

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
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August 29, 2012

Ms. Jane Yura, Vice President  
Pacific Gas and Electric Company  
Gas Operations – Standards and Policies  
P.O. Box 770000, Mailcode N15F  
San Francisco, CA 94177

GA2012-01

Dear Ms. Yura:

The staff of the Consumer Protection and Safety Division (CPSD), Gas Safety and Reliability Branch (GSRB) conducted a General Order 112-E audit of Pacific Gas and Electric Company's (PG&E) Operations, Maintenance, and Emergency Plans (OM&E) from February 14-17, 2012. Also in attendance were a representative from the Pipeline and Hazardous Materials Safety Administration (PHMSA) and staff from CPSD's Risk Assessment Unit. The audit consisted of a review of PG&E's gas distribution and transmission standards, work procedures, bulletins, job aids, etc. which constitutes PG&E's OM&E Plan. No field inspection was performed as a part of this audit.

During the audit, PG&E presented its Enterprise Tracking Compliance System (ECTS) which it uses to monitor and track reviews of the various standards included in PG&E's OM&E Plan. The ECTS lists, at a minimum, all documents subject to the annual OM&E review, PG&E staff responsible for the review of the documents, and the review dates. PG&E's use of ECTS appears to be in its early phase and CPSD looks forward to seeing it employed with full functionality. PG&E states that its ECTS is capable of tracking document update action plans as well as highlighting priority for revisions, which are important aspects of keeping the standards and procedures up-to-date.

Attached is a Summary of Inspection Findings which contains violations identified by CPSD staff and areas of concerns identified during the audit.

Please provide a written response indicating the measures taken by PG&E to address the violations and areas of concern within 30 days from the date of this letter.

Pursuant to Commission Resolution ALJ-274, CPSD staff has the authority to issue citations for each violation found during the audit. CPSD will notify PG&E of the enforcement action it plans to take after it reviews PG&E's audit response.

If you have any questions, please contact Aimee Cauguiran at (415) 703-2055 or by email at [aimee.cauguiran@cpuc.ca.gov](mailto:aimee.cauguiran@cpuc.ca.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael Robertson".

Michael Robertson, Program Manager  
Gas Safety and Reliability Branch  
CPSD/CPUC

Enclosure: Summary of Inspection Findings

Cc: Bill Gibson, PG&E  
Larry Berg, PG&E  
Brian Leary, PG&E  
Cynthia Lee, PHMSA Western Region

## Summary of Inspection Findings

### Areas of Violations

1. 49 CFR §192.605 – Procedural manual for operations, maintenance, and emergencies.

*"Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. The manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least once each calendar year."*

- a) PG&E explained that its standards and procedures are identified as either maintenance and operations (M&O) or non-maintenance and operations (non-M&O). PG&E M&O documents are reviewed annually while non-M&O documents, described as mostly design and construction standards, are reviewed once every 5 years. PG&E's current four subject-matter volumes (Corrosion Control, Plastic, Damage Prevention, and Field Services) are also reviewed the same way, with M&O documents reviewed annually and non-M&O documents reviewed every five years. Document reviews are also tracked using ECTS.

In the 2010 OM&E audit, PG&E was cited by CPSD for not including Gas Standards and Specification (GS&S) documents in its annual review. As a result, PG&E reviewed its GS&S documents and included 36 GS&S documents in its annual OM&E reviews.

However, during the audit conducted from February 14-17, 2012, CPSD staff identified additional documents that should have been included in the annual reviews. As such, PG&E is in violation of §192.605 for failing to review OM&E documents once a year, not to exceed 15 months.

PG&E needs to continue reviewing its GS&S manual and the subject-matter volumes to identify documents that must be included in the annual reviews. The following are examples of documents not currently included in the annual reviews:

- Bulletin 304 – refers to Job Aid "Gas Construction and Maintenance – Demonstration of Compliance with 100 mV Shift Criteria Using a Coupon Test Station"
  - A-93.1 Plastic Gas Distribution System Construction and Maintenance – This document contains repair procedures which meet §192.605(b)(1).
- b) In 2010, PG&E was also cited for not including standards and work procedures for Gas Field Services (GFS) personnel in its scheduled annual reviews. In particular, PG&E was cited for not including WP6435-04 Procedure for Discontinuing Gas Service in its annual review.

PG&E responded stating that it had identified four standards and work procedures that meet the requirements of §192.605(b)(11):

- S6434 Gas Leak and Odor Response

- S6436 Gas and Electric Field Service and Dispatch and Scheduling Operating Practices
- S6437 Seismic Automatic Gas Service Shut-Off (Earthquake) Valve Devices and Earthquake Preparedness
- WP6434-01 Gas Leak and Odor Investigation

Furthermore, in 2010, PG&E stated that it was performing a review of all GFS documents as it prepared to release the Field Services manual in 2011. As a part of its extensive review, PG&E committed to identifying any field services documents that met the criteria of §192.605(b) and included them in the scheduled annual review. However, it does not appear that any documents and work procedures within the Field Services manual, except for TD-6436P-28 Gas Regulator Servicing and Pressure Determination and TD-6437S Seismic Automatic Gas Service Shut-Off (Earthquake) Valve Devices and Earthquake Preparedness, are included in the annual review as they are not reflected in the 2011 Annual Document Review spreadsheet provided to us during the audit.

The field services manual includes standards and work procedures to be followed by PG&E Gas Service Representatives (GSRs) as they respond to customer calls, encounter abnormal conditions while performing their tasks, and respond to emergencies. GSRs play an important role in PG&E's operations and emergency response. Therefore, many of the standards and work procedures that pertain to PG&E's GSR's tasks must be considered part of PG&E's OM&E and included in the annual reviews. This includes WP6435-04 Procedures for Discontinuing Gas Service which is a requirement under Subpart M §192.727(d).

- c) CPSD staff observed that not all bulletins are included in the annual review list. Bulletins that have not been converted into a new standard or procedure must be included in the annual review until they are formally adopted into the standards. Examples of bulletins that meet the requirements of §192.605, but were not included in the annual review are:

- Document 274 Rev 1 Leak Repair Option – Skinner Pipe Joint Clamps
- Document 304 Reading Coupon Test Stations
- Document 310 Replace District Regulator Station Maintenance Forms
- TD-A-34B-001 A-34 Test Requirements Revision
- TD-H-70B-001

PG&E must review its list of bulletins to ensure that all bulletins that have not been converted into a new or existing standard or procedures are included in the annual review. PG&E should also identify those that can be easily incorporated into an existing standard or procedures to avoid having active bulletins for a long period of time.

2. 49 CFR §192.614 Damage prevention program.

*“(a)...[E]ach operator of a buried pipeline shall carry out, in accordance with this section, a written program to prevent damage to that pipeline from excavation activities...”*

*“(c) The damage prevention program required by paragraph (a) of this section must, at a minimum:*

*(1) Include the identity, on a current basis, of persons who normally engage in excavation activities in the area in which the pipeline is located."*

CPSD staff found that PG&E's damage prevention program does not have a written procedure addressing how PG&E maintains a current list of excavators or those who normally engage in excavation activities. PG&E needs to describe how it identifies excavators and how it maintains a current list of excavators for its damage prevention program.

3. 49 CFR §192.14 Conversion of service subject to this part.

*"(a) A steel pipeline previously used in service not subject to this part qualifies for use under this part if the operator prepares and follows a written procedure to carry out the following requirements..."*

PG&E's gap analysis shows this portion of the code as "N/A". PG&E needs to clarify why this section of the code is not applicable. Review of documents from PG&E's Tariff Application Guide (TAG) requires PG&E personnel to obtain records of design, construction, operation and maintenance of the pipeline being considered for acquisition. This implies that PG&E could possibly consider conversion of steel pipeline into service.

If it is company policy not to convert steel pipeline not previously subject to code, then PG&E must clearly state so. Otherwise, PG&E needs to prepare and follow a written procedure as required by 49 CFR §192.14 to guide its personnel through the review, evaluation, test, and record-keeping requirements for conversion.

4. 49 CFR §192.605(e) and §192.613 Continuing Surveillance

*"(a) Each operator shall have a procedure for continuing surveillance of its facilities to determine and take appropriate action concerning changes in class location, failures, leakage history, corrosion, substantial changes in cathodic protection requirements, and other unusual operating and maintenance conditions."*

PG&E currently does not have a specific written procedure addressing Continuing Surveillance. PG&E has certain standards and work procedures such as patrolling, class location study, leak survey, cathodic protection monitoring, and cathodic protection area resurvey. These specific procedures describe PG&E's performance of the various operations and maintenance tasks, but it remains unclear how or whether the various tasks relate to PG&E's continuing surveillance efforts.

PG&E must clearly describe how it uses and coordinates the various operations and maintenance tasks in its continuing surveillance. PG&E's written procedure should describe how findings from failure investigations, leak surveys, cathodic protection monitoring, and other operating and maintenance tasks are gathered and analyzed as a part of its continuing surveillance. The written procedure must also describe the actions to take if changes are found as a result of its data gathering and analysis.

## Areas of Concern/Recommendations

### 1. Annual review of documents and bulletins

- a) PG&E's OM&E plan includes standards, work procedures, bulletins, and job aids, etc. PG&E explained that the various documents are reviewed separately and can be assigned a different compliance review due date.

CPSD staff recommends that all documents related to one OM&E area or subject (i.e. leak survey standard, leak survey work procedures, bulletins related to leak surveys, etc.) be reviewed concurrently to ensure that all documents associated with a gas utility standard are properly referenced and that necessary updates, such as those issued via a bulletin, are incorporated in a timely manner.

- b) PG&E's current list of bulletins identifies active bulletins issued since 1994. CPSD staff is concerned that having active bulletins for a long period of time can lead to confusion as other documents are updated and the bulletins are left as stand-alone documents. We understand bulletins are issued in some instances where it is important to immediately inform personnel of changes that impact their work and public safety. However, bulletins should be converted into a new standard or procedure or incorporated into the applicable existing gas utility standard, work procedure, or job aid. The annual review and update process should provide a good opportunity to create a new document or incorporate such bulletins.

### 2. Updating Documents

CPSD staff reviewed certain standard review plan records generated from PG&E's ECTS. We understand that not all documents with a standard review plan using ECTS would have an Update Plan generated via PG&E's ECTS. Some review plan records contain notes regarding update plans within the Comments section of the review plan, while others only identify changes that needed to be made on the standard without detailing an update plan. We also observed some documents identified as needing updates have target completion dates that are more than one year from the date of the document review.

Please explain how the various documents that have been identified for a change or update are prioritized and how the subject matter expert and/or technical team determine the target date of completion.

### 3. UO Standard S4411 Inspection of Underground Gas Holders

- a) CPSD staff found that UO Standard S4411 was reviewed on 4/29/2011; however, the document content appears to have not been updated since August 2000. The UO Standard S4411 primarily consists of the various forms used for the monthly, annual, and 10-year inspections and lacks written procedures on to how to perform the inspections. For instance, Exhibit A used during monthly inspections requires a check of the regulators for proper operations. However, the

document does not describe the specific steps PG&E personnel would take to perform this task. Similarly, item #8 in Exhibit B used for the annual inspections only asks for the results of operating tests on relief equipment, but does not include written procedures describing how to perform tests on relief devices. If PG&E has a separate work procedure to perform such operating tests on its regulating and over pressure protection equipment, the appropriate work procedures should be referenced in the document.

- b) UO Standard S4411 currently requires monthly and annual inspection reports to be retained for a period of 3 years. CPSD staff requests that the record retention for the monthly and annual inspection reports be changed to 10 years, at a minimum, to allow CPUC inspectors to review the inspection reports during scheduled audits.

#### 4. Pipeline purging practice

PG&E's GS&S A-38 describes two methods that can be used to determine absence of air and determine whether further purging is necessary. The first method uses Combustible Gas Indicator (CGI), while the second method involves blowing a small amount of gas into a bucket of soapy water and igniting the gas contained in the bubbles to check the color of the flame. An orange and yellow flame indicates completion of purging, while a blue flame indicates need for further purging.

Please explain if PG&E still uses the latter method described above. If so, PG&E should explain and provide documentation on how PG&E trains its employees to safely execute this purging method.

#### 5. Joining Procedures

- a) CPSD staff found that PG&E Procedures WP4170-04 through WP4170-07 for Polyethylene Heat Iron Socket, Saddle, Butt Fusion, and Electrofusion couplings and connections, do not take weather conditions into consideration in determining heating and cooling times. Specifically, Table 1 on page 3 of WP4170-04 shows the required heating, holding, and cooling times for heating iron socket fusion. Similarly, Table 1 on page 6 of WP4170-05, Tables 1-3 on page 5 of WP4170-06, and Tables 2 & 3 on page 10 of WP4170-07 identifies required heating, holding, and cooling times for saddle fusion, butt fusion, and electrofusion respectively. However, there is no mention of the need to adjust the modifying heating and cooling times depending on ambient temperature.

CPSD staff is concerned that adverse weather conditions such rain, cold, hot, wind, or snow, may adversely affect fusion quality. CPSD staff requests that PG&E review and adjust the recommended heating and cooling times to reflect weather conditions in order to achieve high quality fusion.

- b) TD-4170B-06 was published on 7/27/2011 (Rev 0) to correct the cooling times listed in WP4170-05 Polyethylene Heat Iron Saddle Fusion. Corresponding job aid TD-4170P-05-JA01 should also be changed to reflect the corrected cooling time in the bulletin.

6. UO Standard S4110

The Current version of UO Standard S4110 is silent about conducting leak surveys of transmission pipelines transporting unodorized gas in Class 4 locations. If PG&E does not have any transmission pipelines in Class 4 locations currently transporting unodorized gas, then it should clearly state so in its standard.

7. Damage Prevention and Operator Qualification

PG&E's damage prevention manual does not require PG&E employees to be operator qualified when performing excavation. In addition, PG&E's list of covered tasks also does not include excavation. Please explain why PG&E does not include excavation as a covered task despite PHMSA's issuance of Advisory Bulletin ADB-06-01, which states in part:

*"Furthermore, PHMSA reminds pipeline operators that although excavation is not explicitly addressed in 49 CFR parts 192 and 195, excavation is considered a covered task under the pipeline operator qualifications regulations (49 CFR 192.801-809 and 195.501-509). These regulations require that pipeline operators and contractors be qualified to perform pipeline excavation activities. A qualified individual is one who has been evaluated and can perform assigned covered tasks and can recognize and react appropriately to abnormal conditions."*