

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



April 8, 2019

EA2018-825

Steve Johal
Work Order/Asset Manager
Riverside Public Utilities
2911 Adams Street
Riverside, CA. 92504

Subject: Audit of Riverside Public Utilities

Mr. Johal:

On behalf of the Electric Safety and Reliability Branch of the California Public Utilities Commission (CPUC), Howard Huie of my staff conducted an electric distribution audit of Riverside Public Utilities (RPU) from October 15, 2018 to October 18, 2018. The audit included a review of RPU's records and field inspections of RPU'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 May 8, 2019, by electronic or hard copy, of all corrective measures taken by RPU to remedy and prevent such violations.

If you have any questions concerning this audit, you can contact Howard Huie at (213) 620-6503 or howard.huie@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, CPUC
Charlotte TerKeurst, Program Manager, Electric Safety and Reliability Branch, CPUC
Howard Huie, 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
- RPU's documented inspection program.

II. Records Review – Violations List

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

General Order 165, Section III (C), Record Keeping, states:

The utility shall maintain records for (1) at least ten (10) years of patrol and detailed inspection activities, and (2) the life of the pole for intrusive inspection activities. Such records shall be made available to parties or pursuant to Commission rules upon 30 days notice. Commission staff shall be permitted to inspect such records consistent with Public Utilities Code Section 314 (a).

For all inspections records shall specify the circuit, area, facility or equipment inspected, the inspector, the date of the inspection, and any problems (or items requiring corrective action) identified during each inspection, as well as the scheduled date of corrective action.

Riverside Public Utilities (RPU) keeps records of all Patrol inspections performed and scheduled but does not document Patrol inspections that are outstanding. Instead, RPU flags a circuit as overdue and moves its inspection to the following month and so forth. The otherwise overdue Patrol inspection will not show as outstanding.

III. Field Inspections

My staff inspected the following facilities during the field inspection:

No.	Structure ID.	Type of Structure	Location
1	31722J	Pole	Riverside
2	11878J	Pole	Riverside
3	11880J	Pole	Riverside
4	38832	Pole	Riverside
5	J34200	Pole	Riverside
6	24245J	Pole	Riverside
7	11883J	Pole	Riverside
8	33336J	Pole	Riverside
9	26283J	Pole	Riverside
10	19737J	Pole	Riverside
11	717422H	Pole	Riverside
12	J34243	Pole	Riverside
13	26U17J	Pole	Riverside
14	18188J	Pole	Riverside
15	18190J	Pole	Riverside
16	18191J	Pole	Riverside
17	18192J	Pole	Riverside
18	18194J	Pole	Riverside
19	18196J	Pole	Riverside
20	18197J	Pole	Riverside
21	1135J	Pole	Riverside
22	11476J	Pole	Riverside
23	11477J	Pole	Riverside
24	11478J	Pole	Riverside
25	5042J	Pole	Riverside
26	11408J	Pole	Riverside
27	11409J	Pole	Riverside
28	19970J	Pole	Riverside
29	40394J	Pole	Riverside
30	40393J	Pole	Riverside
31	16330J	Pole	Riverside
32	646089H	Pole	Riverside
33	757079H	Pole	Riverside
34	57078H	Pole	Riverside
35	J34335	Pole	Riverside
36	757076H	Pole	Riverside
37	658264H	Pole	Riverside
38	26277J	Pole	Riverside
39	757080J	Pole	Riverside
40	25275J	Pole	Riverside
41	24586J	Pole	Riverside
42	812076H	Pole	Riverside

43	19969J	Pole	Riverside
44	717382H	Pole	Riverside
45	665571H	Pole	Riverside
46	25799J	Pole	Riverside
47	22138J	Pole	Riverside
48	511968H	Pole	Riverside
49	32979J	Pole	Riverside
50	22146J	Pole	Riverside
51	22526J	Pole	Riverside
52	777999H	Pole	Riverside
53	27492J	Pole	Riverside
54	J37968	Pole	Riverside
55	J39980	Pole	Riverside
56	41013J	Pole	Riverside
57	J37956	Pole	Riverside
58	41015J	Pole	Riverside
59	J35423	Pole	Riverside
60	28243J	Pole	Riverside
61	16488J	Pole	Riverside
62	4385J	Pole	Riverside
63	694605H	Pole	Riverside
64	22432J	Pole	Riverside
65	PS361	Switch	Riverside
66	PS1125	Switch	Riverside
67	PD732	Switch	Riverside
68	PSE7211	Switch	Riverside
69	PSE12503	Switch	Riverside
70	PSE12809	Switch	Riverside
71	PSE1250	Switch	Riverside
72	PSE12419	Switch	Riverside
73	PJC12420	Primary Junction Cabinet	Riverside
74	PJC12571	Primary Junction Cabinet	Riverside
75	PJC12504	Primary Junction Cabinet	Riverside
76	P12418	Transformer	Riverside
77	P12572	Transformer	Riverside
78	P8661	Transformer	Riverside
79	P12870	Transformer	Riverside
80	BTE1832	Transformer	Riverside
81	P9082	Transformer	Riverside
82	P9083	Transformer	Riverside
83	P5356	Transformer	Riverside
84	2963	Vault	Riverside
85	1836	Vault	Riverside
86	@ 4905 Bushnell	Handhole	Riverside

IV. Field Inspection Violations List

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

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.

Facilities on the following poles were damaged:

- 11476J – Broken cross arm and loose insulator.
- 18194J – Turned pole step.
- 685264 – Bent pole step.
- 4385J – Bent pole step.

GO 95, Rule 31.6, Abandoned Lines, 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. 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 grounding rod at pole No. 757076H is abandoned but not removed.

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 RPU poles were damaged and/or missing:

- 24245J – Missing “HIGH” on the “HIGH VOLTAGE” sign.
- 26U17J – Missing “HIGH VOLTAGE” sign.
- 18194J – Missing “HIGH VOLTAGE” sign.
- 18196J – Missing “HIGH VOLTAGE” sign on lowest cross arms of primary conductors.
- 11477J – Missing “HIGH VOLTAGE” sign.
- 11478J – Missing “HIGH VOLTAGE” sign.

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 molding on the following poles was broken, peeling away from the pole, and/or exposing the ground wire:

- 26U17J – Grounding wire exposed due to warped ground molding.
- 40394J – Broken ground wire molding.
- 26277J – Broken ground wire molding.

GO 95, Rule 93, Climbing Space, 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.

The climbing space at pole No. 18197J was obstructed by a tree planted next to the pole.

GO 95, Rule 56.2 and 86.2, Use, states in part:

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.

The down guy wire on pole No. 812076H was not taut.

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 the following poles was either less than 8 feet from the ground or from an easily climbable foreign structure:

- 25799J – The bottom two pole steps were found to be less than 8' from the ground.
- 665571H – The bottom pole step was found to be less than 8' from the ground.

- 40393J – The bottom pole step easily accessible by a foreign structure.
- 26U17J – The bottom pole step easily accessible by a foreign structure.

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 concrete support ring for top screen for structure No B1832 is broken.

GO 128, Rule 34.3-B, Guarding Live Parts, states:

Compartments and enclosures which will, during normal operation, contain exposed live parts shall be designed and installed to prevent a person from passing a wire or other conducting material into such compartment from the outside when it is closed. This requirement is not intended to prevent normal work operations such as fishing ducts and installing cable.

Pad mounted transformer No. P9083 had a gap at the bottom that allows a person to pass a wire or other conductor material into the compartment from the outside when it is closed.

GO 128, Rule 35.3, Warning Signs - Vaults, states:

High voltage signs shall be installed inside the entrance of vaults with exposed live parts (>750 volts).

The following vaults contain exposed live parts of over 750 volts and do not have warning signs at the entrance:

- V1836 – The vault entrance did not have a “High Voltage” inside the entrance.
- V2963 – The vault entrance did not have a “High Voltage” sign inside the entrance.