

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



August 2, 2022

SA2022-950 / EA2022-1018

Hien K. Vuong, PE
Assistant General Manager - Electric Operations
Azusa Light & Water
City of Azusa
729 N. Azusa Avenue
Azusa, CA 91702

Subject: Audit of Azusa Light & Water

Mr. Vuong:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC) James Miller of my staff conducted a substation and electric distribution audit of Azusa Light & Water's (ALW) service territory from May 9, 2022 to May 13, 2022. The audit included a review of ALW's inspection and maintenance records and a field inspection of ALW'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 September 2, 2022, by electronic or hard copy, of all corrective measures taken by ALW to remedy and prevent such violations.

If you have any questions concerning this audit, you can contact James Miller at (213) 660-8898 or James.Miller@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, SED, CPUC
Majed Ibrahim, Senior Utilities Engineer, ESRB, SED, CPUC
James Miller, Utilities Engineer, ESRB, SED, CPUC

AUDIT FINDINGS

I. Records Review

During the audit, my staff reviewed the following records:

Substation Records

- Current Inspection Procedures
- Equipment Testing Procedures
- Inspection Records
- Oil, Infrared, and Miscellaneous Testing Results
- Pending and Completed Work Orders

Distribution Records

- Current Overhead and Underground Inspection Procedures
- Patrol and Detailed Inspection Records
- Work Orders Created from Inspections
- Completed, Late, and Canceled Work Orders
- Pole Loading Records
- Intrusive Testing Results
- Incoming and Outgoing Third-Party Notifications

II. Records Review – Violations List

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

GO 95, Rule 44.2, Additional Construction, states in part:

Any entity planning the addition of facilities that materially increases loads on a structure shall perform a loading calculation to ensure that the addition of the facilities will not reduce the safety factors below the values specified by Rule 44.3.

ALW's records showed that ALW installed a new transformer on Pole No. 4432MA on July 13, 2018, but did not perform a loading calculation to ensure that the addition of the transformer would not reduce the safety factor of the pole below the values specified by GO 95 Rule 44.3.

III. Field Inspection

My staff inspected the following facilities during the field inspection:

No.	Facility Identification	Facility Type	Location
1	Azusa	Substation	Azusa
2	Kirkwall	Substation	Azusa
3	314MA	Pole	Azusa
4	4596MA	Pole	Azusa
5	4597MA	Pole	Azusa
6	5060MA	Pole	Azusa
7	E/O 5060MA	Pole	Azusa
8	3615MA	Pole	Azusa
9	3585MA	Pole	Azusa
10	1505MA	Pole	Azusa
11	4773MA	Pole	Azusa
12	4774MA	Pole	Azusa
13	4775MA	Pole	Azusa
14	2021MA	Pole	Azusa
15	1703MA	Pole	Azusa
16	2019MA	Pole	Azusa
17	1848MA	Pole	Azusa
18	3846MA	Pole	Azusa
19	3839MA	Pole	Azusa
20	1506MA	Pole	Azusa
21	2542MA	Pole	Azusa
22	1784MA	Pole	Azusa
23	1785MA	Pole	Azusa
24	5488MA	Pole	Azusa
25	1781MA	Pole	Azusa
26	2553MA	Pole	Azusa
27	1528MA	Pole	Azusa
28	GT10382	Pole	Azusa
29	1186341E	Pole	Azusa
30	4253MA	Pole	Vasquez Ranch
31	E/O 4253MA	Pole	Vasquez Ranch
32	3171MA	Pole	Vasquez Ranch
33	3622MA	Pole	Vasquez Ranch
34	4035MA	Pole	Azusa
35	5440MA	Pole	Azusa
36	5081MA	Pole	Azusa
42	3890MA	Pole	Azusa

43	2203MA	Pole	Azusa
44	3202	Padmounted Transformer	Mountain Cove
45	3206	Padmounted Transformer	Mountain Cove
46	3170	Padmounted Transformer	Mountain Cove
47	3190	Padmounted Transformer	Mountain Cove
48	3133	Padmounted Transformer	Mountain Cove
49	3160	Padmounted Transformer	Mountain Cove
50	3129	Padmounted Transformer	Mountain Cove
51	PME309	Padmounted Switch and Fuse	Mountain Cove
52	CB33	Capacitor Bank	Rosedale
53	PMH318	Padmounted Switch	Rosedale
54	3348	Padmounted Transformer	Rosedale
55	3765	Padmounted Transformer	Rosedale
56	3742	Padmounted Transformer	Rosedale
57	3458	Padmounted Transformer	Rosedale
58	3771	Padmounted Transformer	Azusa
59	2397	Padmounted Transformer	Azusa
60	2811	Padmounted Transformer	Azusa
61	2614	Padmounted Transformer	Azusa
62	3557	Padmounted Transformer	Azusa
63	3308	Padmounted Transformer	Azusa

IV. Field Inspection – Violations List

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.

- The Kirkwall South and Rio Hondo Aerojet-Brew South 66 kV circuit breakers had pressure gauges that could not be read through their viewing windows. (Note that these facilities belong to Southern California Edison but reside in ALW’s substation.)
- An inverter cable was passing out of a vent in the control room and coiled on the ground outside.

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.

Pole No. 4596MA had damaged visibility strips.

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.

An ALW down guy wire and a communications conductor, both attached to Pole No. 5060MA were in contact with each other.

GO 95, Rule 34, Foreign Attachments, states in part:

Nothing in these rules shall be construed as permitting the unauthorized attachment, to supply, street light or communication poles or structures, of antennas, signs, posters, banners, decorations, wires, lighting fixtures, guys, ropes and any other such equipment foreign to the purposes of overhead electric line construction.

- An unauthorized metal spike was attached to Pole No. 4597MA.
- An unauthorized sign reading “Please do not block the driveway” was attached to Pole No. 3585MA.

GO 95, Rule 51.6, 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 or bands on the following poles were damaged or missing:

- 4596MA
- 4774MA
- 4775MA
- 2019MA
- 3846MA
- 3839MA
- 1785MA
- 1781MA
- 2553MA

GO 95, Rule 91.3 Stepping, B. Location of Steps, states in part:

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.

Temporary pole steps attached to Pole No. 1703 were less than eight feet from the ground line.

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 damaged:

- 3614MA
- 4596MA
- The pole south of Pole No. 1505MA
- 2021MA

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.

Each of the following padmounted equipment showed signs of corrosion:

- Padmounted Transformer 3202
- Padmounted Transformer 3206
- Padmounted Transformer 3170

The following padmounted equipment could not be opened for inspection due to faulty locks or frozen bolts:

- Padmounted Transformer 3190
- Padmounted Transformer 3133
- Capacitor Bank CB33
- Padmounted Transformer 3348
- Padmounted Transformer 3765
- Padmounted Transformer 3742
- Padmounted Transformer 3458
- Padmounted Transformer 3557