

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



December 2, 2013

EA2013-017

Jadwindar Singh
Manager, Distribution Compliance
Pacific Gas and Electric Company
245 Market St, #926
San Francisco, CA 94105

SUBJECT: Audit of PG&E's Sierra Division

Dear Mr. Singh:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission, Ivan Garcia, Yusef Collins and Raymond Cho of my staff conducted an electric audit of PG&E's Sierra Division from September 9-13, 2013. The audit included a review of PG&E's records and field inspections of PG&E's facilities.

During the audit, we identified violations of one or more General Orders. A copy of the audit summary itemizing the violations, a list area of concerns and additional question is enclosed. Please advise me no later than January 10, 2014 by electronic or hard copy, of all corrective measures taken by PG&E to remedy and prevent such violations.

If you have any questions concerning this audit please contact Ivan Garcia at (916) 928-5875 or ivan.garcia@cpuc.ca.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read "Raymond Fugere".

Raymond Fugere, P.E.
Program and Project Supervisor
Electric Safety and Reliability Branch
Safety and Enforcement Division

Enclosure: Audit Summary

CC: Elizaveta Malashenko, Deputy Director, Safety and Enforcement Division
Raymond Cho, Utilities Engineer, CPUC
Yusef Collins, Utilities Engineer, CPUC
Ivan Garcia, Utilities Engineer, CPUC
Curtis Todd Ryan, Supervisor, PG&E Gas & Electric

AUDIT SUMMARY

Company: PG&E –Sierra Division
Electric Audit
Date: September 9 to September 13, 2013

Violations

A.	Location:	PG&E –Sierra Division
	Date Visited by CPUC:	9/9/2013-9/13/2013
	Explanation of Violation(s):	
	<p><u>GO 165, Section III-B, – Standards for Inspection, states:</u></p> <p style="text-align: center;"><i>“Each utility subject to this General Order shall conduct inspections of its distribution facilities, as necessary, to ensure reliable, high quality, and safe operation, but in no case may the period between inspections (measured in years) exceed the time specified in Table 1.”</i></p> <p>A pre-audit data request response indicated that the following facilities were not inspected as required by GO 165:</p> <ul style="list-style-type: none"> • 1 facility on the 2012 Overhead Inspection of Map J45 • 1 facility on the 2009 Underground Inspection of Map Q-2402B <p>The pre-audit data response Q8b indicated that the following number of maps had issues and didn't meet the requirements of GO 165.</p> <ul style="list-style-type: none"> • 5 overhead maps were noted. • 35 underground maps were noted. 	

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	<p>We found several missing and/or late patrol and inspection maps to PG&E's Overhead and Underground Master Patrols and Inspections (P&I) List. The following GO 165 violations are listed in the tables below.</p>																																																									
	<table border="1"> <thead> <tr> <th colspan="2" data-bbox="284 814 1380 856">Overhead Patrols</th> </tr> <tr> <th data-bbox="284 856 836 898">Map</th> <th data-bbox="836 856 1380 898">Finding</th> </tr> </thead> <tbody> <tr><td data-bbox="284 898 836 930">F60</td><td data-bbox="836 898 1380 930">Missing 2008 Patrol</td></tr> <tr><td data-bbox="284 930 836 961">H36</td><td data-bbox="836 930 1380 961">Missing 2011 Patrol</td></tr> <tr><td data-bbox="284 961 836 993">H3721</td><td data-bbox="836 961 1380 993">Missing 2011 Patrol</td></tr> <tr><td data-bbox="284 993 836 1024">H3722</td><td data-bbox="836 993 1380 1024">Missing 2011 Patrol</td></tr> <tr><td data-bbox="284 1024 836 1056">H4408</td><td data-bbox="836 1024 1380 1056">Missing 2012 Patrol</td></tr> <tr><td data-bbox="284 1056 836 1087">H4620</td><td data-bbox="836 1056 1380 1087">Missing 2012 Patrol</td></tr> <tr><td data-bbox="284 1087 836 1119">H4623</td><td data-bbox="836 1087 1380 1119">Missing 2012 Patrol</td></tr> <tr><td data-bbox="284 1119 836 1150">I0810</td><td data-bbox="836 1119 1380 1150">Missing 2008 Patrol</td></tr> <tr><td data-bbox="284 1150 836 1182">I3608</td><td data-bbox="836 1150 1380 1182">Missing 2010 Patrol</td></tr> <tr><td data-bbox="284 1182 836 1213">I3615</td><td data-bbox="836 1182 1380 1213">Missing 2010 Patrol</td></tr> <tr><td data-bbox="284 1213 836 1245">I3721</td><td data-bbox="836 1213 1380 1245">Missing 2010 Patrol</td></tr> <tr><td data-bbox="284 1245 836 1276">I4402</td><td data-bbox="836 1245 1380 1276">Missing 2010 Patrol</td></tr> <tr><td data-bbox="284 1276 836 1308">I4621</td><td data-bbox="836 1276 1380 1308">Missing 2010 Patrol</td></tr> <tr><td data-bbox="284 1308 836 1339">J3612</td><td data-bbox="836 1308 1380 1339">Missing 2010 Patrol</td></tr> <tr><td data-bbox="284 1339 836 1371">J3805</td><td data-bbox="836 1339 1380 1371">Missing 2010 Patrol</td></tr> <tr><td data-bbox="284 1371 836 1402">K3901</td><td data-bbox="836 1371 1380 1402">Missing 2012 Patrol</td></tr> <tr><td data-bbox="284 1402 836 1434">O15</td><td data-bbox="836 1402 1380 1434">Missing 2010 Patrol</td></tr> <tr><td data-bbox="284 1434 836 1465">R1022</td><td data-bbox="836 1434 1380 1465">Missing 2009 Patrol</td></tr> <tr><td data-bbox="284 1465 836 1497">S0908</td><td data-bbox="836 1465 1380 1497">Missing 2009 Patrol</td></tr> <tr><td data-bbox="284 1497 836 1528">T0901</td><td data-bbox="836 1497 1380 1528">Missing 2009 Patrol</td></tr> <tr><td data-bbox="284 1528 836 1560">T0914</td><td data-bbox="836 1528 1380 1560">Missing 2009 Patrol</td></tr> <tr><td data-bbox="284 1560 836 1591">T0919</td><td data-bbox="836 1560 1380 1591">Missing 2009 Patrol</td></tr> <tr><td data-bbox="284 1591 836 1623">U0402</td><td data-bbox="836 1591 1380 1623">Missing 2009 Patrol</td></tr> <tr><td data-bbox="284 1623 836 1654">U0403</td><td data-bbox="836 1623 1380 1654">Missing 2009 Patrol</td></tr> <tr><td data-bbox="284 1654 836 1686">U0404</td><td data-bbox="836 1654 1380 1686">Missing 2009 Patrol</td></tr> <tr><td data-bbox="284 1686 836 1717">U0405</td><td data-bbox="836 1686 1380 1717">Missing 2009 Patrol</td></tr> </tbody> </table>		Overhead Patrols		Map	Finding	F60	Missing 2008 Patrol	H36	Missing 2011 Patrol	H3721	Missing 2011 Patrol	H3722	Missing 2011 Patrol	H4408	Missing 2012 Patrol	H4620	Missing 2012 Patrol	H4623	Missing 2012 Patrol	I0810	Missing 2008 Patrol	I3608	Missing 2010 Patrol	I3615	Missing 2010 Patrol	I3721	Missing 2010 Patrol	I4402	Missing 2010 Patrol	I4621	Missing 2010 Patrol	J3612	Missing 2010 Patrol	J3805	Missing 2010 Patrol	K3901	Missing 2012 Patrol	O15	Missing 2010 Patrol	R1022	Missing 2009 Patrol	S0908	Missing 2009 Patrol	T0901	Missing 2009 Patrol	T0914	Missing 2009 Patrol	T0919	Missing 2009 Patrol	U0402	Missing 2009 Patrol	U0403	Missing 2009 Patrol	U0404	Missing 2009 Patrol	U0405	Missing 2009 Patrol
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Overhead Patrols (continued)	
U0408	Missing 2009 Patrol
U0409	Missing 2009 Patrol
U0410	Missing 2009 Patrol
U0414	Missing 2009 Patrol
U0415	Missing 2009 Patrol
U0416	Missing 2009 Patrol
U0417	Missing 2009 Patrol
U0418	Missing 2009 Patrol
U0419	Missing 2009 Patrol
U0422	Missing 2009 Patrol
U0423	Missing 2009 Patrol
U0425	Missing 2009 Patrol
U0517	Missing 2009 Patrol
U0701	Missing 2009 Patrol
U0702	Missing 2009 Patrol
U0703	Missing 2009 Patrol
U0704	Missing 2009 Patrol
U0705	Missing 2009 Patrol
U0706	Missing 2009 Patrol
U0707	Missing 2009 Patrol
X0405	Missing 2009 Patrol
X0408	Missing 2009 Patrol
X0503	Missing 2009 Patrol
X0509	Missing 2010 Patrol
X0619	Missing 2009 Patrol
Y0502	Missing 2009 Patrol

Underground Patrols	
Map	Finding
H4121	Missing 2008 Patrol
I3723	Missing 2009 Patrol
J3404	Missing 2011 Patrol
J3505	Missing 2010 Patrol
J3508	Missing 2010 Patrol
J3510	Missing 2010 Patrol
J3514	Missing 2010 Patrol
K3405	Missing 2011 Patrol
K3410	Missing 2011 Patrol
K3506	Missing 2011 Patrol
K3509	Missing 2011 Patrol
K3511	Missing 2011 Patrol
K3512	Missing 2011 Patrol

Underground Patrols (continued)	
K3513	Missing 2011 Patrol
K3514	Missing 2011 Patrol
K3515	Missing 2011 Patrol
K3520	Missing 2011 Patrol
M0820	Missing 2011 Patrol
N14	Missing 2009 Patrol
O0908	Missing 2010 Patrol
O0912	Missing 2010 Patrol
O0913	Missing 2010 Patrol
O0916	Missing 2010 Patrol
O0917	Missing 2010 Patrol
O0919	Missing 2010 Patrol
O1007	Missing 2011 Patrol
O15	Missing 2011 Patrol
R13	Missing 2009 Patrol
R1325	Missing 2009 Patrol
S1213	Missing 2010 Patrol
T1316	Missing 2011 Patrol
U1204	Missing 2011 Patrol
U1308	Missing 2011 Patrol
U3009	Missing 2010 Patrol
U3010	Missing 2010 Patrol
U3012	Missing 2010 Patrol
U3015	Missing 2010 Patrol
U3017	Missing 2010 Patrol
U3018	Missing 2010 Patrol
V0306	Missing 2011 Patrol
V0310	Missing 2009 Patrol
V0315	Missing 2010 Patrol
V0319	Missing 2010 Patrol
V0320	Missing 2009/2010/2011 Patrol
V0325	Missing 2009/2010/2011 Patrol
V04	Missing 2010 Patrol
V0415	Missing 2010 Patrol
V0417	Missing 2010 Patrol
V0418	Missing 2010 Patrol
V0420	Missing 2010 Patrol
V0423	Missing 2010 Patrol
V0424	Missing 2010 Patrol
V0507	Missing 2010 Patrol

Underground Patrols (continued)	
V0511	Missing 2010/2012 Patrol
V0521	Missing 2010 Patrol
V0524	Missing 2010 Patrol
V0724	Missing 2010 Patrol
V0901	Missing 2011 Patrol
W0402	Missing 2010 Patrol
W0404	Missing 2010 Patrol
W0407	Missing 2010 Patrol
W0408	Missing 2010 Patrol
W0409	Missing 2010 Patrol
W0410	Missing 2010 Patrol
W0411	Missing 2010 Patrol
W0412	Missing 2010 Patrol
X0125	Missing 2010 Patrol
X0216	Missing 2009 and 2010 Patrol
X0221	Missing 2009 Patrol
X0221	Missing 2010 Patrol
X03	Missing 2009 and 2010 Patrol
X0403	Missing 2009 Patrol
X0405	Missing 2009 Patrol
X0501	Missing 2009 Patrol
X0503	Missing 2009 Patrol
X0504	Missing 2009 Patrol
X0505	Missing 2009 Patrol
X0506	Missing 2009 Patrol
X0509	Missing 2009 Patrol
X0517	Missing 2009 Patrol
X0519	Missing 2009 Patrol
X0520	Missing 2009 Patrol
X0523	Missing 2009 Patrol
X0611	Missing 2009 Patrol
X0614	Missing 2009 Patrol
X0616	Missing 2009 Patrol
X0619	Missing 2009 Patrol
X0621	Missing 2009 Patrol
X0622	Missing 2009 Patrol
X0624	Missing 2009 Patrol
X07	Missing 2009 Patrol
X0703	Missing 2009 Patrol
X08	Missing 2009 Patrol

Underground Patrols (continued)	
Y05	Missing 2009 Patrol
Y0503	Missing 2009 Patrol
Y0504	Missing 2009 Patrol
Y0505	Missing 2009 Patrol
Y0508	Missing 2009 Patrol
Y0509	Missing 2009 Patrol
Y0510	Missing 2009 Patrol
Y0513	Missing 2009 Patrol
Y0514	Missing 2009 Patrol
Y0515	Missing 2009 Patrol
Y0613	Missing 2008 Patrol

Underground Inspections	
Map	Finding
I3508	Missing 2011 Inspection
T1316	Missing 2011 Inspection
V0724	Missing 2011 Inspection
V0901	Missing 2011 Inspection
X0509	Missing 2010 Inspection

C.	Location:	PG&E – Sierra Division
	Date Visited by CPUC:	9/9/2013-9/13/2013
	Explanation of Violation(s):	
	<p><u>GO 165, Section III-C, – Record Keeping, states in part:</u></p> <p><i>“For all inspections records shall specify the circuit, area, facility or equipment inspected, the inspector, the date of the inspection, and any problems (or items requiring corrective action) identified during each inspection, as well as the scheduled date of corrective action.”</i></p> <p>5,021 work orders, from January 2008 to September 4, 2013, were completed past their scheduled date of corrective action. Furthermore, 111 work orders are currently open past their scheduled date of corrective action.</p>	

D.	Location:	PG&E – Sierra Division
	Date Visited by CPUC:	9/9/2013-9/13/2013
	Explanation of Violation(s):	
	<p><u>GO 165, Section III-C, – Record Keeping, states in part:</u></p> <p><i>“For all inspections records shall specify the circuit, area, facility or equipment inspected, the inspector, the date of the inspection, and any problems (or items requiring corrective action) identified during each inspection, as well as the scheduled date of corrective action.”</i></p> <p>PG&E does not document all items requiring corrective action during an inspection. Specifically, PG&E staff does not document minor work. PG&E staff only marks a tally mark indicating minor work, and does not specify the equipment identified for corrective action in the tally marks.</p>	

E.	Location:	PG&E – Sierra Division
	Date Visited by CPUC:	9/9/2013-9/13/2013
	Explanation of Violation(s):	
	<p data-bbox="250 426 1287 499"><u>GO 95, Rule 31.1, – Design, Construction and Maintenance, states in part:</u></p> <p data-bbox="347 533 1313 716"><i>“For all particulars not specified in these rules, design, construction, and maintenance should be done in accordance with accepted good practice for the given local conditions known at the time by those responsible for the design, construction, or maintenance of communication or supply lines and equipment.”</i></p> <p data-bbox="258 751 1256 898">PG&E UO Standard S2303 describes equipment testing intervals for capacitor banks. Capacitor banks are to be tested on a yearly interval. The following capacitor banks were tested late according to PG&E UO Standard S2303 and thus in violation of GO 95, Rule 31.1.</p> <ul data-bbox="298 940 951 1129" style="list-style-type: none"> • C245 was missing a 2011 equipment test • C238 was missing a 2011 equipment test • C2054 was missing a 2011 equipment test • C503 was missing a 2012 equipment test • C642 was missing a 2013 equipment test 	

The following violations that SED engineers discovered during the field audit and were not documented and addressed by PG&E during its last detailed inspection as required by General Order 165:

F.	Location:	8357 Oak Knoll Dr., Granite Bay
	Pole No.:	N/A
	Previous Visit by Utility:	Overhead Inspection Map X0619 Completed 1/8/2013
	Date Visited by CPUC:	9/12/2013
	Explanation of Violation(s):	
	<p><u>GO 95, Rule 56.6, Requirements for Sectionalizing With Insulators, states:</u></p> <p><i>“All portions of guys within both a vertical distance of 8 feet from the level of supply conductors of less than 35,500 volts and a radial distance of 6 feet from the surface of wood poles or structures shall not be grounded, through anchors or otherwise. Where necessary to avoid the grounding of such portions, guys shall be sectionalized by means of insulators installed at locations as specified in Rule 56.7.”</i></p> <p>At this pole, the tree branch was in contact with the down guy above the insulator bob. This condition was not noted by PG&E inspectors during the last inspection.</p>	

G.	Location:	8270 Oak Knoll Dr., Granite Bay
	Pole No:	N/A
	Previous Visit by Utility:	Overhead Inspection Map X0619 Completed 1/8/2013
	Date Visited by CPUC:	9/12/2013
Explanation of Violation(s):		
<p data-bbox="250 590 935 625"><u>GO 95, Rule 34, Foreign Attachments, states:</u></p> <p data-bbox="370 663 1263 877"><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></p> <p data-bbox="250 921 1365 989">At this pole, a customer’s fence was affixed to the pole. This condition was not noted by PG&E inspectors during the last inspection</p>		

H.	Location:	7381 Steeple Chase Drive, Shingle Springs
	Pole No:	N/A
	Previous Visit by Utility:	Overhead Inspection Map K3720 Completed 5/21/13
	Date Visited by CPUC:	9/12/2013
Explanation of Violation(s):		
<p><u>GO95, Rule 31.1, Design, Construction and Maintenance, states in part:</u></p> <p><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. For all particulars not specified in these rules, design, construction, and maintenance should be done in accordance with accepted good practice for the given local conditions known at the time by those responsible for the design, construction, or maintenance of communication or supply lines and equipment.”</i></p> <p><u>Utility Procedure: TD-2325P-01 dated 07/11/2012, Section 2.2:</u></p> <p>Visual Inspection, part 3, states that inspectors must “Identify aboveground or pole-top damage” including breaks or checks.</p> <p>The pole at this location displayed a couple checks along the length of the pole. One check was found to be about two (2) inches deep at about five (5) feet from the base of the pole. PG&E did not conduct a visual inspection as documented in Utility Procedure, TD-2325P-01. SED believes this procedure is an accepted good practice by PG&E. The condition was not documented in the last inspection by PG&E inspectors.</p>		

Areas of Concern

A. Anchor Strength

According to General Order 95, rule 49.6-C states in part:

...Anchor rods and their appurtenances shall meet the same strength requirements as the guy wire or strand.

Also, see General Order 95, rule 44.1, Table 4: Minimum Safety Factors for "Foundations against uplift." The required safety factor is 1.5.

At 7381 Steeple Chase Dr, the pole was supported by an anchor guy. The anchor in the ground was located next to a hole in the ground of unknown depth. The hole raises concerns on whether or not the anchor guy meets the safety factor of 1.5.

B. Woodpecker Holes

C.

At 7401 Steeple Chase Dr., the pole displayed several woodpecker holes. During the scheduled 2013 inspection of this pole, a PG&E inspector noted a "deep woodpecker cavity" and a "replace pole" maintenance order was created. The order was "returned" due to "clerical error." All poles must meet General Order 95, rule 44.1, minimum safety factors and the CPUC investigators are concerned that this pole does not meet the requirement.