

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



August 22, 2023

SA2023-1063

Melvin Stark  
Principal Manager, Maintenance & Inspections/Asset Management  
Southern California Edison (SCE)  
3 Innovation Way  
Pomona, CA 91768

**SUBJECT:** Substation Audit of SCE's Lugo Switching Center - Hesperia

Mr. Stark:

On behalf of the Electric Safety and Reliability Branch of the California Public Utilities Commission (CPUC), Kyle King of my staff conducted a substation audit of SCE's Lugo Switching Center – Hesperia from June 12, 2023 to June 16, 2023. The audit included a review of SCE's records and field inspections of SCE's Lugo Switching Center – Hesperia substation 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 September 22, 2023, by electronic or hard copy, of all corrective measures taken by SCE to remedy and prevent such violations.

If you have any questions concerning this audit, you can contact Kyle King at (213) 222-3260 or [Kyle.King@cpuc.ca.gov](mailto: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: Audit Findings

Cc: Leslie Palmer, Director, Safety and Enforcement Division, CPUC  
Nika Kjensli, Program Manager, ESRB, SED, CPUC  
Kyle King, Utilities Engineer, ESRB, SED, CPUC

## **AUDIT FINDINGS**

### **I. Records Review**

During the audit, my staff reviewed the following records:

- SCE GO 174 Substation Inspection Process
- SCE GO 174 Substation Inspection Program
- SCE SOP Protection System Maintenance Program.
- Substation Operators Training Records
- Summary of Substation Inspections
- Inspection Checklists and One-Line Diagrams for ten substations
- Recent open and completed work orders
- Summary of results of Infrared Testing in 2022
- Oil sample testing results
- Infrared inspection records

## II. Field Inspections

My staff inspected the following substation facilities during the field inspection:

No.	Substation ID	Location
1	Aqueduct	Topaz Ave. & Dartmouth St., Hesperia, CA
2	Savage	1st Ave. & Jasmine St., Victorville, CA
3	Hesperia	8886 G Ave., Hesperia, CA
4	Apple Valley	10889 Deep Creek Rd., 1.5 Mi. S/O Bear Valley Rd., Apple Valley, CA
5	Lucerne	N/W C/O Barstow Rd. And Old Woman Springs Rd., Lucerne Valley, CA
6	Cottonwood	36651 Highway 18., Lucerne Valley, CA
7	Goldhill	TBD 750' E/O Holcomb Valley Rd., Next To County Dump, Big Bear
8	Wrightwood	Hwy 2. And Lone Pine Cyn Rd., Wrightwood, CA
9	Phelan	W/O Johnson Rd., 1/4 Mi. S/O Phelan Rd, Phelan, CA
10	Victorville	N/E C/O Sixth St. & 'B' St., Victorville, CA
11	Ridgecrest	Argus, Between Sanders and Fairview, Ridgecrest, CA
12	Downs	C/O Ridgecrest Blvd. And Downs, Ridgecrest, CA
13	Inyokern	TBD Inyokern Rd., 1/4 Mile E/O Hwy 395., Inyokern
14	Calgen	TBD West Inyokern Rd, Ridgecrest
15	Inyokern Town	Orchard Ave., Inyokern, CA
16	Trona	Athol St. 700 Ft. W/O Trona Rd., Trona, CA
17	Kerrgen	83220 Argus., Trona, CA
18	Searles	80000 Trona Rd., Trona, CA
19	Yermo	N/W C/O Yermo, And Dividing Line Rd., Yermo
20	Harvard	Hwy 91, 10 MI E/O Yermo & 1/2 MI W/O Harvard Off Ramp, Harvard
21	Gale	National Trails Hwy., 1.25 MI. E/O Daggett, Daggett
22	Barstow	S/E C/O Sixth St. And Hutchinson., Barstow
23	West Barstow	S/W C/O W. Main St. & 'H' St., Barstow

### **III. Field Inspection - Violations List**

My staff observed the following violations during the field inspections 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.*

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

#### **Savage Substation**

- Debris was found inside the substation.
- No. 1 Capacitors had a cracked fitting on a “hot stick bar”.
- No. 2 Bank Transformer 115/12 kV East Unit had loose cables and zip ties that were undone.

#### **Lucerne Substation**

- GO Bar 33 kV had a Potential Transformer that was leaking oil.

#### **Phelan Substation**

- 115 kV Transfer Bus needed “High Voltage” signage.
- No. 2 Bank Transformer 115/12 kV West Unit had two fans that were not operating.

#### **Victorville Substation**

- Debris was found inside the substation.
- 33 kV Bus Pot Relay was leaking oil on the B Phase and C Phase.
- No. 1 Bank Transformer 33/4 kV was leaking oil on the B Phase and the C Phase.
- For the 4 kV rack, a cap was missing on the hot stick holder (i.e., the container for storing the hot stick).
- No. 2 Bank Transformer 33/12 kV South Unit was leaking oil.

#### **Ridgecrest Substation**

- CAB Hildreth 4.8 kV Line Side Transformer was leaking oil.
- CAB Miracle City 4.8 kV Line Side Transformer was leaking oil.
- CAB Burroughs 4.8 kV Line Side Transformer was leaking oil.
- There wasn’t enough “High Voltage” and “Do Not Enter” signage around the perimeter of the substation.
- No. 1 Bank Transformer 33/4.8 kV Phase A was leaking oil.

### **Downs Substation**

- Debris was found inside the substation.

### **Inyokern Substation**

- No. 2 B Bank 115/33 kV Transformer was leaking oil.
- No. 1 B Bank 115/33 kV Transformer was leaking oil.

### **Searles Substation**

- There wasn't enough "High Voltage" and "Do Not Enter" signage around the perimeter of the substation.
- The substation fencing needed repairs.

### **Gale Substation**

- Bug 33 kV 100-0 Step Type 251 Amp Line Regulator was leaking oil.

### **Barstow Substation**

- Debris was found inside the substation.
- Need additional "High Voltage" signage to the No. 1 33 kV Transformer Capacitors Fence.