

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



January 11, 2023

SA2022-959

Marvin Moon
Assistant General Manager, Power Delivery
Pasadena Water and Power (PWP)
1055 East Colorado Blvd., Suite 350
Pasadena, CA 91106

SUBJECT: Substation Audit of Pasadena Water and Power

Mr. Moon:

On behalf of the Electric Safety and Reliability Branch of the California Public Utilities Commission (CPUC), Eric Ujjiye, and Calvin Choi of my staff conducted a substation audit of Pasadena Water and Power from May 2 - 6, 2022. The audit included a review of PWP's records and field inspections of PWP's substation 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 February 13, 2023, by electronic or hard copy, of all corrective measures taken by PWP to remedy and prevent such violations.

If you have any questions concerning this audit, you can contact Eric Ujjiye at (213) 620-2598 or Eric.Ujjiye@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: Lee Palmer, Director, Safety and Enforcement Division, CPUC
Nika Kjensli, Program Manager, ESRB, SED, CPUC
Eric Ujjiye, Utilities Engineer, ESRB, SED, CPUC

AUDIT FINDINGS

I. Records Review

During the audit, my staff reviewed the following records:

- PWP GO 174 Substation Inspection Process
- PWP GO 174 Substation Inspection Program
- PWP SOP Protection System Maintenance Program.
- Summary of PWP Substation Operators Training Records
- Summary of Substation Inspections in the PWP territory.
- Inspection Checklists and One-Line Diagrams for ten substations
- Pending and Completed Workorders for the year 2021
- Summary of results of Infrared Testing in 2021
- Summary of results from substation Dissolved Gas Analysis performed in 2021

II. Field Inspections

My staff inspected the following substation facilities during the field inspection:

No.	Substation Name
1	BROOKSIDE
2	FAIR OAKS
3	VILLA
4	WILSON
5	HASTING
6	TMG GOODRIDGE
7	SANTA ANITA
8	EASTERN
9	DEL MAR
10	GLEN ARM
11	OAK KNOLL
12	CHESTER

III. Field Inspection - Violations List

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

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.

Facilities at the following substations were not maintained for their intended use:

Brookside Substation

- At the time of the field inspection, the fire extinguisher last monthly inspection was January 2022.
- A high voltage warning sign was painted over on the right side of the entrance gate.
- A sign was defaced at the outside rear of the facility.

Villa Substation

- A gauge on the SF-6 X-1347 was damaged, making it illegible.
- A section of the barbed wire was detached and hanging off the fence

Wilson Substation

- For the top row of batteries, the fluid was at the minimal level, with batteries 3 and 12 trickling.

Hasting Substation

- The cooling center fan of transformer Bank 1A was not operating.
- A high voltage warning sign was not placed on the outside wall of an accessible corner of the substation.

Santa Anita Substation

- A bushing on Bank 4 17kV VCB was leaking oil.

Eastern Substation

- The east and south outer walls of the substation were missing high voltage warning signs.

Del Mar Substation

- The oil indicator on X1382 4 kV displayed low oil levels
- The outer west wall of the substation did not have a high voltage warning sign.

Glen Arm Substation

- The outer perimeter fencing did not have a high voltage warning sign.

Chester Substation

- The outer perimeter fencing did not have a high voltage warning sign.