

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
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February 24, 2022

SA2021-927

Melvin Stark
Principal Manager, T&D Compliance Integration
Southern California Edison
1 Innovation Way
Pomona, California 91768

SUBJECT: Substation Audit of Southern California Edison Ventura District

Mr. Stark:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Kyle King, Richard Le, and James Miller of my staff conducted a substation audit of Southern California Edison (SCE) Ventura District from November 1, 2021 to November 5, 2021. The audit included a review of SCE's records and field inspections of SCE's facilities.

During the audit, my staff identified violations of one or more General Orders (GOs). A copy of the audit findings itemizing the violations is enclosed. Please advise me no later than March 25, 2022, by electronic or hard copy, of all corrective measures taken by SCE to remedy and prevent the recurrence of such violations in the future.

If you have any questions concerning this audit, please contact Kyle King at (213) 222-3260 or Kyle.King@cpuc.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Fadi Daye".

Fadi Daye, 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, Director, Safety and Enforcement Division, CPUC
Nika Kjensli, Program Manager, Electric Safety and Reliability Branch, CPUC
Kyle King, Utilities Engineer, ESRB, CPUC

AUDIT FINDINGS

I. Records Review

During the audit, my staff reviewed the following records and documents:

- SCE Map of the Ventura Switching Center
- Listing of addresses of all substations in SCE Ventura AOR
- GO 174 SCE Substation Inspection Program Summary 2021 Final Signed
- SCE Maintenance Manual on Substation Inspections
- SCE Substation Testing Policies and Procedures
- SCE Ventura Substation Inspector – GO174 Training Records Documentation
- SCE Substation Inspection Records from January 2019 to August 2021
- Summary of Substation Visual Inspections in the Ventura Switching District
- Inspection Checklists and One-Line Diagrams for six selected substations
- 4 oil sample test results of the most recently performed oil tests
- Pending and Completed Workorders for the year 2020.
- Summary of results of Infrared Testing in 2020
- Summary of results from substation Dissolved Gas Analysis performed in 2020
- Last two year inspection records including all information required under GO 174
- Records of any special inspections or test conducted from January 2019 to August 2021

II. Records Review – Violations List

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

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

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.

SCE's GO 174 Substation Inspection Practices requires Priority 2 work orders to be "Repair(ed) or reassess(ed) by prescribed due date or within 6 years." SCE failed to repair or reassess 10 work orders by the assigned prescribed due dates.

III. Field Inspections

My staff inspected the following substations during the field inspections:

Functional Loc.	Substation	Address	City
ES-5504	Casitas	Highway 33 Southside Casitas Springs	Casitas Springs
ES-5525	Oak Park	1726 Lindero Canyon Road	Thousand Oaks
ES-5555	Chatsworth	Santa Susana Field Lab 25800 Woolsley Canyon Road	Canoga Park
ES-5589	Thrust	Santa Susana Field Lab 25800 Woolsley Canyon Road	Canoga Park
ES-5239	Crater	27111 West Mulholland Highway N/O Las Virgenes Rd.	Agoura Hills
ES-5240	Rindge	3547 Winter Canyon Rd. cross Street Civic Center Way	Malibu
ES-5563	Estero	200 ft. S/E of Wood Rd. on South Side of Hueneme Rd. S/E of Oxnard	Oxnard
ES-5543	Willamette	5936 South Perkins Road.	Oxnard
ES-5291	Wastewater	6001 South Perkins Road	Oxnard
ES-5526	Ojai	403 Willow Street cross street Fox Street	Ojai
ES-5369	Ellwood	30 Las Armas between Hollister Ave. and Highway 101	Goleta
ES-5520	Modoc	11 West Mission west of State Street	Santa Barbara
ES-5366	Desal	520 East Yanonali Street	Santa Barbara
ES-5524	Montecito	1449 Schoolhouse Rd. west of San Ysidro Rd.	Santa Barbara

IV. Field Inspections – Violations List

My staff observed the following violations during the field inspection:

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.

Facilities at the following substations were not maintained for their intended use:

Casitas Substation

- Two signs on the outside perimeter of the fence were illegible.

Oak Park Substation

- Bird Guards on the No. 1 Capacitor 16 kV Switcher were loose and damaged.

Thrust Substation

- A transformer on the low voltage side was rusted.
- A steel support on the low voltage side was rusted.
- A junction box on the low voltage side was rusted.
- A cubicle enclosure was rusted.
- A junction box insulator needed paint.
- High Side and Low Side bushings on top of the transformer needed paint.

Crater Substation

- A 66 kV operating bus ground disconnect needed paint.

Estero Substation

- Battery rack had no containment area.
- Greenhouse 16 kV circuit breaker line needed a rubber insulating sleeve.

Willamette Substation

- Cover on Junction Box Panel was broken.

Wastewater Substation

- A meter box was corroded.
- An AC panel box was corroded.

Ojai Substation

- The battery rack had no secondary containment rack.
- The Patricia 16 kV Circuit Breaker Bus Bird Guard was not properly fastened.

Modoc Substation

- Phase A 1 Bank 16/4 V Nitrogen Gas read 0 psi for Phase A.
- The nitrogen pressure gauge window was yellowed and difficult to read for C Phase 1 Bank 16/4 KV.

Montecito Substation

- The Tremaine 4 kV Transfer Bus Disconnect had a label that was damaged.