

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



January 3, 2023

SA2022-954

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

SUBJECT: Substation Audit of Southern California Edison Bishop-Mammoth Switching Center

Mr. Stark:

On behalf of the Electric Safety and Reliability Branch of the California Public Utilities Commission (CPUC), Calvin Choi and Bryan Pena of my staff conducted a substation audit of Southern California Edison (SCE) Bishop-Mammoth Switching Center from November 14, 2022 to November 18, 2022. The audit included a review of SCE's records and field inspections of SCE's 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 February 3, 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 Calvin Choi at (213) 266-4730 or Calvin.Choi@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: Lee Palmer, Director, Safety and Enforcement Division, CPUC
Nika Kjensli, Program Manager, ESRB, SED, CPUC
Calvin Choi, Utilities Engineer, ESRB, SED, CPUC

AUDIT FINDINGS

I. Records Review

During the audit, my staff reviewed the following records:

- SCE GO 174 Substation Inspection Practices
- Section 6.9 Substation Inspections, of SCE's Operators Manual
- SCE's Electrical Design Station Layout – Ground Testing
- SCE Substation Ground Grid Testing Technical Manual
- SCE RMP-02, Protection System Maintenance Program.
- SCE SC&M Maintenance and Inspection Manual Sect. 4, 5, and 6 (Oil Testing)
- Summary of SCE Mammoth Lakes District Substation Operators Training Records
- Summary of Substation Inspections in the Mammoth Lakes District
- Inspection Checklists and One-Line Diagrams for two selected substations
- Pending and Completed Workorders for the year 2021
- Summary of results of Infrared Testing in 2021
- Summary of results from substation Dissolved Gas Analysis performed in 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.

In 2021, SCE failed to complete 106 work orders by SCE's assigned due date.

III. Field Inspections

My staff inspected the following facilities during the field inspection:

No.	Substation Name	Address
1	BRIDGEPORT	Hwy 395, Bridgeport, CA
2	LUNDY	9 Miles N of Lee Vining, Lee Vining, CA
3	LEE VINING	Hwy 395 and Hwy 120, Lee Vining, CA
4	RUSH CREEK	6 Miles S/W Hwy 395 at June Lake, June Lake
5	JUNE LAKE	HWY 158., 3 MI.N/O JUNE LAKE VILLIAGE, June Lake, CA
6	SKILAND	Chateau Rd in Mammoth Village, Mammoth Village
7	MINARET	HWY 203., 5 MI. NW/O MAMMOTH VILLAGE, Mammoth Lakes, CA
8	CASA DIABLO	1 MI E/O Hwy 395 and Mammoth Rd., Mammoth Lakes, CA
9	MAGMAGEN	1 MI. E/O HWY 395 AND MAMMOTH RD., Mammoth Lakes, CA
10	ZACK	Chidago Canyon Rd., Bishop, CA
11	BISHOP PLANT 2	15 miles SW of Bishop on Hwy. 168, Bishop, CA
12	BISHOP PLANT 3	6 miles W of Bishop on Hwy. 168, Bishop, CA
13	BISHOP PLANT 4	6 miles W of Bishop on Hwy. 168, Bishop, CA
14	BISHOP PLANT 5	5 miles W. of Bishop on Hwy. 168, Bishop, CA
15	MT. TOM	Hwy 168, 5 Mi W/O Bishop, Bishop, CA
16	BISHOP PLANT 6	4 miles W. of Bishop on Hwy. 168, Bishop, CA
17	DEEP SPRINGS	20 MI NE/O Hwy 395 on Deep Springs, Big Pine, CA
18	FISH LAKE VALLEY	1 Mi S/O Hwy 168 at Nevada Border, Big Pine, CA

IV. 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:

Skiland Substation

- The painted ID markers on the transformers were faded and illegible.

Minaret Substation

- The signs on the relay cabinets were very deteriorated and crumbling.
- The fans on the transformers would not start, due to the fan being covered in ice/snow.

Casa Diablo Substation

- One cooling fan on the No. 1 Bank Transformer failed to start as expected.
- There were barrels left next to a circuit breaker that was not being worked on during the inspection.

Bishop Plant 2 Substation

- The handle for the cabinet on the Sabrina 12kV circuit breaker box was broken.

Bishop Plant 6 Substation

- The No. 1 Bank Transformer was weeping oil from the radiator gaskets.