

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
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May 22, 2019

EA2019-830

Randy R. Smith
Principle Manager, T&D Compliance Integration
Southern California Edison Company
1 Innovation Way
Pomona, CA 91786

Subject: Audit of Southern California Edison's Victorville District

Mr. Smith:

On behalf of the Electric Safety and Reliability Branch of the California Public Utilities Commission (CPUC), Eric Ujiiye and Saimon Islam of my staff conducted an electrical distribution audit of Southern California Edison's (SCE) Victorville District from March 25, 2019 to March 29, 2019. 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 June 24, 2019, 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 Eric Ujiiye at (213) 620-2598 or eric.ujiiye@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: Elizaveta Malashenko, Director, Safety and Enforcement Division, CPUC
Lee Palmer, Deputy Director, Office of Utility Safety, SED, CPUC
Charlotte TerKeurst, Program Manager, Electric Safety and Reliability Branch, CPUC
Eric Ujiiye, Utilities Engineer, ESRB, CPUC

AUDIT FINDINGS

I. Records Review

During the audit, my staff reviewed the following records:

- Overhead and underground detailed inspections records.
- Completed and pending corrective action work orders.
- Pole loading calculations.
- Safety hazard notifications.
- Intrusive test records
- SCE's documented inspection program.

II. Records Review – Violations List

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

GO 95, Rule 31.1, Design, Construction and Maintenance, states in part:

For all particulars not specified in these rules, design, construction, and maintenance should be done in accordance with accepted good practice for the given local conditions known at the time by those responsible for the design, construction, or maintenance of communication or supply lines and equipment.

GO 95, Rule 31.2, Inspection of Lines, states in part:

Lines shall be inspected frequently and thoroughly for the purpose of ensuring that they are in good condition so as to conform with these rules. Lines temporarily out of service shall be inspected and maintained in such condition as not to create a hazard.

GO 165, Standard III-B, Distribution Facilities, Standards for Inspections, states in part:

Each utility subject to this General Order shall conduct inspections of its distribution facilities, as necessary, to ensure reliable, high-quality, and safe operation, but in no case may the period between inspections (measured in years) exceed the time specified in [Table 1](#).

SCE's records indicated that from 2013 to 2018, SCE completed 2,435 annual grid patrol inspections and 686 overhead detailed inspections past their scheduled due date.

SCE's records indicated that from 2016 to 2018, SCE completed 34 work orders past their due date for corrective action. Additionally, as of the date of the audit, SCE had 713 open work orders that were past their scheduled due date for corrective action.

GO 128, Rule 17.1, Design Construction and Maintenance, states in part:

Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service.

GO 128, Rule 17.2, Inspection, states in part:

Systems shall be inspected by the operator frequently and thoroughly for the purpose of insuring that they are in good condition and in conformance so as to conform with these rules.

GO 165, Standard III-B, Distribution Facilities, Standards for Inspections, states in part:

Each utility subject to this General Order shall conduct inspections of its distribution facilities, as necessary, to ensure reliable, high-quality, and safe operation, but in no case may the period between inspections (measured in years) exceed the time specified in [Table 1](#).

SCE's records indicated that from 2013 to 2018, SCE completed 9,322 underground detailed inspections past their scheduled due date.

III. Field Inspections

My staff inspected the following facilities during the field inspection:

No.	Structure ID.	Type of Structure	Location
1	2342411E	pole	Phelan
2	2342411E	pole	Phelan
3	4235116E	pole	Phelan
4	4235116E	pole	Phelan
5	4235115E	pole	Phelan
6	4235114E	pole	Phelan
7	4235113E	pole	Phelan
8	4235112E	pole	Phelan
9	4235111E	pole	Phelan
10	4235110E	pole	Phelan
11	4067498E	pole	Phelan
12	4067497E	pole	Phelan
13	1857791E	pole	Phelan
14	66977S	pole	Hesperia
15	66977S	pole	Hesperia
16	4355603E	pole	Hesperia
17	66806S	pole	Hesperia
18	563534S	pole	Hesperia
19	4553005E	pole	Hesperia
20	4343943E	pole	Hesperia
21	563531S	pole	Hesperia
22	563200S	pole	Hesperia
23	4458840E	pole	Apple Valley
24	4135573E	pole	Apple Valley
25	4135572E	pole	Apple Valley
26	4361508E	pole	Apple Valley
27	4135571E	pole	Apple Valley
28	4267505E	pole	Apple Valley
29	4714749E	pole	Apple Valley
30	265553S	pole	Apple Valley
31	1600534E	pole	Apple Valley
32	2001829E	pole	Apple Valley
33	4361507E	pole	Apple Valley
34	1600533E	pole	Apple Valley
35	265555S	pole	Apple Valley
36	367937S	pole	Lucerne Valley
37	4646390E	pole	Hesperia
38	1553141E	pole	Hesperia
39	4591948E	pole	Hesperia
40	4069253E	pole	Hesperia
41	4185598E	pole	Hesperia
42	1544608E	pole	Hesperia
43	3365197E	pole	Hesperia
44	266688S	pole	Hesperia

45	4343943E	Pole	Hesperia
46	563178S	Pole	Hesperia
47	2233220E	Pole	Hesperia
48	2104397E	Pole	Hesperia
49	P5180324	Pad-mounted Transformer	Apple Valley
50	V5580426	Vault	Apple Valley
51	P5347643	Pad-mounted Transformer	Apple Valley
52	M5011177	Manhole Transformer	Victorville
53	P5416821	Pad-mounted Transformer	Victorville
54	P5431385	Pad-Mounted Transformer	Victorville
55	P5386582	Pad-Mounted Transformer	Victorville

IV. Field Inspection Violations List

My staff observed the following violations during the field inspections portion of the audit:

GO 95, Rule 51.6-A, Marking and Guarding, High Voltage Marking of Poles, states in part:

Poles which support line conductors of more than 750 volts shall be marked with high voltage signs. This marking shall consist of a single sign showing the words "HIGH VOLTAGE", or pair of signs showing the words "HIGH" and "VOLTAGE", not more than six (6) inches in height with letters not less than 3 inches in height. A pair of signs may be stacked to a height of no more than 12 inches. Such signs shall be of weather and corrosion-resisting material, solid or with letters cut out therefrom and clearly legible.

The high voltage signs on each of the following SCE poles were damaged and/or missing:

- 4235115E – The marking displayed “VOL” for the voltage portion of the marking.
- 4235114E – The section of the voltage marking was damaged and illegible.
- 4235112E – Both sides of the crossarm displayed damaged incomplete “HIGH” and “VOLTAGE” marking.
- 4235111E – Both sides of the crossarm displayed damaged incomplete “HIGH” and “VOLTAGE” marking.
- 4235110E – The marking displayed “TAGE” of the voltage portion of the marking.
- 4067498E – The “HIGH” and “VOLTAGE” markers are missing.
- 4067497E – The marking is damaged displaying “VOLTAG” for the voltage portion.
- 4259925E – The “HIGH” and “VOLTAGE” markers are missing.
- 563534S – The “HIGH” and “VOLTAGE” markers are missing.
- 563531S – The “HIGH” and “VOLTAGE” markers are missing on the buck-arm and the “HIGH” portion is missing on the upper most crossarm.
- 563200S – The uppermost double crossarm was missing the “VOLTAGE” in one direction and completely damaged in the other direction.
- 4361508E – The marking was damaged and illegible.
- 4361507E – The high voltage markers were missing on the cross arm.
- 1600533E – The uppermost cross arm is missing the “VOLTAGE” portion on both sides of the crossarm.

GO 95, Rule 31.1, Design Construction and Maintenance, states in part:

Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service.

GO 95, Rule 54.6-B, Ground Wires, states in part:

That portion of the ground wires attached on the face or back of wood crossarms or on the surface of wood poles and structures shall be covered by a suitable protective covering (see Rule 22.8).

The SCE ground moulding on each of the following SCE poles was damaged:

- 2342411E – ground moulding was damaged and missing a section at the communication level.
- 66977S – the ground molding was bowed outward, exposing the SCE ground wire; additionally, a communication conductor – installed *through* the resulting gap caused by the bowed ground moulding – was contacting the SCE ground wire.
- 1600534E - ground moulding was bowing from the surface of the pole exposing the ground wire.
- 2001829E – the ground molding was bowed outward, exposing the SCE ground wire; additionally, a communication conductor – installed *through* the resulting gap caused by the bowed ground moulding – was contacting the SCE ground wire.
- 1544608(E) – the ground moulding was missing a section at the public level, exposing the ground wire

GO 95, Rule 91.3-B, Stepping, Location of Steps, states:

The lowest step shall be not less than 8 feet from the ground line, or any easily climbable foreign structure from which one could reach or step. Above this point steps shall be placed, with spacing between steps on the same side of the pole not exceeding 36 inches, at least to that conductor level above which only circuits operated and maintained by one party remain. Steps or fixtures for temporary steps shall be installed as part of a pole restoration process. Steps shall be so placed that runs or risers do not interfere with the free use of the steps

The lowest pole step on Pole number 4594026E was located 7 feet 2 inches above ground level.

GO 128, Rule 35.3, Warning Signs, states in part:

Warning signs indicating high voltage shall be installed on an interior surface, or barrier if present, inside the entrance of vaults, manholes, handholes, pad mounted transformer compartments, and other above ground enclosures containing exposed live parts above 750 volts.

A warning sign indicating high voltage was not installed on the interior surface of SCE Manhole number V5580426.