



City of Glendale, California
Glendale Water & Power
Administration

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February 27, 2024

Fadi Daye, P.E.
Program & Project Supervisor
Electric and Safety Reliability Branch
Safety and Enforcement Division
California Public Utilities Commission
320 West 4th St., Ste 500
Los Angeles, CA 90013

SA2023-1099
Subject: Substation Audit of Glendale Water & Power

Dear Mr. Daye,

Your letter, dated February 2, 2024, requested that we advise you of actions taken by Glendale Water & Power (GWP) to address conditions identified during the Safety and Enforcement Division's (SED's) substation audit of all GWPs' substations from October 30, 2023 to November 3, 2023.

Your letter requested a response by March 4, 2024. Attached are all corrective measures being taken by GWP.

Sincerely,

Daniel Scorza

Daniel Scorza
Assistant General Manager - Electric
Glendale Water & Power
141 North Glendale Ave., Ste 450
Glendale, CA 91206

Enclosure: SED of CPUC Audit Findings and GWP's Responses

Cc: Lee Palmer, Director, Safety and Enforcement Division, CPUC
Nika Kjensli, Program Manager, Electric Safety and Reliability Branch, CPUC
Majed Ibrahim, Senior Utilities Engineer, 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:

- Current Substation Inspection Procedures
- Current Substation Equipment Testing Procedures
- Substation Inspection Records
- Oil Sample Testing Results
- Infrared Inspection Records
- Recent Open and Completed Work Orders Generated from Inspections

II. Field Inspections

My staff inspected the following substations during the field inspections:

No.	Substation Name	City
1	Kellogg	Glendale
2	Grandview	Glendale
3	Western	Glendale
4	Bel-Air	Glendale
5	Fremont	Glendale
6	Rossmoyne	Glendale
7	Acacia	Glendale
8	Tropico	Glendale
9	Columbus	Glendale
10	Howard	Glendale
11	Montrose	Glendale
12	Glorietta	Glendale
13	Scholl	Glendale

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:

GWP Response:

We acknowledge and are thankful for report on your investigation. Many leaks are not leaking to fail, as they are expected with hardware in use for over 4 decades. GWP is happy to comply with responding to the findings of the report.

Grandview Substation

1. The No. 2 69/12 kV transformer was leaking oil from its southeast corner.

GWP Response:

Logged issue into substation work order database. Leak will be cleaned, fittings tightened, repairs done as needed, and situation monitored.

2. The No. 1 69/12 kV transformer was leaking oil from a valve on its north side.

GWP Response:

Logged issue into substation work order database. Leak will be cleaned, fittings tightened, repairs done as needed, and situation monitored.

Western Substation

3. The No. 2 34.5/12 kV transformer had a small oil leak near its moisture excluder.

GWP Response:

Logged issue into substation work order database. Leak will be cleaned, fittings tightened, repairs done as needed, and situation monitored.

4. The Bus C-Phase potential transformer was leaking oil.

GWP Response:

Logged issue into substation work order database. Leak will be cleaned, fittings tightened, repairs done as needed, and situation monitored.

Fremont Substation

5. One of the two ventilation fans in the battery room was not operational.

GWP Response:

Hydrogen monitor to be replaced and both fans tested for proper operation.

6. Extensive corrosion was present on the radiators of transformers No. 4, 6, 7, and 8, and transformers No. 4, 6, and 8 also presented with corrosion around their bases.

GWP Response:

Fremont substation is planned for an upgrade, which includes replacing these transformers. Transformers have been in use for over 4 decades and the surface corrosion observed is expected. We will inspect transformers condition, and repair as needed, along with continued monitoring.

Rossmoyne Substation

7. The No. 4 34.5/4 kV transformer had an oil leak between its main body and load tap changer (LTC).

GWP Response:

This issue had been logged into the substation work order database prior to inspection and is still scheduled to be repaired.

8. The nitrogen blanket pressure gauges on the No. 2 and No. 4 34.5/4 kV transformers displayed a reading of less than 0 PSIG.

GWP Response:

Logged issue into substation work order database. Integrity of the nitrogen gauges to be assessed. Nitrogen will be added as necessary.

9. The Rack Tie South Bus C-phase circuit breaker was leaking oil.

GWP Response:

Logged issue into substation work order database. Leak will be cleaned, fittings tightened, repairs done as needed, and situation monitored.

Acacia Substation

GWP Response:

Acacia substation is the next substation to be completely upgraded.

10. The nitrogen blanket pressure gauges on transformers No. 4, 5, 6, and 7 all displayed a reading of less than 0 PSIG.

GWP Response:

Logged issue into substation work order database. Integrity of the nitrogen gauges to be assessed. Nitrogen will be added as necessary.

11. Transformer No. 4 was leaking oil.

GWP Response:

Logged issue into substation work order database. Leak will be cleaned, fittings tightened, repairs done as needed, and situation monitored.

Tropico Substation

1. The nitrogen blanket pressure gauges on Bank Transformer No 1 and transformers No. 7 and 8 all displayed a reading of less than 0 PSIG.

GWP Response:

Logged issue into substation work order database. Integrity of the nitrogen gauges to be assessed. Nitrogen will be added as necessary.

2. Corrosion was observed on the radiator transformer No. 7.

GWP Response:

Transformer has been in use for over 4 decades and the surface corrosion observed is expected. We will inspect transformers condition, and repair as needed, along with continued monitoring.

3. Bank Transformer No. 1 was leaking oil from its oil pump gasket.

GWP Response:

Logged issue into substation work order database. Leak will be cleaned, fittings tightened, repairs done as needed, and situation monitored.

Columbus Substation

4. Part of the plastic shielding was missing from the battery rack.

GWP Response:

Logged issue into substation work order database. Shielding and related parts to be replaced. Battery pack also to be replaced.

5. Corrosion was observed on the anode of battery No. 29.

GWP Response:

Logged issue into substation work order database. Corrosion will be removed.

6. The nitrogen blanket pressure gauges on transformers No. 1 and 4 displayed a reading of less than 0 PSIG.

GWP Response:

Logged issue into substation work order database. Integrity of the nitrogen gauges to be assessed. Nitrogen will be added as necessary.

7. Transformer No. 4 was leaking oil from its bus neck.

GWP Response:

Logged issue into substation work order database. Leak will be cleaned, fittings tightened, repairs done as needed, and situation monitored.

8. Oil was observed leaking into the control cabinets of the substation's three circuit breakers.

GWP Response:

Logged issue into substation work order database. Leak will be cleaned, fittings tightened, repairs done as needed, and situation monitored.

Howard Substation

9. Voltage regulator No. 17 was leaking oil.

GWP Response:

Leak cleaned. Contacts and gaskets replaced.

10. Corrosion was observed on the anode of battery No. 60.

GWP Response:

Logged issue into substation work order database. Corrosion will be removed.

11. The nitrogen blanket pressure gauges on the A, B, and C-phase transformers all displayed a reading of less than 0 PSIG.

GWP Response:

Logged issue into substation work order database. Integrity of the nitrogen gauges to be assessed. Nitrogen will be added as necessary.

12. The substation's spare 34.5/4 kV transformer was leaking oil.

GWP Response:

Logged issue into substation work order database. Transformer had been in use for over 5 decades and leak observed is expected. Leak will be cleaned, fittings tightened, repairs done as needed, and situation monitored. This transformer was already scheduled to be replaced.

13. The Bank No. 1 A, B, and C-phase transformers were all leaking oil.

GWP Response:

Logged issue into substation work order database. Transformers have been in use for over 5 decades and leak observed is expected. Leak will be cleaned, fittings tightened, repairs done as needed, and situation monitored. This transformer was already scheduled to be replaced.

Montrose Substation

14. Transformer No. 1 had a small oil leak on its radiator.

GWP Response:

This issue had been logged into the substation work order database prior to inspection and the transformer is scheduled to be repaired. Contract already has been awarded for work on this transformer and the oil leak will be addressed as well.

15. The B-phase potential transformer for the Bank No. 2 Tie transformer was leaking oil.

GWP Response:

Logged issue into substation work order database. Leak will be cleaned, fittings tightened, repairs done as needed, and situation monitored.

Scholl Substation

16. Transformers No. 3 and 4 were leaking oil.

GWP Response:

Transformer 3: This transformer is currently undergoing repair as contract has been awarded; leak will be addressed.

Transformer 4: Logged issue into substation work order database. Leak will be cleaned, fittings tightened, repairs done as needed, and situation monitored.