PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

May 19, 2016 TA2016-003

Mr. Adeel Babar
Supervisor – Regulatory Compliance
Pacific Gas and Electric Company (PG&E)
3401 Crow Canyon Road, #221E
San Ramon, CA 94583

SUBJECT: Audit of PG&E's Moss Landing Headquarter

Dear Mr. Babar:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission Jamie Lau of my staff conducted a transmission audit of PG&E's Moss Landing Headquarter from April 4, 2016, to April 7, 2016. The audit included a review of PG&E's records and field inspections of PG&E's facilities.

During the audit, my staff identified violations of one or more General Orders (GOs). Enclosed is a copy of the audit findings with itemized violations. Please advise me no later than June 20, 2016, 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 Jamie Lau at (415) 703-2233 or jamie.lau@cpuc.ca.gov.

Sincerely,

Fadi Daye

Fadi Daye, P.E.
Program and Project Supervisor
Electric Safety and Reliability Branch
Safety and Enforcement Division
California Public Utilities Commission

Enclosure: Audit Findings

Cc: Elizaveta Malashenko, Director, Safety and Enforcement Division, CPUC
Charlotte TerKeurst, Program Manager, Electric Safety and Reliability Branch, CPUC
Alok Kumar, P.E., Senior Utilities Engineer Supervisor, ESRB, CPUC
Jamie Lau, P.E., Utilities Engineer, ESRB, CPUC

AUDIT FINDINGS

I. Records Review

My staff reviewed the following records for the period of January 1, 2015 to March 30, 2016:

a. Overhead patrol and detailed inspection records.
b. Completed, pending, and cancelled corrective action work orders generated as a result of inspections and trouble calls.
c. Pole loading calculations.
d. Intrusive pole testing records.
e. New Construction records.
f. Inspector training records

II. Records Review - Violations

GO 165, Section IV, Transmission Facilities, states in part:

> *Each utility shall prepare and follow procedures for conducting inspections and maintenance activities for transmission lines.*

PG&E's Wood Poles Inspection standard "TD-2325S" requires transmission wood poles to follow GO 165's intrusive inspection cycles for distribution poles. GO 165 requires distribution poles wood poles that are over 15 years of age and have not been subject to intrusive inspection, to be intrusively inspected within 10 years from the date GO 165 became effective (March 31, 1997). PG&E's records indicated that Pole #005-133 of Del Monte-Viejo circuit was installed in 1948 and was not intrusively inspected until year 2015 , therefore, violating the requirement of GO 165.

GO 95, Rule 31.1, Design, Construction, and Maintenance, states in part:

> *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.*

PG&E's records indicated that from October 30, 2013 to March 30, 2016, 118 overhead Electric Transmission Line Corrective (LC) work orders were either completed late or open past their due date. These work orders were generated as a result of inspections or trouble calls.

GO 95, Rule 44.3, Replacement, states in part:

> *Lines or parts thereof shall be replaced or reinforced before safety factors have been reduced (due to factors such as deterioration and/or installation of additional facilities) in Grades "A" and "B" construction to less than two-thirds of the safety factors specified in Rule 44.1…*

PG&E's records indicated that the safety factor of Pole #0/5 located at 950 Blanco Cir, Salinas, was 1.88. GO 95 requires such a pole to have a safety factor of 2.0 or above.

III. Field Inspection

My staff inspected the following facilities during the audit:

Circuit	Structure Number	Type of Structure	Approx. Location
115 kV Moss Landing-Salinas #1 and 2	0/3	Tower	Moss Landing Substation – Dolan Rd and Hwy 1, Moss Landing
115 kV Moss Landing-Salinas #1 and 2	0/4	Tower	Moss Landing Substation – Dolan Rd and Hwy 1, Moss Landing
115 kV Moss Landing-Salinas #1 and 2	0/4A	Tower	Moss Landing Substation – Dolan Rd and Hwy 1, Moss Landing
60 kV Salinas-Firestone #2	10/234	Pole	West and along Hwy 101 (crossing Hartnell Rd), Salinas
60 kV Salinas-Firestone #2	10/232	Pole	West and along Hwy 101 (crossing Hartnell Rd), Salinas
60 kV Salinas-Firestone #2	10/231	Pole	West and along Hwy 101 (crossing Hartnell Rd), Salinas
60 kV Salinas-Firestone #2	10/230	Pole	West and along Hwy 101 (crossing Hartnell Rd), Salinas
60 kV Salinas-Firestone #2	10/229	Pole	West and along Hwy 101 (crossing Hartnell Rd), Salinas
60 kV Fresh Express Tap from Salinas-Firestone #1	0/1	Pole	950 Blanco Cir, Salinas
60 kV Fresh Express Tap from Salinas-Firestone #1	0/2	Pole	950 Blanco Cir, Salinas
60 kV Fresh Express Tap from Salinas-Firestone #1	0/3	Pole	950 Blanco Cir, Salinas
60 kV Fresh Express Tap from Salinas-Firestone #1	0/5	Pole	950 Blanco Cir, Salinas
60 kV Fresh Express Tap from Salinas-Firestone #1	0/6	Pole	950 Blanco Cir, Salinas
60 kV Fresh Express Tap from Salinas-Firestone #1	0/7	Pole	950 Blanco Cir, Salinas
115 kV Moss Landing-Crazy Horse #1 and 2	0/3	Tower	Moss Landing Substation – Dolan Rd and Hwy 1, Moss Landing
115 kV Moss Landing-Crazy Horse #1 and 2	0/2	Tower	Moss Landing Substation – Dolan Rd and Hwy 1, Moss Landing
115 kV Moss Landing-Crazy Horse #1 and 2	0/4	Tower	Moss Landing Substation – Dolan Rd and Hwy 1, Moss Landing
60 kV Del Monte-Viejo	0/1	Pole	Kolb Ave and Casanova Ave, Monterey
60 kV Del Monte-Viejo	0/2	Pole	Kolb Ave and Hannon Ave, Monterey
60 kV Del Monte-Viejo	0/3	Pole	2332 Fremont St, Monterey
60 kV Del Monte-Viejo	0/4	Pole	Ramona Ave and Bruce Ln, Monterey
60 kV Del Monte-Viejo	0/5	Pole	287 Bruce Ln, Monterey
60 kV Salinas-Laureles	8/192	Pole	724 Monterey Rd, Salinas
60 kV Salinas-Laureles	6/149	Pole	Along Hwy 68, Salinas

115 kV Llagas-Hollister	20/129	Tower	6835 Camino Arroyo, Gilroy
115 kV Llagas-Hollister	20/130	Tower	6755 Camino Arroyo, Gilroy
115 kV Llagas-Hollister	20/131	Tower	A farm road near 652 Holloway, Gilroy
115 kV Llagas-Hollister	20/132	Tower	A farm road near 652 Holloway, Gilroy
115 kV Llagas-Hollister	20/133	Tower	A farm road near 652 Holloway, Gilroy
115 kV Llagas-Hollister	5/79	Pole	Fraizer Lake Rd and Shore Rd, Hollister
115 kV Llagas-Hollister	5/80	Pole	Along Fraizer Lake Rd crossing Shore Rd, Hollister
115 kV Llagas-Hollister	5/81	Pole	Along Fraizer Lake Rd crossing Shore Rd, Hollister
115 kV Llagas-Hollister	5/82	Pole	Along Fraizer Lake Rd crossing Shore Rd, Hollister
115 kV Llagas-Hollister	5/83	Pole	Along Fraizer Lake Rd crossing Shore Rd, Hollister
115 kV Llagas-Hollister	5/84	Pole	Along Fraizer Lake Rd crossing Shore Rd, Hollister
115 kV Llagas-Hollister	5/85	Pole	Along Fraizer Lake Rd crossing Shore Rd, Hollister
115 kV Llagas-Hollister	0/7	Pole (Steel)	Y Rd (East of Hwy 101), San Juan Bautista

IV. Field Inspection – Undocumented Violations List

We observed the following violations during our field inspection. None of these violations were documented and/or addressed by PG&E during its last inspection:

GO 95, Rule 31.1, Design, Construction, and Maintenance, states in part:

> *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.*

PG&E's Transmission Preventive Maintenance Manual requires a tower foundation with steel members not to be covered by earth. Tower #20/130 located at 6755 Camino Arroyo, Gilroy, had its foundation's steel members covered by earth.

GO 95, Rule 34, Foreign Attachments, states in part:

> *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.*

Pole #5/82 located along at Fraizer Lake Rd, Hollister had an unauthorized third-party sign attachment. PG&E removed it shortly after CPUC's finding.

GO 95, Rule 54.6A, Unprotected Conductors, states in part:

> *Unprotected conductors may pass laterally on a pole or structure or vertically from one level on a pole or structure to another level, but shall not pass within the climbing space…*

A cover for a transmission insulator bonding wire was broken, thus exposing the wire at the climbing space on Pole #0/3 located at 2332 Fremont St, Monterey.

GO 95, Rule 54.7-A3j, Allowable Climbing Space Obstructions, states in part:

> *Bolts and their washers. However, bolts bonded to or used for the attachment of deadend hardware of circuits above 750 volts in wood crossarm configuration that project into the climbing space shall be covered with a non-conducting material as specified in Rule 22.8-C. If such bolts are bonded, a positive electrical contact shall be made.*

The climbing space on Pole # 5/84 located along at Fraizer Lake Rd, Hollister, was obstructed by two bolts projected into the climbing space without bolt covers at the distribution level.

GO 95, Rule 91.3-A1, Use of Steps, states in part:

> *Poles with Vertical Runs or Risers: All jointly used poles which support supply conductors shall be provided with pole steps if vertical runs or risers are attached to the surface of such poles……*

Jointly used Pole #0/5 located at 287 Bruce Ln, in Monterey had vertical runs and did not have pole steps.