STATE OF CALIFORNIA ARNOLD SCHWARZENEGGER, *Governor*

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

September 1, 2010 FILE NO. EA-2010-17

Mel Stark
Manager, Maintenance & Inspection
Southern California Edison
2885 W. Foothill Blvd.
Rialto, CA 92376

SUBJECT: Electric Audit of Southern California Edison Company (SCE) South Bay District overhead and underground facilities

Dear Mr. Stark:

On behalf of the Utilities Safety and Reliability Branch of the California Public Utilities Commission, I conducted an electric audit of SCE's facilities in South Bay District on August 9-13, 2010.

As part of the audit, I conducted inspections in areas where SCE recently performed detailed inspections of overhead and underground facilities. I found that SCE's personnel did not document all General Orders (GOs) 95 and 128 violations at the time of inspections. Attached to this letter is a list of the violations I observed during the audit.

Within 30 days from the date of this letter, please advise me of the corrective measures your company will take to ensure that GOs 95 and 128 violations are documented and addressed in your inspection records.

If you have any questions, please contact me at (213) 576-7016.

Sincerely,

Mahmoud (Steve) Intably, P.E.
Utilities Engineer
Utilities Safety and Reliability Branch
Consumer Protection and Safety Division

cc: Moses M. Varela, Manager Program Contract 3, Dist. Insp. & Maint. Program Power Delivery, 10060 Telegraph Road, Ventura, CA 93004

Enclosure: Inspection Report

Inspection Report

List of General Orders (GOs) 95 and 128 violations that were observed during the audit and were not documented in SCE's inspection records.

GO 95, Rule 18B Notification of Safety Hazards

Rule 18B states:

> *"If a company, while inspecting its facilities, discovers a safety hazard on or near a communications facility, electric transmission or distribution facility involving another company, the inspecting company shall notify the other company and/or facility owner of such safety hazard no later than 10 business days after the discovery..."*

Pole number had broken lashing wires belonging to a telephone company and SCE did not notify the telephone company of the broken lashing wires.

GO 95, Rule 31.6 Abandoned Lines

Rule 31.6 states:

> *"Lines or portions of lines permanently abandoned shall be removed by their owners so that such lines shall not become a public nuisance or a hazard to life or property..."*

Pole number 1036250E had an abandoned insulator

GO 95, Rule 35 Tree Trimming

Rule 35 states:

> *"Communication and electric supply circuits, energized at 750 volts or less, including their service drops, should be kept clear of vegetation in new construction and when circuits are reconstructed or repaired, whenever practicable. When a utility has actual knowledge, obtained either through normal operating practices or notification to the utility, that any circuit energized at 750 volts or less shows strain or evidences abrasion from vegetation contact, the condition shall be corrected by reducing conductor tension rearranging or replacing the conductor, pruning the vegetation or placing mechanical protection on the conductor(s). For the purpose of this rule, abrasion is defined as damage to the insulation resulting from the friction between the tree and conductor. Scuffing or polishing of the insulating covering is not considered abrasion. Strain on a conductor is present when deflection causes additional tension beyond the allowable tension of the span. Contact between vegetation and conductors, in and of itself, does not constitute a violation of the rule."*

Each of the following poles had a service drop or an overhead conductor in contact with trees and showing signs of abrasion:

- 1036250E
- 1036337E
- 1006607E
- 1010713H
- 1006476E
- 1084263E
- 1006640E

GO 95, Rule 44.3 Replacement

Rule 44.3 states:

> *"Lines or parts thereof shall be replaced or reinforced before safety factors have been reduced (due to deterioration) in Grades "A" and "B" construction to less than two–thirds of the construction safety factors specified in Rule 44.1 and in Grades "C" and "F" construction to less than one–half of the construction safety factors specified in Rule 44.1 . Poles in Grade "F" construction shall also conform to the requirements of Rule 81.3–A .*
>
> *In no case shall the application of this rule be held to permit the use of structures or any member of any structure with a safety factor less than one."*

Pole number 1083485E had a broken guy wire.

GO 95, Rule 51.6A High Voltage Marking

Rule 51.6A states:

> *"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. Such signs shall be of weather and corrosion–resisting material, solid or with letters cut out therefrom and clearly legible."*

Each of the following poles supported line conductors of more than 750 volts and were not marked with high voltage signs:

- 1083500E
- 811489E
- 1006476E

GO 95, Rule 54.6B Ground Wires

Rule 54.6B states:

> *"That portion of the ground wire 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)."*

Each of the following poles had a broken ground molding:

- 1084258E
- 1084265E
- 1083500E
- 1083499E
- 1139311E
- 1006608E

Poles numbered 1083702E and 811489E had a bent or a turned step.
Pole number 1036250E had a service drop with a damaged attachment on the roof edge of a house.
Poles numbered 223880E and 1006476E had sunken insulators.

GO95, Rule 54.6E Risers

Rule 54.6E requires risers to be encased. Pole number 1083702E had a damaged riser's casing.

GO 95, Rule 54.8B, Table 10

Rule 54.8B, Table 10 requires a service drop of 0-750 volt to have a vertical clearance of 8 ft above other buildings on the same premises. Pole number 1006631E had a service drop passing a structure on the same premises with vertical clearance less than 8 ft.

Rule 54.8B, Table 10 requires a service drop of 0-750 volt to have a vertical clearance of 0.5 inches above the roof of the building served. Pole number 1036338E had a service drop touching the roof of the house it served.

GO 95, Rule 54.8C4 Clearances between Supply Service Drops, 0 – 750 Volt and Communication Service Drops

Rule 54.8C4 states:

> *"The radial clearance between supply service drop conductors and communication service drop conductors may be less than 48 inches as specified in Table2, Column C, Cases 4 and 9; Column D, Cases 3 and 8, but shall be not less than 24 inches. Where within 15 feet of the point of attachment of either service drop on a building, this clearance may be further reduced but shall be not less than 12 inches."*

Poles numbered 1036856E and 223880E supported service drops within 15 ft from the point of attachment and had less than 12 inches radial clearance from communications service drops.

GO 95, Rule 54.9C1 Conductor Material, Urban Districts

Rule 54.9C1 states:

> *"Conductors in rack construction in urban districts shall have a covering not less than the equivalent of weather–resistant covering."*

Poles numbered 1036250E and 1084254E had conductors in rack construction with damaged weather- resistant covering.

GO 95, Rule 56.2 Overhead Guys, Anchor Guys and Span Wires

Rule 56.2 states:

> *"Where mechanical loads imposed on poles, towers, or structures are greater than can be supported with safety factors as specified in Rule 44, additional strength shall be provided by the use of guys or other suitable construction. Where guys are used with poles or similar structures capable of considerable deflection before failure, the guys shall be able to support the entire load, the pole below the point of guy attachment acting merely as a strut.*
>
> *Guys shall be attached to structures, as nearly as practicable, at the center of load. They shall be maintained taut and of such strength as to meet the safety factors of Rule 44."*

Each of the following poles had a loose guy wire:

- 1084256E
- 1084258E
- 1006475E
- 1085257E
- 1083488E
- 4756939E

GO 95, Rule 56.9 Guy Marker (Guy Guard)

Rule 56.9 states:

> *"A substantial marker of suitable material, including but not limited to metal or plastic, not less than 8 feet in length, shall be securely attached to all anchor guys. Where more than one guy is attached to an anchor rod, only the outermost guy is required to have a marker."*

Each of the following poles had an anchor guy exposed to traffic and did not have a guy marker:

- 1084256E
- 1084257E
- 1139310E

GO 95, Rule 38 Minimum Clearances of Wires from Other Wires

Rule 38 states:

> *"The minimum vertical, horizontal or radial clearances of wires from other wires shall not be less than the values given in Table 2 and are based on a temperature of 60° F. and no wind. Conductors may be deadended at the crossarm or have reduced clearances at points of transposition, and shall not be held in violation of Table 2, Cases 8–15 , inclusive.*
>
> *The clearances in Table 2 shall in no case be reduced more than 10 percent because of temperature and loading as specified in Rule 43 or because of a difference in size or design of the supporting pins, hardware or insulators. All clearances of less than 5 inches shall be applied between surfaces, and clearances of 5 inches or more shall be applied to the center lines of such items."*

Pole number 4527450E had a triplex cable with less than 3 feet of radial clearance from a communication cable.

Pole number 1084261E had 12 kV conductors with less than 4 feet of vertical clearance from a telephone service drop.

GO 95, Rule 93 Climbing Space

Rule 93 states:

> *"Climbing space shall be provided on all jointly used poles which support conductors and the provisions of Rules 54.7 and 84.7 are directly applicable to such poles. Climbing space on jointly used poles shall be so correlated between conductor levels that its position in relation to the pole is not changed by more than 90 degrees in a vertical distance of less than 8 feet. Climbing space shall be maintained from the ground level."*

Pole number 1006631E had a riser installed in climbing space.

GO 128, Rule 32.7 Covers

Rule 32.7 states:

"*Manholes, handholes, and subsurface equipment enclosures while not being worked in,*

shall be securely closed by covers of sufficient strength to sustain such loads as may reasonably be imposed upon them and arrangements shall be such that a tool or appliance shall be required for their opening and cover removal."

Structure number V5463271 had unsecured cover (missing bolt).

GO 165, Section IV, Paragraph 5: Standards for Inspection, Record-keeping, and Reporting

Paragraph 5 states:

> *"For all inspections, within a reasonable period, company records shall specify the circuit, area, or equipment inspected, the name of the inspector, the date of the inspection, and any problems identified during each inspection, as well as the scheduled date of corrective action. For detailed and intrusive inspections, companies shall also rate the condition of inspected equipment. Upon completion of corrective action, company records will show the nature of the work, the date, and the identity of persons performing the work"*

SCE audit summary report for 2009-2010 showed that:

1. One Work Order rated priority 1 was completed late.
2. Two Work Orders rated priority 2 were completed late.
3. 483 Work Orders rated priority 2 were still open/past due.