

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



January 5, 2023

SA2022-962

Jesse Medina
Assistant Manager, Substation Operations and Maintenance
Imperial Irrigation District (IID)
2151 W. Adams Ave.
El Centro, CA 92243

SUBJECT: Substation Audit of IID La Quinta District

Mr. Medina:

On behalf of the Electric Safety and Reliability Branch of the California Public Utilities Commission (CPUC), Calvin Choi and Monica Robledo of my staff conducted a substation audit of Imperial Irrigation District (IID) La Quinta District from November 28, 2022 to December 2, 2022. The audit included a review of IID's records and field inspections of IID'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 6, 2023, by electronic or hard copy, of all corrective measures taken by IID to remedy and prevent such violations.

If you have any questions concerning this audit, you can contact Calvin Choi at (213) 266-4730 or Calvin.Choi@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
Calvin Choi, Utilities Engineer, ESRB, SED, CPUC

AUDIT FINDINGS

I. Records Review

During the audit, my staff reviewed the following records:

- IID GO 174 Substation Inspection Process
- IID GO 174 Substation Inspection Program
- IID SOP Protection System Maintenance Program.
- Summary of IID LA Quinta District Substation Operators Training Records
- Summary of Substation Inspections in the La Quinta District
- 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 facilities during the field inspection:

No.	Substation Name
1	AVENUE 58
2	SKY VALLEY
3	RAMON
4	EDOM
5	FRANCES WAY
6	NORTHVIEW
7	AVENUE 42
8	SHADOW HILLS
9	JACKSON
10	MARSHALL STREET
11	LA QUINTA
12	NORTH LA QUINTA
13	COACHELLA VALLEY
14	MECCA
15	THERMAL
16	AVENUE 52
17	VAN BUREN

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:

Avenue 58 Substation

- The cooling fans on No. 3 Bank Transformer failed to start as expected.
- A bird nest was found under the CBO circuit breaker A phase bushing.
- A bird nest was found under the CSO circuit breaker A phase bushing.

EDOM Substation

- The liquid level for 2 backup batteries were slightly below the minimum level.
- The conduit for CESO circuit breaker was separated from its service box near ground level, exposing the wire inside.
- The conduit for CES A phase CVT was separated from its service box near ground level, exposing the wire inside.
- The ground wire on the X10 circuit breaker was cut (potentially due to vandalism).

Northview Substation

- One cooling fan on the No. 2 Bank Transformer failed to start as expected.
- Bird nests were found under the CAWO circuit breaker A and C phase bushings.
- A bird nest was found under the CATO circuit breaker A phase bushing.
- A bird nest was found under the CAD6 switch B phase insulator.
- A bird nest was found under the CAEO circuit breaker A phase bushing.
- According to the oil gauge, the oil level was low on CAE CVT B phase bushing.

Avenue 42 Substation

- The conduit for yard light near CED3 switch was broken.
- The ground wire for a capacitor bank was exposed on the ground and poses a tripping hazard.
- A conduit for the capacitor bank was separated from its service box, exposing the wire inside.

Jackson Substation

- One cooling fan for No. 2 Bank Transformer failed to start as expected.
- Bird nests were found under the CWSO circuit breaker A and C phase bushings.

Jefferson Substation

- One cooling fan for Regulator 2 C phase failed to start as expected.
- CDWO C phase oil breaker was weeping oil from the oil sight glass.
- A bird nest was found under the CDEO circuit breaker B phase bushing.

La Quinta Substation

- A bird nest was found under the CDTO circuit breaker C phase bushing.
- Bird nests were found under the CDEO circuit breaker A and C phase bushings.

North La Quinta Substation

- A bird nest was found under the CDTO circuit breaker C phase bushing.
- A bird nest was found under the CDNO circuit breaker C phase bushing.
- The cooling fans for Regulator 2 A and B phase failed to start as expected.

Coachella Valley Substation

- Four cooling fans for No. 2 Bank Transformer failed to start as expected.
- The No. 3 Bank CVT was leaking oil.
- The oil sight glass for N CVT C phase was covered in oil and dirt and not able to see through.
- The oil sight glasses for L CVT all phases were covered and not able to see through.
- The oil sight glass for No. 4 Bank 1-CVT B0 was covered and not able to see through.
- Three fans on No. 1 Bank Transformer failed to start as expected.
- One fan on No. 4 Bank Transformer failed to start as expected.
- A bird nest was found under the X10 circuit breaker A phase bushing.

Mecca Substation

- A bird nest was found under the KOBW circuit breaker A phase bushing.
- One fan on No. 2 Bank Transformer failed to start as expected.

Thermal Substation

- Four fans on No. 1 Bank Transformer failed to start as expected.
- The R1 bypass C phase switch had a hot spot on the blades.

Avenue 52 Substation

- Four fans on No. 1 Bank Transformer failed to start as expected.
- The X1D2 C phase switch had a hot spot on the blades.
- The conduit for 92 C phase CVT was broken near ground level.

Van Buren Substation

- The ground wire on the A phase CVT next to CITD switch was cut.