available resources, internal and external to the company, that could aid in completing the leak re-surveys sooner than the end of 2010. The USRB urged PG&E to further

investigate available external resources to confirm that re-surveys could not be completed by the end of year 2009. At the behest of the USRB, PG&E shortened the resurvey time to October 22, 2010 a reduction of about 10 weeks from previous estimates.

PG&E has stated that, currently, an insufficient number of qualified and experienced contractors are available to complete the resurvey sooner than October 22, 2010. In his November 25, 2008 e-mail, PG&E Bob Fassett indicated that major national contractors have existing commitments starting in March and that while PG&E has some contract surveyors available during the winter, additional experienced surveyors are not available after February unless PG&E were to allow the contractor to hire new employees and train them from "scratch." PG&E also indicated while the company is training additional experienced gas or field service employees from within PG&E to perform leak re-survey work, the company is not willing to rely on new contract employees lacking previous gas experience because it does not believe they could be trained to conduct surveys with the required level of effectiveness in time.

We understand that contractors have previous commitments and a limited number of qualified, experienced, resources available at any given time. In addition, training and qualifying new employees can take time for PG&E as well as contractors and, even after being qualified and beginning work, it can take many years for these resources to gain full experience for the job. Therefore, PG&E should continue looking for opportunities that make qualified leak surveyors, experienced or newly qualified, available to PG&E.

We are aware that PG&E is slightly ahead of its self imposed schedule for completing leak re-surveys, and that PG&E is currently surveying more meters per hour than earlier projected. However, we are also aware of the fact that much of PG&E's territory remains to be re-surveyed and, based on the rate of 86% combined Grade 1 and 2+ leaks found by PG&E for the re-surveys conducted since October 13, 2008, there is a potential that many of the leaks remaining are very serious in nature. Because of this, we strongly urge PG&E to continue researching all avenues, and seeking all available resources, to allow the company to complete its leak re-surveys sooner.

Deficiencies with PG&E's leak survey procedures, and issues related to PG&E's operator qualification of its surveyors, are currently under review by the USRB.

2. Peninsula Division MAOP Issue:

During a 2008 audit of Peninsula Division (Peninsula), USRB discovered an instance in which two independent distribution systems, with different Maximum Allowable Operating Pressures (MAOPs), had been interconnected. In a September 29, 2008 email, PG&E informed us of another system in Peninsula, the 30 psig Bunker Hill System, in which the same situation occurred. In both cases, the combined systems were apparently never operated above the lower of the two MAOPs of the independent systems. Nonetheless, the failure of Peninsula to formally uprate the lower MAOP of the two systems prior to tying them in to systems with higher MAOP created the potential for systems to be operated above their established MAOPs.

In addition to the problems with improper MAOP noted in Peninsula, your December 30, 2008 letter also provided us information we had requested related to any other instances, similar to Peninsula, in which PG&E personnel connected two systems of differing MAOPs into a single system without uprating the lower MAOP system to a higher MAOP as required by 49 CFR, Part 192.553(c). PG&E provided details on three additional instances where systems of different MAOPs were inadvertently, or deliberately interconnected without proper uprating procedures having been utilized. These included:

- A 2006 event in which Fresno Division inadvertently connected a 50-psig system with a 60-psig system. The 50-psig system was formally uprated two days after discovery of the problem;

- A 2006 event in which Sacramento Division connected a 35-psig system with a 50-psig system. The 35-psig system was formally uprated when the problem was identified sometime later in 2006 via leak survey with no leaks detected;
- A 2007 event in which Sacramento Division combined a 50-psig system with a 60-psig system. A valve, intended to be normally in a closed position, was installed and left in an open position during a main line extension. The incorrect position of the valve was discovered days later and the valve closed. However, while the valve was open, the 50-psig MAOP system operated at 60-psig.

Failure to establish and follow written procedures to properly uprate the MAOP of a system creates a safety risk. This is because the increased pressure can initiate leaks in the system which can fail to be corrected in a timely manner. Proper procedures include increasing pressure in increments and leak surveying the system following each incremental pressure increase. Due to its having performed pressure uprates in the three instances noted above, as well as the two incidents noted in the Peninsula Division without written procedures that ensured that the uprates were performed in compliance with 49 CFR, Part 192, Subpart K, PG&E violated 49 CFR, Part 192.553(c).

3. Isolated Service Project:

As noted by PG&E within its December 30, 2008 letter, the Natural Gas Pipeline Safety Act of 1968 (the 1968 Gas Act) required operators to install CP on all new buried or submerged steel pipelines installed after July 31, 1971. 49 CFR, Section 192.457(b) required that all steel distribution lines without CP, existing before August 1, 1971, be identified and monitored. CP was required to be installed on these lines in areas where the required monitoring, or other operations, revealed active corrosion.

At the October 30th meeting, PG&E provided details on a project underway to find steel service lines within its system that are isolated from cathodic protection (CP). Many of the isolated service lines resulted from plastic service installations which did not tie steel risers into the existing CP system for the main, or provide an anode to protect the short riser section. PG&E stated that assumptions had been made that CP was being provided on these installations. According to PG&E, it was not until the late 1990's that it began to see evidence indicating that a "significant number of isolated risers were created when steel services were replaced with plastic services." PG&E also stated that a "...significant number of these risers were not initially identified and added to the cathodic protection isolated service program" as was required to be done by the 1968 Gas Act. PG&E stated that field checks it performed in late 1999 and 2000 confirmed that "a subset of services installed during this period were isolated."

PG&E's Gas Standard O-16, Corrosion Control, has long required corrosion mechanics to review construction jobs involving the installation or deactivation of buried gas carrying steel facilities, including service lines to confirm that CP levels of the affected steel facilities are checked. However, USBR has informed PG&E in previous audit reports, and during the October 30th meeting, that it had reviewed records of construction projects which had been closed without the required review having been performed by the appropriate division corrosion mechanic(s).

Although field checks in late 1999 and 2000 confirmed that PG&E had problems with isolated services, it was not until 2005 that the company initiated a formal program to address this problem. According to statistics through August 2008 for this program, PG&E identified 720,826 suspect sites, which it reduced to 640,826 after removing 80,000 copper services under another program to replace those services. PG&E further reduced the 640,826 suspect sites down to 309,359 by applying a methodology to identify sites actually requiring field verification. The methodology included all services installed before 1975 and a sampling of services, based on 95% confidence level, of services installed from 1976 to 1980. Details as to how this sampling determined the number of field locations has not been provided by PG&E.

From among the 309,359 sites requiring a field check, PG&E records indicate that 108,360 (35%) sites have been checked. From among the 108,360 checked, PG&E has confirmed that 7,642 locations were isolated and required corrections; however, only 6,396 (84%) have been corrected. The remaining 1,246 (16%) of the locations which have not been corrected are of concern to us because they are located in the densely populated communities of East Bay, San Jose, and San Francisco. It is also of concern, considering that approximately 70% of the time PG&E had allotted to this program has passed while PG&E has only field inspected 35% of the suspect sites. It is further troubling that seven of PG&E's divisions have conducted no field checks at all. In fact, it appears that Fresno Division has not even reviewed its 10% Plats and yet, the division has reduced 39,118 suspect sites down to 20,746 actually requiring a site check (although none have been checked).

In PG&E divisions that have started field checks, data shows that field checks have found from 2.8% (DeAnza) to 15.5% (Peninsula), with an average of about 9.2%, of suspect sites to be isolated. This would mean that there may be as many as 18,500 (9.2% of 200,979) services in PG&E's system for which cathodic protection and/or monitoring is required by state and federal safety regulations that do not have it. We are also puzzled by the fact that many divisions (Kern & Los Padres, North Bay, Sacramento, North Valley and Stockton among them) have checked 27,900 services and yet the August statistics are blank under the column headed "Total number of suspect found." We are concerned about the amount of time it is taking PG&E to take remedial actions after becoming aware of deficiencies. Although requested by us, information related to dates for when conditions were found, and when remedial actions were taken, has not been provided by PG&E.

Failure to take remedial action to correct deficiencies in CP is a violation of state and federal gas pipeline safety standards. Work to correct CP deficiencies is not discretionary. Remedial action to correct CP deficiencies must be scheduled and conducted in a timely manner (generally within one monitoring cycle of becoming aware of the deficiency) and cannot be conducted as PG&E noted is being done in some divisions, when "...scheduling allows."

Although PG&E has procedures to prevent steel services from becoming isolated and for correcting deficiencies in cathodic protection found during monitoring, its failure to follow these procedures during its operations is in violation of 49 CFR Part 192.13(c). PG&E's failure to protect its isolated steel facilities, within one year of installation, or within one-year of a field check through which PG&E became aware of a location needing CP, is a violation 49 CFR, Section 192.465(d). The failure of PG&E to monitor its protected isolated services is a violation of 49 CFR, Section 192.465(a) and its failure to monitor its unprotected services, in order to determine areas of active corrosion, is a violation of 49 CFR, Section 192.465(e).

4. Meter Protection Program:

At the October 30th meeting, we also discussed USBR's findings of four unprotected gas risers in Daly City. Although these risers met PG&E's requirement for meter protection, USBR found that no protection had been installed. The results of PG&E's investigation of these locations confirmed the requirement for meter protection; however, the locations were found not to be included within the database for PG&E's Meter Protection Program (MPP). PG&E's investigation also found that the "...MPP lacks adequate mechanisms to continuously monitor changes in customer building and driveway configurations and both update and re-prioritize the work schedule."

According to PG&E's Gas Meter Protection Program 2007 Annual Progress Report dated April, 2008, "PG&E personnel add meter locations to the database as they are identified during the normal course of business. Since 1999, when PG&E began tracking additions to program scope, PG&E has added 6,480 new locations requiring corrective action to the database." This statement is not entirely correct. As indicated by PG&E within its December 30th letter, PG&E has not been routinely identifying locations in need of meter protection during meter reading activities which are a normal course of business. This is a violation of 49 CFR, Section 192.613(a) (continuing surveillance).

It appears that for the 6,480 locations that were added to the MPP since its inception, PG&E has not properly tracked how these locations were identified, what hazard at the location initiated the inclusion of the location, or by whom the locations were identified. As a result, it appears that PG&E lacks details on the added meter locations, although these locations clearly increased program funding requirements and the overall duration of the program.

We are concerned about the apparent low priority assigned by PG&E management to the MPP and the lack of any quality control of the program. We are equally concerned about the absence of any risk assessment or prioritization model and procedures to prioritize MPP work. PG&E stated that "...recommended mitigation for each location is entered into the database (e.g. "4-inch post needed"). Then, as part of this process, the observer judges whether the site represents a hazard. If so, this site is specially identified to the gas superintendent who has the discretion to assign the work immediately or set the appropriate schedule."

This does not make sense because the fact the site has been added to the program means that it represents a hazard by definition. There is no procedure given to *specially* identify a problem for the superintendent. How is *discretion* to be applied methodically and in a manner that assures that safety is never compromised for expediency.

In its December 30th letter, PG&E stated that a risk assessment or prioritization model for the MPP will be included within its developing Distribution Integrity Management program. We will expect PG&E to carry through on this item. PG&E also stated that beginning in 2009, it intends to reassess all meter locations to ensure they meet the requirements of its Gas Standard & Specification J-95. We believe that, at least since the MPP was implemented, this reassessment should not have been necessary had PG&E properly managed the MPP and trained its personnel to continuously evaluate locations in need of meter protection during routine work activities (i.e., meter reading) as PG&E has stated it intends to do, going forward, through routine leak surveys.

In the future, we expect that routine leak surveys will not be PG&E's sole means for identifying meter protection risks. Since leak surveys are conducted on a minimum three year frequency, PG&E should train other representatives that are routinely in the field for other activities (i.e. meter readers, service planning representatives, gas service representatives, gas T&R Mechanics, Gas Engineers, etc.) to identify and report such risks. We are certain that PG&E would agree that the sooner a risk is identified, the sooner it can be corrected.

PG&E's failure to properly identify hazardous meter locations, and install meter protection as required by its Gas Standard & Specification J-95 is violation of 192.13(c). In addition, PG&E's failure to take steps to correct the hazardous conditions is a violation of 49 CFR, Part 192.353(a).

5. Electronic availability of Standards and Procedures:

We appreciate all your efforts, as detailed within the December 30th letter, to provide USRB staff on-line access to PG&E gas standards and guidelines. We continue to believe that such access will improve efficiency of both organizations, as well as reduce costs. We look forward to the new gas technical library website being operational early this year.

6. Corrosion Mechanic Review of Jobs:

Your December 30th letter provided details on a process PG&E is developing to ensure that jobs involving steel pipelines are reviewed by corrosion mechanics to ensure that CP is applied to new steel installations or that the job does not adversely affect existing facilities. Such a review can also help ensure that any isolated steel mains or services have CP applied or are otherwise monitored in compliance with GO 112-E and 49

CFR, Part 192. PG&E Gas Standard O-16 has always required such reviews; however USRB Staff noted they have found instances (most recently during the Fresno Division audit conducted in 2008) in which this requirement was not followed.

In your letter, you stated that PG&E had been working to enhance the effectiveness of the current process and, we expect, to ensure the standard is followed. We have reviewed the Gas Planning/Engineering Review Job Aid, included with your February 3, 2009 letter, and believe its use can help PG&E avoid future non-compliances related to isolated steel mains or services.

If you have any questions, please contact me at (415) 703-2407.

Sincerely,

Original was signed and mailed on February 13, 2009

Sunil Shori
Utilities Engineer
CPSD/USRB

C: Julian Ajello