

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



June 6, 2019

SA2019-828

Joe Loya  
Manager – Transmission Compliance  
Pacific Gas and Electric Company (PG&E)  
245 Market St. Room 924B  
San Francisco, CA 94105

**SUBJECT:** Substation Audit of PG&E Moss Landing

Mr. Loya:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Ivan Garcia, Chris Lee, Stephen Lee, Charles Mee, and Wilson Tsai of my staff conducted a substation audit of PG&E's Moss Landing Division from February 25, 2019 through February 28, 2019. The audit included a review of PG&E's procedures, records, and field inspections of its substation facilities.

During the audit, my staff identified violations of General Order 174. A copy of the audit findings itemizing the violations is enclosed. Please provide a response no later than July 8, 2019, by electronic or hard copy of all corrective actions and preventive measures taken by PG&E to correct the identified violations and prevent the recurrence of such violations.

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

Sincerely,

A handwritten signature in blue ink, appearing to read "Banu Acimis".

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

Enclosures: CPUC Audit Findings

Cc:

Lee Palmer, Deputy Director, Safety and Enforcement Division (SED), CPUC  
Charlotte TerKeurst, Program Manager, ESRB, SED, CPUC  
Charles Mee, Senior Utilities Engineer-Specialist, ESRB, SED, CPUC  
Chris Lee, Utilities Engineer, ESRB, SED, CPUC  
Ivan Garcia, Utilities Engineer, ESRB, SED, CPUC  
Stephen Lee, Utilities Engineer, ESRB, SED, CPUC

## AUDIT FINDINGS

### I. Records Review

During the audit, ESRB staff reviewed the following standards, procedures, and records:

- Lists and locations of all PG&E substations in the Moss Landing Division
- Monthly and every-other-month substation inspection records from the last 24 months for all PG&E substations in the Moss Landing Division.
- PG&E Substation Equipment Maintenance Requirements, Utility Standard: TD-3322S with Attachments 1 through 13
- PG&E Condition Based Management Transition Process, TD-3322B-012
- PG&E Substation Inspections, TD-3322B-024
- PG&E Substation Inspection Implementation Plan, TD-3322B-026
- PG&E Substation Maintenance and Construction Manual (SM&CM), Substation Inspections Booklet
- PG&E Infrared Inspection Procedures
- PG&E Insulating Oil Testing Manual
- PG&E Substation Fire Protection Systems and Equipment –Inspection, Test and Maintenance of Fire Protection Systems and Equipment at Substations: TD-3320P-07
- Lists of equipment at selected substation
- Single-line electrical diagrams for selected substations
- The last two visual inspection checklists for selected substations.
- Maintenance records for selected substations; Line Corrective (LC) Notifications in the last 24 months
- Infrared Testing records for selected substations in the last 12 months
- PG&E Oil Test Samples for transformers at selected substations in the last 12 months
- Substation electrical equipment testing results
- PG&E 4kV Substation Equipment and Transferring Substation Assets to Distribution: TD-3350P-06

## II. Records Violations

ESRB staff observed the following violations during the records review portion of the audit:

**GO 174, Rule 12, General** states in part:

*“...Substations shall be designed, constructed and maintained for their intended use, regard being given to the conditions under which they are to be operated, to promote the safety of workers and the public and enable adequacy of service.*

*Design, construction and maintenance should be performed in accordance with accepted good practices for the given local conditions known at the time by those responsible.”*

PG&E Substation Equipment Maintenance Requirements, Utility Standard: TD-3322S, states that Priority B notifications have a basic finish date within 90 days of their creation date and have a past-due date that occurs on the first day of the second month following the month of the basic finish date. PG&E completed the following notification approximately seven months late from the past-due date:

<b>Order</b>	<b>Notification</b>	<b>Substation</b>	<b>Priority</b>	<b>Date Created</b>	<b>Basic Finish Date</b>	<b>Past-Due Date</b>	<b>Date Completed</b>
43200728	113761523	Spence	B	10/25/2017	1/23/2018	3/1/2018	10/5/2018

### III. Field Inspection

ESRB conducted field inspections of the following substations:

<b>Name of Substation</b>	<b>Approximate Address</b>	<b>City</b>
Spence	535 Eckhart Road	Salinas
Buena Vista	1220 Abbott Street	Salinas
Salinas	114 Bridge Street	Salinas
Hatton	4305 Canada Court	Carmel
Monterey	498 Del Monte Center	Monterey
Rob Roy	Freedom Blvd & Rob Roy Junction	Aptos
Erta	Atkinson Lane & Freedom Blvd	Watsonville
Watsonville	11 Walker Street	Watsonville

#### IV. Field Inspection – Undocumented Violations List

ESRB staff observed the following violations during the field inspection. PG&E did not identify and document these violations prior to the audit that ESRB discovered during the field inspection.

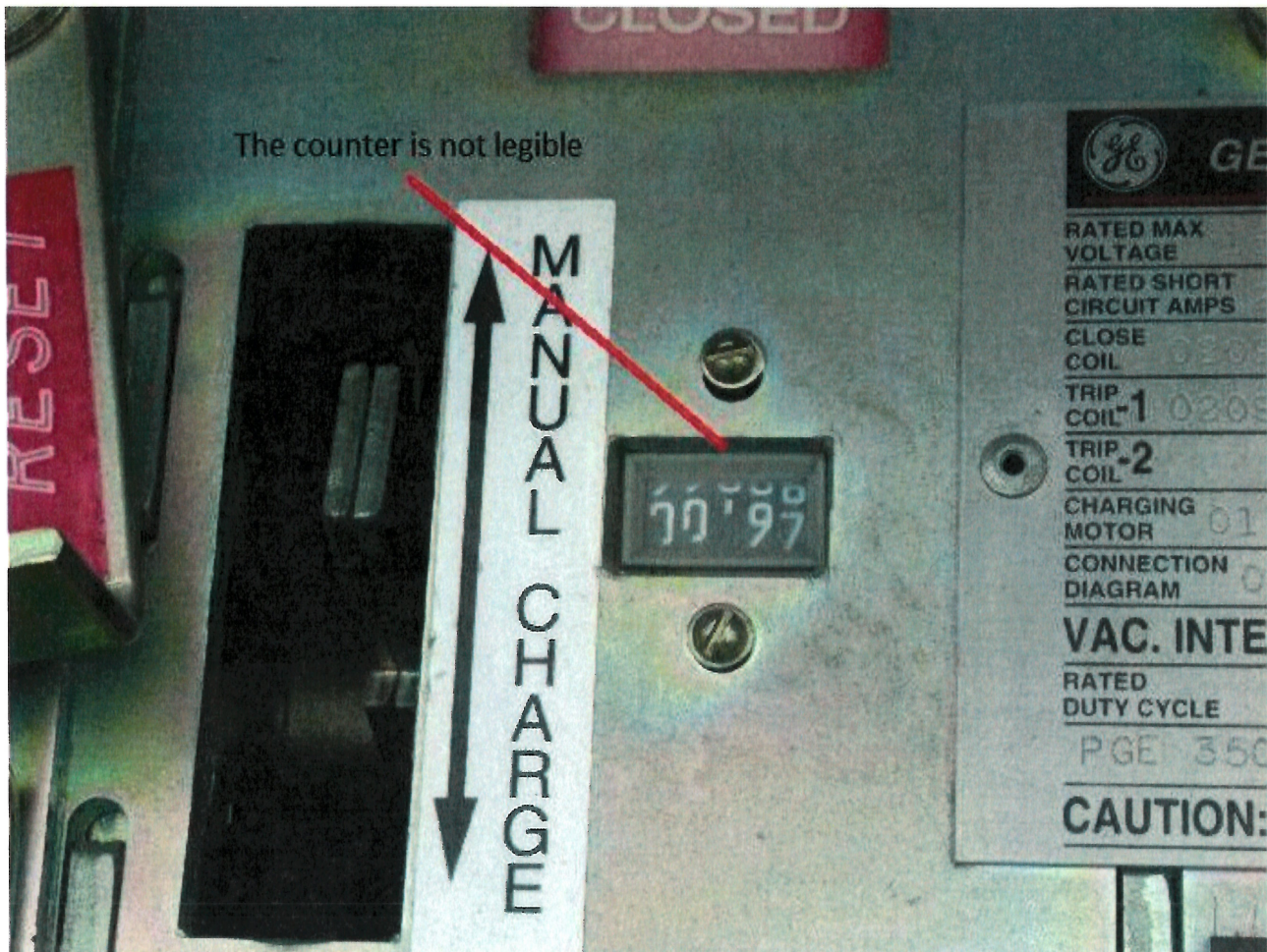
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#### Buena Vista Substation

1. The counter on Circuit Breaker 1106 was worn out and not legible.



2. A tree's branches overhang into the Buena Vista Substation yard and are a potential risk to PG&E's substation electrical facilities.



Salinas Substation

- ESRB observed cracks on Transformer Bank 4's concrete foundation.



Hatton Substation

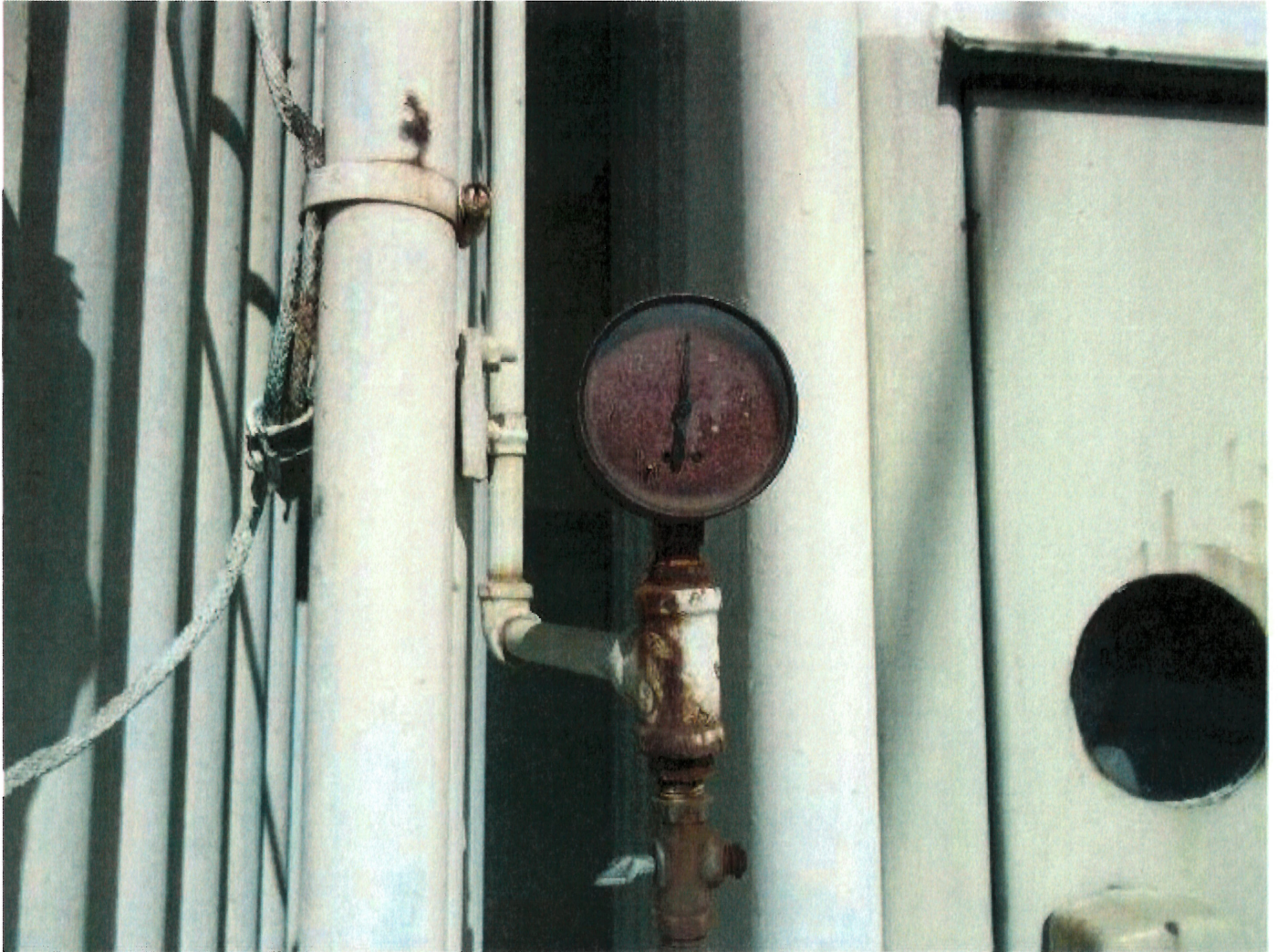
- ESRB observed atmospheric corrosion at the base of the Regulator #1 B-phase.





Erta Substation

- Transformer #2 internal pressure gauge is illegible.



Watsonville Substation

- ESRB observed atmospheric corrosion and deterioration on one of Bank 3's radiator fin brackets.



- ESRB observed cracks and deterioration on Circuit Breaker 2101's structural foundation.



- The signs which indicate the phases on Circuit Breaker 2101 are illegible.

