

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



January 12, 2023

SA2022-956

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

SUBJECT: Substation Audit of Southern California Edison's Lugo Switching Center

Mr. Stark:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Saimon Islam and Monica Robledo of my staff conducted a substation audit of Southern California Edison's (SCE) Lugo Switching Center from November 7, 2022 to November 10, 2022. 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 February 13, 2023, 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 Saimon Islam at (213) 326-2600 or saimon.islam@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
Majed Ibrahim, Senior Utilities Engineer, ESRB, SED, CPUC
Saimon Islam, Utilities Engineer, ESRB, SED, CPUC

AUDIT FINDINGS

I. Records Review

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

- Map of the SCE Lugo Switching Center AOR
- Listing of addresses of all substations in SCE Lugo Switching Center AOR
- GO 174 Sub Inspection Program Summary 2022 Final Signed
- Section 6.9 Substation Inspections of SCE's Operators Manual
- SCE Substation Policies and Procedures
- SCE Lugo AOR Inspector Training Records
- Lugo Switching Center Substation Inspections
- Visual inspection checklist, substation equipment list, one-line diagrams and most recent electrical test for six selected substations
- Four most recent oil sample test results
- Pending and Completed Workorders for the year 2022
- Infrared testing for three selected substations in 2022

II. Field Inspections

My staff inspected the following substations during the field inspections:

Substation	Location	City
Phelan	Johnson Rd., 1/4 Mi. S/O Phelan Rd.	Phelan
Aqueduct	Topaz Ave. & Dartmouth St.	Hesperia
Savage	1st Ave. & Jasmine St.	Victorville
Hesperia	8886 G' Ave.	Hesperia
Apple Valley	10889 Deep Creek Rd., 1.5 Mi. S/O Bear Valley Rd.	Apple Valley
Rancho	TBD Hwy. 18, S/O Standing Rock	Apple Valley
Victorville	N/E C/O Sixth St. & 'B' St.	Victorville
Goldhill	750' E/O Holcomb Valley Rd.	Big Bear
Cottonwood	36651 Highway 18.	Lucerne Valley
Oro Grande	3Rd St. & Hill St.	Oro Grande
Rivertex	National Trails Hwy NW Of I-15	Victorville
Helendale	National Trails Hwy & 1/2 Mi. N/O Vista Rd.	Oro Grande
Bryman	Old Trails Hwy.	Oro Grande

III. 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:

Phelan Substation

- Lotto 12 kV Circuit Breaker had a bird's nest and papers on the top portion of it.

Aqueduct Substation

- The substation had erosion at one side of the perimeter fence.
- The No. 2 Bank 115/12 kV Transformer (east unit) had a weeping fan motor.
- Victor-Phelan 115 kV west line bell glass insulator had a broken portion.

Hesperia Substation

- A fire extinguisher in the control building did not have up-to-date monthly inspections (missing May and July) as required by California Code of Regulations (CCR) Title 19, Division 1, Chapter 3, Article 6, Section 574.1.

Apple Valley Substation

- Cochise 12 kV Circuit Breaker had a bird's nest on the B-phase.
- The No. 2 Bank 115/12 kV Transformer (east unit) had oil weeping from the gasket of the radiator and the cabinet door was tied by a rope.
- The No. 2 Bank 115/ 12kV Transformer (west unit) had a cabinet door tied by a rope.
- Cottonwood-Pluess-Savage 115 kV Circuit breaker had a bird's nest on A-phase.

Rancho Substation

- A fire extinguisher in the control building unit did not have annual inspection in violation of CCR Title 19, Division 1, Chapter 3, Article 6, Section 575.
- A 33 kV Relay had low level of oil indicated by A-phase gauge.

Victorville Substation

- Portland 33 kV Circuit Breaker had weeping.
- Portland 33 kV line Potential Transformer's (PT) gauge was illegible.
- The No. 1 Bank 33/4 kV had oil weeping from B and C phase.

Goldhill Substation

- A fire extinguisher in the control building did not have up-to-date monthly inspections as required by California Code of Regulations (CCR) Title 19, Division 1, Chapter 3, Article 6, Section 574.1.

Rivertex Substation

- A fire extinguisher in the control building unit did not have annual inspection in violation of CCR Title 19, Division 1, Chapter 3, Article 6, Section 575.
- The No. 2 Bank 115/13.8 kV had three inoperable cooling fans.
- The No. 1 Bank 115/13.8 kV had two inoperable cooling fans.

Helendale Substation

- The No. 2, 33 kV Circuit Breaker had a bird's nest.
- The No. 2 Bank 33 kV had an air filter stuck on top portion of it.

Goldhill Substation

- The No. 1 Bank 33/4 kV had oil weeping from C phase.