

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
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July 27, 2021

EA2021-890

Scott Hirashima, P.E.
Manager of Regulatory Standards and Compliance
Regulatory Standards and Compliance Section
City of Los Angeles, Department of Water and Power (LADWP)
111 North Hope Street, Room 1246
Los Angeles, CA 90012

SUBJECT: Audit of LADWP's West LA District

Mr. Hirashima:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Eric Ujiiye and Stacey Ocampo of my staff conducted an electric distribution audit of LADWP's West LA District from March 1, 2021 to March 5, 2021. The audit included a review of LADWP's inspection and maintenance records and a field inspection of LADWP'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 August 27, 2021, by electronic or hard copy, of all corrective measures taken by LADWP 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

Enclosure: Audit Findings

Cc: Lee Palmer, Director, Safety and Enforcement Division, CPUC
Nika Kjensli, Program Manager, ESRB, CPUC
Eric Ujiiye, Utilities Engineer, ESRB

Audit Findings

I. Records Review

During the audit, my staff reviewed the following records:

- Overhead and underground detailed inspection records.
- Completed and pending corrective action work orders.
- Pole loading calculations.
- Intrusive test records.
- LADWP's visual inspection program.
- ESRB's interview of two LADWP inspectors.

II. Records Review – Violations List

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

GO 165, Section III-B, Standards for Inspection, states:

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.

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

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

LADWP's inspection records indicated that from 2016 to 2020, the following number of overhead patrol inspections were either completed or pending completion past the assigned due dates:

- Late Overhead Patrol Inspections
 - Tier 1 – 84,325
 - Tier 2 – 15,509

LADWP's inspection records indicated that from 2010 to 2020, the following number of overhead detailed inspections were either completed or pending completion past the assigned due date:

- Late Overhead Detailed Inspections
 - Tier 1 – 14,770
 - Tier 2 – 5,352

GO 128, Rule 17.2, Inspection, states:

Systems shall be inspected by the operator frequently and thoroughly for the purpose of insuring that they are in good condition and in conformance with all applicable requirements these rules.

LADWP inspection records indicated that from 2016 to 2020, the following number of underground patrol inspections were either completed or pending completion past the assigned due date:

- Late Underground Patrol Inspections
 - Tier 1 – 14,876
 - Tier 2 – 9,542

LADWP inspection records indicated that from 2010 to 2020, the following number of underground detailed inspections were either completed or pending completion past the assigned due date:

- Late Underground Detailed Inspections
 - Tier 1 – 5,919
 - Tier 2 – 4,408

GO 95, Rule 18, Rule 18-B1, Maintenance Programs, states in part:

Companies shall undertake corrective actions within the time periods stated for each of the priority levels set forth below. Scheduling of corrective actions within the time periods below may be based on additional factors, including the following factors, as appropriate ...

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.

LADWP's records indicated that from 2016 to 2020, LADWP completed 3,334 overhead work orders past LADWP's 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.

LADWP's records indicated that from 2016 to 2020, LADWP completed 647 underground work orders past LADWP's scheduled due date for corrective action.

III. Field Inspection

My staff inspected the following facilities during the field inspection:

No.	Structure ID.	Type of Structure	Location
1	268829M	Pole	Brentwood Park
2	132379M	Pole	Brentwood Park
3	373816M	Pole	Brentwood Park
4	116591M	Pole	Brentwood Park
5	199105M	Pole	Brentwood Park
6	203765M	Pole	Brentwood Park
7	421743M	Pole	Brentwood Park
8	421744M	Pole	Brentwood Park
9	98932M	Pole	Brentwood Park
10	245937M	Pole	Brentwood Park
11	301796M	Pole	Brentwood Park
12	389596M	Pole	Brentwood Park
13	24636M	Pole	Brentwood Park
14	319092M	Pole	Brentwood Park
15	425770M	Pole	Brentwood Park
16	72877M	Pole	Brentwood Park
17	419646M	Pole	Brentwood Park
18	72876M	Pole	Brentwood Park
19	24635M	Pole	Brentwood Park
20	392082M	Pole	Brentwood Park
21	444157M	Pole	Palms
22	245384M	Pole	Palms
23	426865M	Pole	Palms
24	428291M	Pole	Palms
25	245382M	Pole	Palms
26	124615M	Pole	Palms
27	288732M	Pole	Palms
28	572708H	Pole	Rancho Park
29	148701M	Pole	Rancho Park
30	572709H	Pole	Rancho Park
31	572710H	Pole	Rancho Park
32	572711H	Pole	Rancho Park
33	243528M	Pole	Rancho Park
34	288709M	Pole	Rancho Park
35	401083M	Pole	Rancho Park
36	784892H	Pole	Rancho Park
37	368927M	Pole	Rancho Park
38	401356M	Pole	Rancho Park
39	401360M	Pole	Rancho Park

40	1324946	Pad Mounted Transformer	Los Lioness Canyon
41	1574748	Pad Mounted Transformer	Los Lioness Canyon
42	1327956	Handhole	Los Lioness Canyon
43	1334135	Vault	Los Lioness Canyon
44	1334085	Pad Mounted Transformer	Los Lioness Canyon
45	1334044	Pad Mounted Transformer	Los Lioness Canyon
46	1334457	Pole	Beverly Hills
47	9951 Liebe Dr	Pole	Beverly Hills
48	164353M	Pole	Beverly Hills
49	1030101M	Pole	Beverly Hills
50	372420M	Pole	Beverly Hills
51	387253M	Pole	Beverly Hills
52	34180M	Pole	Beverly Hills
53	34181M	Pole	Beverly Hills
54	34182M	Pole	Beverly Hills
55	9950 Liebe Dr	Pole	Beverly Hills
56	9940 Liebe Dr	Pole	Beverly Hills
57	9611 Yoakum Dr	Pole	Beverly Hills
58	192538M	Pole	Beverly Hills
59	192537M	Pole	Beverly Hills
60	9617 Yoakum Dr	Pole	Beverly Hills
61	9631 Yoakum Dr	Pole	Beverly Hills
62	192536M	Pole	Beverly Hills
63	9636 Yoakum Dr	Pole	Beverly Hills
64	9642 Yoakum Dr	Pole	Beverly Hills
65	9643 Yoakum Dr	Pole	Beverly Hills
66	9649 Yoakum Dr	Pole	Beverly Hills
67	9655 Yoakum Dr	Pole	Beverly Hills
68	192535M	Pole	Beverly Hills
69	374452M	Pole	Beverly Hills
70	2625 Deep Canyon Dr	Pole	Beverly Hills
71	395557M	Pole	Beverly Hills
72	398654M	Pole	Beverly Hills
73	2606 Deep Canyon Dr	Pole	Beverly Hills
74	2601 Deep Canyon Dr	Pole	Beverly Hills
75	395471M	Pole	Beverly Hills
76	166200M	Pole	Beverly Hills
77	2610 Hutton Dr	Pole	Beverly Hills

IV. Field Inspection – Violations List

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 the following LADWP poles were damaged and/or missing:

- Pole 199105M – The marking “Voltage” was not displayed on one side of the upper crossarm supporting primary conductors nor on the surface of the pole.
- Pole 72876M - The marking “Voltage” was not displayed on one side of the upper crossarm supporting primary conductors nor on the surface of the pole.
- Pole 72877M - The markings “HIGH” and “VOLTAGE” signs were missing from both sides of the crossarm supported on the pole.
- Pole 288732M - The markings “HIGH” and “VOLTAGE” signs were missing from both sides of the upper crossarm supporting primary conductors nor on the surface of the pole.
- Pole 572709H - The markings “HIGH” and “VOLTAGE” signs were missing on one side of the upper crossarm supporting primary conductors nor on the surface of the pole.
- Pole 572711H - The marking “Voltage” was damaged on one side of the upper crossarm supporting primary conductors attached to the pole.
- Pole 784892H - The markings “HIGH” and “VOLTAGE” signs were missing from both sides of the upper crossarm supporting primary conductors nor on the surface of the pole.
- Pole 387253M - The marking “Voltage” was not displayed on one side of the upper crossarm supporting primary conductors nor on the surface of the pole.
- Pole 34180M - The markings “HIGH” and “VOLTAGE” signs were missing on one side of the upper crossarm supporting primary conductors nor on the surface of the pole.
- Pole 34181M - The marking “Voltage” was damaged on one side of the upper crossarm supporting primary conductors attached to the pole.
- Pole 34182M - The markings “HIGH” and “VOLTAGE” signs were missing from both sides of the upper crossarm supporting primary conductors nor on the surface of the pole.
- Pole 192536M - The markings “HIGH” and “VOLTAGE” signs were missing from both sides of the upper crossarm supporting primary conductors nor on the surface of the pole.
- Pole 3374452M - The marking “Voltage” was damaged on one side of the upper crossarm supporting primary conductors attached to the pole.

GO 95, Rule 54.7, Climbing and Working Space, states in part:

Climbing space shall be maintained from the ground level. Climbing space, measured from center line of pole, shall be provided on one side or in one quadrant of all poles or structures with dimensions as specified in the following ...

The climbing space on each of the following LADWP poles was obstructed by vegetation:

- 132379M
- 72877M
- 245382M
- 34180M
- 34182M
- 374452M
- 192537M

GO 95, Rule 31.6, Abandoned Lines, states in part:

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.

An abandoned ground wire was still attached to Pole No. 72876M.

General Order 95, Rule 38 - Minimum Clearances of Wires from Other Wires, Table 2, Column C, Case 19 requires the minimum radial clearance between guys and span wires passing communication conductors supported on the same poles to be three inches.

- Pole No. 373816M - a span guy wire was contacting a communication conductor attached to the same pole.
- Pole No. 243528M - a span guy wire was contacting a communication conductor attached to the same pole.

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 ground moulding attached to Pole 368927M was damaged.

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.

LADWP facilities on the following poles required maintenance:

- Pole 572709H: the traffic guard attached to the pole was damaged.
- Pole 368927M: the traffic guard attached to the pole was damaged.
- Pole 1030101M: the visibility strip was damaged.
- Pole 148701M: two of the insulators attached to the primary crossarm were “sunken”.
- Pole 148701M: the secondary double crossarm attached to the pole was split and held together by the supporting bolts.
- Pole 572709H: two of the insulators on the primary crossarm were “sunken”.
- Pole 572709H: the top secondary double crossarm attached to the pole was severely deteriorated.
- Pole 164353M: the double primary crossarm attached to the pole was deteriorating and splitting.
- Pole 572711H: the lowest pole step was missing.
- Pole 784892H: a pole step was rotated and bent.
- Pole 784892H: the bottom bolt was missing from the hanger attaching the transformer to the pole.
- Pole 116591M: the vehicle struck pole was detached at the base and left in an unsafe condition.

A tree was straining a down guy wire on the following poles, causing the guy wire to deflect:

- 421744M – Two down guy wires on the same pole were being deflected by tree branches.
- 395557M

GO 95, Rule 18.B, Reporting and Resolution of Safety Hazards Discovered by Utilities, Notifications of Safety Hazards, states in part:

If a company, while performing inspections of its facilities, discovers a safety hazard(s) on or near a communications facility or electric facility involving another company, the inspecting company shall notify the other company and/or facility owner of such safety hazard(s) no later than 10 business days after the discovery.

LADWP did not report the third-party safety hazards on the following poles:

- Pole 374452M – A third-party communications span was attached to a crossarm via a rope.
- Pole 124614M – A third-party communications down guy wire was detached from the anchor and abandoned.
- Pole 23528M - A third-party communications down guy wire was detached from the anchor and abandoned.
- Pole 312053M – A third-party communications conductor was abandoned and left attached at the communications level.

GO 95, Rule 31.6, Abandoned Lines, states in part:

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. For the purposes of this rule, lines that are permanently abandoned shall be defined as those lines that are determined by their owner to have no foreseeable future use.

The secondary crossarm attached to Pole 288709M was abandoned.

GO 128, Rule 17.1, 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 [the] communication or supply lines and equipment.

The conductor rack within Vault number 1334135 was deteriorated and was maintained for its intended use.

GO 128, Rule 32.7, Covers, states in part:

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.

The underground access panel cover for pad-mounted transformer 1334457 was missing a bolt.