PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

April 5, 2024 SA2024-1123

Matthew H. Smelser
Energy Department Manager
Imperial Irrigation District
333 E. Barioni Boulevard
Imperial, CA 92251

SUBJECT: Substation Audit of Imperial Irrigation District's La Quinta Service Area

Mr. Smelser:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), James Miller and Sultan Tipu of my staff conducted a substation audit of Imperial Irrigation District's (IID) La Quinta Service Area from March 4, 2024 to March 8, 2024. The audit included a review of IID's records and field inspections of IID'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 6, 2024, by electronic or hard copy, of all corrective measures taken by IID to remedy and prevent such violations. Please note that ESRB will be posting the audit report and your response to our audit on the CPUC website. If there is any information in your response that you would like us to consider as confidential, we request that in addition to your confidential response, you also provide us with a public or redacted version of your response that can be posted publicly on our website.

If you have any questions concerning this audit, you can contact James Miller at (562) 841-3159 or James.Miller@cpuc.ca.gov.

Sincerely,

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
Majed Ibrahim, Senior Utilities Engineer (Supervisor), ESRB, SED, CPUC
James Miller, Utilities Engineer, ESRB, SED, CPUC
Sultan Tipu, Utilities Engineer, ESRB, SED, CPUC

AUDIT FINDINGS

I. Records Review

During the audit, my staff reviewed the following records and documents:

- Inspection Records
- Substation Operation and Maintenance Procedure
- Substation Construction and Maintenance Procedure
- Fire Extinguisher Maintenance and Inspection Procedure
- Substation Construction and Maintenance Request Process
- Staff Training Records
- Substation Inspection Records
- Substation Equipment Testing Records (Batteries, Breakers, Capacitors, and Regulators)
- Electrical Testing Records
- Oil Test Results
- Open and Closed Work Orders
- Infrared Testing Records

II. Field Inspections

My staff inspected the following substations during the field portion of the audit:

No.	Substation Name	City
1	Coachella Valley	Coachella
2	Avenue 52	Coachella
3	Thermal	Coachella
4	New Jackson	Coachella
5	Van Buren	Indio
6	Dillon	Indio
7	Edom	Palm Desert
8	Ramon	North of Palm Desert
9	Sky Valley	North of Palm Desert
10	Francis Way	Indio
11	Northview	Indio
12	Avenue 42	Indio
13	Shadow Hills	Indio
14	Monroe	Indio
15	Shields	Indio
16	Avenue 48	Indio
17	La Quinta	Indio

III. Field Inspections – Violations List

My staff observed the following violations during the field inspection:

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:

Coachella Substation

1. The high-side winding thermostat on the No. 1 Bank 230/92kV transformer may be defective. Its maximum temperature needle indicated that the coil's temperature had reached a temperature of 150°C since the last time it had been reset, a temperature which exceeded the unit's three high-temperature alarms. The maximum temperature needles on the unit's low-side winding and oil thermostats each displayed a reading of less than 40°C.

Avenue 52 Substation

2. A guy wire attached to a wooden H-Frame next to the KD4 Switch was broken.

Thermal Substation

3. The No. 1 Bank 92/13kV Transformer was leaking oil from its radiator.

New Jackson Substation

4. The door to the nitrogen cabinet of the No. 1 Bank Transformer was damaged and could not be opened by IID staff during our visit.

Van Buren Substation

5. One of the four bollards around the oil containment unit had fallen over.
6. The nitrogen tank pressure indicator on the No. 1 Bank Transformer displayed a pressure of 0 PSIG.

Dillon Substation

7. The nitrogen blanket pressure indicator on the No. 2 Bank Transformer displayed a reading of less than 0 PSIG.

Edom Substation

8. The nitrogen tank pressure indicator on the No. 2 Bank Transformer displayed a pressure of 0 PSIG.
9. The nitrogen blanket pressure indicator on the No. 2 Bank Transformer displayed a reading of 0 PSIG.

Sky Valley Substation

10. One of the cooling fans on the No. 1 Bank Transformer was vibrating excessively, and the fan's grate/cover was not attached.
11. Another of the cooling fans on the Bank 1 Transformer was not plugged in.

Francis Way Substation

12. The cable tray cover was open near the substation's control room.
13. Several ground wires had been cut and removed from Capacitor Bank 1's support rack.

Northview Substation

14. One of No. 2 Bank Transformer's cooling fans was not plugged in.
15. The oil level gauge on the CAE B-Phase Voltage Transformer indicated that the unit's oil level was low.

Avenue 42 Substation

16. The oil level gauge on the Regulator 2 B-Phase Unit indicated that the unit's oil level was low.
17. The viewing window of the SF_6 pressure gauge on the CDO Gas Circuit Breaker contained a significant amount of water or another clear, colorless liquid.
18. The CD CVT unit was leaking oil.

Shadow Hills Substation

19. Capacitor Bank 1's foundation was covered with mud. Several of the legs of the capacitor bank's rack's legs were significantly near their bases.

Monroe Substation

20. The walkways around this substation contained many holes in the ground that presented tripping hazards.
21. One of the ground wires on the CWND1 A-Frame structure had been cut and removed.

Shields Substation

22. The nitrogen tank pressure indicator on the No. 2 Bank Transformer displayed a pressure of 0 PSIG.

Avenue 48 Substation

23. One of the cooling fans on the No. 2 Bank Transformer was not running.
24. The lightning arrestor for the Circuit N46 A-Phase pothead was damaged (distribution side).

La Quinta Substation

25. The nitrogen tank pressure indicator on the No. 1 Bank Transformer displayed a pressure of 0 PSIG.
26. One of the No. 1 Bank Transformer's cooling fans was not plugged in.