

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



January 12, 2010

Eleanor Pefferman, Manager  
Sustainable Electric Reliability  
Pacific Gas and Electric Company  
245 Market Street, Mail Code N14L  
San Francisco, CA 94105

CPUC File No. EA2009-17

**SUBJECT:** Electric Audit of PG&E's North Yosemite Division, Merced and Los Banos

On behalf of the Utilities Safety and Reliability Branch of the California Public Utilities Commission, Terence Eng, Kenneth How and I conducted an Electric Audit encompassing the Los Banos and Merced areas in PG&E's Yosemite Division from September 14 – 18, 2009. The audit included a review of your records for the period of 2007-2008 and other associated records. We also conducted field inspections of overhead and underground electric facilities in Atwater, Dos Palos, Firebaugh, Los Banos, Merced and Mendota.

During the inspection, we identified violations of one or more General Orders. A copy of the audit summary itemizing the violations is enclosed. Please advise me of all corrective measures taken by the Utility regarding these violations. Please provide the electronic or hard copy records showing the correction date for each violation.

If you have any questions, please contact me at (415) 703-1817.

Sincerely,

A handwritten signature in cursive script that reads "Paul Penney".

Paul Penney  
Utilities Engineer  
Utilities Safety and Reliability Branch  
Consumer Protection and Safety Division

Enclosure: Appendix A  
(1) GO165 Records Review  
(2) GO95/128 Field Notes

CC: Ms. Holly Meyer-Zebzda, Quality Assurance  
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Mr. Terence Eng, Utilities Engineer, USRB  
Mr. Kenneth How, Utilities Engineer, USRB

## APPENDIX A

### (1) GO165 Records Review

- (A) During our records review, we noted the following violations of GO165, Section IV, regarding inspection time intervals. Paragraph one of this section states:

*"Each utility subject to this General Order shall conduct inspections of its distribution facilities, as necessary, to assure reliable, high-quality, and safe operation, but in no case may the period between inspections (measured in years) exceed the time specified in the attached table... "*

The following tables show the plat maps along with a description of the violation.

#### A.1 Overhead

<b>Plat Map</b>	<b>Description of Violation</b>
704	One pole in the top right was not detail inspected in 2008.
570	Several poles in the bottom of the map were not patrolled in 2008.
5TM-946	Several poles were not detail inspected in 2007.
5TM-1078	The patrol record for this rural area was missing for 2006.
5TR-380	The patrol record for this urban area was missing for 2008.

#### A.2 Underground

<b>Plat Map</b>	<b>Description of Violation</b>
382E	Pad mount transformer T-605 was due for inspection in 2005. The barrier posts could not be removed without a boom, and the transformer could not be detail inspected without being completely opened. T-605 was subsequently inspected on 3-1-07.

The following equipment inspections are in violation of PG&E's Equipment Testing and Maintenance standard (UO Standard S2302).

#### A.3 Reclosers

<b>Operating Number</b>	<b>Description of Violation</b>
3910	The test report for 2007 was missing.
4080	The counter read was missing in 2008.
4000	The 3/25/2008 counter read was missing.
9700	The test date and time were missing. The issue date was 8/23/07.

#### A.4 Regulators

<b>Operating Number</b>	<b>Description of Violation</b>
8023	The 2007 test report was missing.
8281	The test reports for 2007 and 2008 were missing.

8667	The regulator needs to be replaced. On 12/17/07, the counter reading was 548628; on 5/20/2008, the counter reading was 554753.
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A.5 Capacitors

Operating Number	Description of Violation
196	The test report for 2008 was not recorded with the switches closed.

- (B) Maintenance tags (Notifications) were reviewed for the cities of Los Banos and Merced. From the data provided by PG&E, 15 tags were overdue based on PG&E's internal standard. Out of these, two were included in the 2007 GO165 report and eight were included in the 2008 GO165 report. The circumstances surrounding the remaining five notifications (tags) are thoroughly explained in the spreadsheet. No response is necessary for this item.

**(2) GO95 and GO128 Inspection Field Notes**

We did field verification of detailed inspections for two recently completed overhead plat maps, along with random verification of closed tags.

A total of 52 poles and associated facilities were inspected on plat map 358, and 17 facilities and associated facilities were inspected on plat map 925. The following tables list the location, field observations (along with any follow up questions) and GO95 violations. The lists exclude items noted by PG&E during the detailed inspection process.

(A) Plat map 358

Location	Field Observations	GO95 Violation
7	The ground molding near ground level has an approximate 2 inch gap, exposing the ground wire. This item was not noted during the detailed inspection. Please provide a notification number.	Rule 54.6— <i>“That portion of the ground wires attached on the face or back of wood crossarms or on the surface of wood poles and structures shall be covered by a suitable protective covering... Minor separation, warping, and/or cracking of the protective covering is allowed, provided the ground wire is not exposed.”</i>
14	The ground molding near communication level has an approximate 1 inch gap, exposing the ground wire. This item was not noted during the detailed inspection. Please provide a notification number.	Rule 54.6— <i>“That portion of the ground wires attached on the face or back of wood crossarms or on the surface of wood poles and structures shall be covered by a suitable protective covering... Minor separation, warping, and/or cracking of the protective covering is allowed, provided the ground wire is not exposed.”</i>

24	A bolt cover is coming loose, causing a potential hazard if the cover falls. This item was not noted during the detailed inspection. Please provide a notification number.	Rule 54.6—“ <i>Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service...</i> ”
31	The ground molding near communication level has a gap, exposing the ground wire. This item was not noted during the detailed inspection. Please provide a notification number.	Rule 54.6—“ <i>That portion of the ground wires attached on the face or back of wood crossarms or on the surface of wood poles and structures shall be covered by a suitable protective covering... Minor separation, warping, and/or cracking of the protective covering is allowed, provided the ground wire is not exposed.</i> ”

(B) Plat map 925

Location	Field Observations	GO95 Violation
11	A sign was on the pole, which is an unauthorized attachment. This item was not noted during the detailed inspection. Please provide a notification number.	Rule 34—“ <i>Nothing in these rules shall be construed as permitting the unauthorized attachment, to supply, street light or communication poles or structures, of antennas, signs, posters, banners, decorations, wires, lighting fixtures, guys, ropes and any other such equipment foreign to the purposes of overhead electric line construction...</i> ”
12	A sign was on the pole, which is an unauthorized attachment. This item was not noted during the detailed inspection. Please provide a notification number.	Rule 34—“ <i>Nothing in these rules shall be construed as permitting the unauthorized attachment, to supply, street light or communication poles or structures, of antennas, signs, posters, banners, decorations, wires, lighting fixtures, guys, ropes and any other such equipment foreign to the purposes of overhead electric line construction...</i> ”
17	The pole and transformer appeared to be idle facilities. Could you provide a status report? Will these facilities be removed, or is their a future need? Also, please provide an estimated date of removal (if applicable).	Rule 31.6—“ <i>Lines or portions of lines permanently abandoned shall be removed by their owners so that such lines shall not become a public nuisance or a hazard to life or property. For the purposes of this rule, lines that are permanently abandoned shall be defined as those lines that are determined by their owner to have no foreseeable future use.</i> ”

During our field review of closed tags, we noted a pole with a significant lean at 40109 W. Bullard Ave., in Firebaugh. The pole is on the right hand side of a gate leading into a business. See Figure 1 below. We are concerned that the pole may not have the required minimum safety factor as defined in GO95, Rule 44.3. Therefore, please provide PG&E's pole loading calculations.



**Figure 1**—a leaning pole in Firebaugh.

Also, in PG&E's pole loading calculations, does PG&E generally take into account pole lean? If not, please explain? For this particular pole, please take pole lean into account. In other words, in addition to the stress caused by the vertical loading, please include the stress due to bending moment at the base of the pole caused by the weight of the pole.

### **(3) Concerns/Recommendation**

- (A) When an equipment test finds a capacitor in need of repair, PG&E generates a notification (tag), repairs the equipment, and tests the capacitor afterward. According to PG&E personnel, when the post-repair test is done, no test record is generated. We recommend that PG&E document the post-repair test results.
- (B) The standard for reclosers requires inspection and testing twice a year. However, we found instances where the inspection interval was greater than 6 months, and substantially less than six months. We understand that flexibility in time intervals is necessary. However, we do not believe the optimum benefit is achieved by doing inspections substantially greater than six months or less than six months. Below are some samples of recloser inspection cycles from our review.

<b>Operating Number</b>	<b>Date #1</b>	<b>Date #2</b>
3700	10/20/07	8/9/08
3330	8/19/08	9/13/08
3530	8/9/08	9/6/08
3700	8/9/08	9/6/08

We therefore recommend that PG&E provide further guidance in its UO Standard S2302 (pg. 19) on the twice a year time interval. For example, inspection and testing shall be done twice a year, with intervals not less than four months or greater than eight months.