STATE OF CALIFORNIA GAVIN C. NEWSOM, *Governor*

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

May 27, 2026 SA2026-1440

Daniel Kushner
Sr. Director - Electric Regulatory Compliance
Pacific Gas & Electric Company (PG&E)
300 Lakeside Dr., Oakland, CA 94612

SUBJECT: Electric Substation Audit of PG&E's Stockton Headquarters

Mr. Kushner:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Tom Roberts and Emiliano Solorio of ESRB staff conducted an electric substation audit of PG&E's Stockton Headquarters (HQ) from March 16-20, 2026. During the audit, ESRB staff conducted field inspections of PG&E's substation facilities and equipment and reviewed pertinent documents and records.

As a result of the audit, ESRB staff identified violations of General Order 174. A copy of the audit findings itemizing the violations is enclosed. Please provide a response no later than June 24, 2026, by electronic copy of all corrective actions and preventive measures taken by PG&E to correct the identified violations and prevent the recurrence of 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 provide us with a public version (a redacted version of your confidential response) to be posted on our website.

If you have any questions concerning this audit, please contact Tom Roberts at tom.roberts@cpuc.ca.gov or (415) 971-3907.

Sincerely,

Rickey Tse, P.E.
Program and Project Supervisor
Electric Safety and Reliability Branch
Safety and Enforcement Division
California Public Utilities Commission

Enclosure: CPUC Electric Substation Audit Report for PG&E

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CPUC SUBSTATION AUDIT FINDINGS
PG&E STOCKTON HQ
MARCH 16-20, 2026

I. Records Review

During the substation audit, Electric Safety and Reliability Branch (ESRB) reviewed the following standards, procedures, and records for PG&E substations in the Stockton HQ:

- List of all substations,
- Map showing all substations,
- Current maintenance and inspection program documents,
- Maintenance and inspector training program documents,
- List of all inspections conducted in the last five years,
- List of all open/pending, completed, cancelled, and late work orders and maintenance items in the previous five years,
- Equipment lists for all substations,
- Single-line diagrams (SLDs) for all substations,
- Last two visual inspection checklists for all substations,
- List of transformer banks that operated beyond nameplate capacity for the last five years for all substations,
- The records for infrared testing conducted in the last two years,
- Most recent oil sample test results for all substations,
- Most recent electric test results for all substations,
- Training records for all substation and maintenance personnel in the past five years,
- Other relevant substation inspections for the past five years for all substations,
- Internal audit findings for the Stockton HQ for the past five years.

II. Records Violations

ESRB observed the following violations during the records review portion of the audit:

1. General Order (GO) 174, Rule 12, General states in part:

> *"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."*

1. PG&E Substation Equipment Maintenance Requirements, Utility Standard: TD-3322S[1], establishes PG&E's required end dates and out-of-compliance dates for corrective work as follows:

Table 1. Line Corrective (LC) Due Dates Per Priority Code

[1] PG&E Utility Standard TD-3322S, June 6, 2024, Revision 10, Section 1.3.3.

Priority Code	Required End Date	Out-of-Compliance Date
A	Within 30 days	Close notifications (after removing the hazard [make safe]) with either permanent or temporary repairs within 30 days. Create a new lower priority notification immediately for any remaining work that will exceed 30 days. Reference the Priority A notification number to ensure a record of temporary repairs is linked to the new notification.
B	Within 90 days	The out-of-compliance date is the 1st day of the 2nd month following the month in which the required end date occurs.
E	Within 365 days	The out-of-compliance date is the 1st day of the year following the year in which the required end date occurs.
F	Greater than 365 days	There is no out-of-compliance date. This work will be completed when it is operationally efficient to perform the work.

Based on Table 1 above, ESRB found 10 notifications that were closed after their past due dates.[2] Therefore, PG&E did not perform maintenance in accordance with accepted good practices described in Utility Standard TD-3322S. See Table 2 below for the Line Corrective (LC) notifications which were closed late.[3]

Table 2. Overdue Line Corrective (LC) Notifications

Notification Number	Priority	Notification Date	Completion Date	Out-of-Compliance Date	Days Late
115449573	E	12/4/2018	1/18/2022	1/1/2020	748
120928750	**B**	4/30/2021	12/23/2022	6/1/2022	478
117940849	E	10/2/2019	3/11/2022	1/1/2023	434
118011937	E	10/15/2019	3/11/2022	1/1/2023	434
117903438	E	9/20/2019	7/17/2021	1/1/2025	197
118145082	E	11/6/2019	4/9/2021	1/1/2023	98
120400646	E	12/28/2020	4/1/2022	1/1/2024	90
123604372	**B**	5/14/2022	12/9/2022	10/1/2022	69
119872085	E	10/8/2020	3/11/2022	1/1/2026	69
117437265	E	6/12/2019	1/9/2021	1/1/2021	8

[2] This is based on an Out-of-Compliance Date calculated by ESRB using the criteria per Table 1 above and the Priority, Notification Date, and Completion Date provided in PG&E's February 13, 2026, response to Pre-Audit Data Request question 13. If the Out-of-Compliance Date provided by PG&E is used, six closed notifications were completed late. A spreadsheet with ESRB's calculations, which were added to PG&E file *DRU16918_Q13_Atch01_Stockton Notification Data.xls*, can be provided upon request.

[3] Table 2 does not include LC notifications that were still open at the time data was provided to ESRB on February 13, 2026. As of February 13, 2026, none of the open notifications were late.

2. PG&E Substation Equipment Maintenance Requirements, Utility Standard: TD-3322S, also refers to "SO Notifications:"

   Table 2. Corrective Maintenance Tasks – Types LC and SO Notifications.[4]

The term "SO Notification" is not defined in this document or any other PG&E documentation provided to ESRB. This issue was raised in ESRB's audit report for the San Carlos HQ, audit SA2026-1308, and PG&E responded "*System Operation (SO) notifications are intended for our operations personnel to use as needed. While this notification type is not currently being utilized by the Substation Maintenance team, however, our operations team would like to maintain the ability to use them in the future or for selected circumstances.* If PG&E chooses to keep the reference to SO notifications for future use, it should add a definition of the term to the next revision (e.g. Revision 8) of TD-3322S Attachment 5 and any other documents that use the term.

3. PG&E Substation Equipment Maintenance Requirements, Utility Standard: TD-3322S[5], also establishes PG&E's required out-of-compliance dates for preventative work (PM) as follows:

   1.3 Compliance
   1. For preventive work, determine the out-of-compliance date using the notification required end date in the maintenance plan and the maintenance plan cycle.
   - *IF the cycle is 1 year or more, THEN the out-of-compliance date is the 1st day of the year following the year in which the required end date occurs.*
   - *IF the cycle is less than 1 year, THEN the out-of-compliance date is the 1st day of the month following the month in which the required end date occurs.*

   Based on this excerpt from PG&E's procedure, and out-of-compliance dates provided by PG&E, ESRB noted one PM notification that was closed after its past due date. Therefore, PG&E did not perform maintenance in accordance with the accepted good practices described in Utility Standard TD-3322S. See Table 3 below for the PM notifications which were closed late.[6]

   Table 3. Overdue Preventative Maintenance (PM) Notifications

[4] PG&E Utility Standard TD-3322S, Attachment 5, Revision 7, Station and Headquarters Maintenance Template, May 28, 2021, Table 1, pages 12-14. See Table 2 rows with Standard Text Key ETS06, ETS18, ETS29, ETS46, ETS58, and ETS58. The term "SO" is not defined in this document.
[5] PG&E Utility Standard TD-3322S, June 6, 2024, Revision 10, Section 1.3.1.
[6] Table 3 does not include PM notifications that were still open at the time data was provided to ESRB on PG&E's February 13, 2026. As of 2/13/2026, no notifications were open beyond the Out-of-Compliance Date. A spreadsheet with ESRB's calculations can be provided upon request.

Notification Number	Priority	Completion Date	Out-of-Compliance Date	Days Late
115417745	E	1/9/2021	1/1/2019	739

2. **GO 174, Rule 31.1, Inspection Program Frequency** states:

"Substations shall be inspected as frequently as necessary.
- *Time intervals or other bases shall be specified in the Inspection Program."*

PG&E Substation Equipment Maintenance Requirements, Utility Standard: TD-3322S establishes the frequency of PG&E's substation inspection program as follows:

"Substation inspection type - PG&E developed substation inspection types to determine the frequency of inspection. Initially, the categorization of a substation type is based on a PG&E-developed model that considers the risk each substation may have for public and employee safety, system criticality, security, and environmental risk. Then, field conditions or current activities (e.g., specific equipment or public issues) not represented in the model are considered, and the final substation type categorization is then made. Type 1 substations are inspected monthly and Type 2 substations are inspected on an every-other-month cycle."[7]

"Substation inspections – PG&E Substation Inspection Program is based on a time-based trigger. Substation Inspections are scheduled to be performed monthly for high criticality substations, and every other month for low criticality substations."[8]

"The criticality of the substation is based on numerous factors including, but not limited to, voltage class, capacity, NERC CIP jurisdiction, system operation criticality, as well as proximity to waterways, to population, or to environmentally sensitive areas. The methodology, contained in a spreadsheet, is then used to evaluate individual substations and assign a classification (frequency)."[9]

PG&E's response to Pre-Audit Data Request question 1 shows that substation inspections are performed on a monthly, or every other month cycle, consistent with TD-3322S. However, the excerpts above fail to provide a clear basis for determining the inspection cycle for two reasons: 1) the determination is based on two different terms, the station type and station criticality; and 2) the specific criteria for categorizing a given station as Type 1 or Type 2, or as high criticality or low criticality are not provided. This was noted

[7] PG&E Utility Standard TD-3322S, – Attachment 11, Revision 3, PG&E Substation Inspection Program Summary, April 7, 2022, Section 2.
[8] PG&E Utility Standard TD-3322S, – Attachment 11, Revision 3, PG&E Substation Inspection Program Summary, April 7, 2022, Section 3.a.
[9] PG&E Utility Standard TD-3322S, – Attachment 5, Revision 7, Station and Headquarters Maintenance Template, May 28, 2021, note following Table 3.

in ESRB's audit report for the San Carlos HQ, SA2025-1308. PG&E's response to that report acknowledged there was an "opportunity for improvement" and that this was being addressed through Corrective Action Plan (CAP) 131307737. When the CAP is completed, PG&E should provide a copy of the next revision (e.g. Revision 8) of TD-3322S Attachment 5 and any other affected documents.

3. **GO 174, Rule 33.1, Inspection Program Frequency** states:

> *"Electronic or hard copy records of completed Inspections shall include, at a minimum:.*
> - *Inspector name or identification*
> - *Inspection date*
> - *Brief description of identified discrepancies*
> - *Condition rating (where applicable)*
> - *Scheduled date of corrective action (where applicable)"*

PG&E Substation Equipment Maintenance Requirements establish the frequency of PG&E's substation infrared inspection program as follows:

> *"Yearly: Conduct infrared surveys on electric substation equipment to detect heat-producing connections and contacts and other thermal patterns that may indicate abnormal conditions or equipment failure"*[10]

This standard refers to "TD-3322M, SM&C Manual, Infrared Inspections" and "Form: Substation Infrared Inspection F80" in Table 1. The referenced manual addresses the use of an infrared (IR) camera and recordkeeping requirements:[11]

> *"A. General, 1. Purpose, Monitoring the thermal profile of equipment and its components helps determine if the equipment is operating properly or if it needs corrective work. An IR inspection with an IR camera provides a thermal image and the interpretive spot temperature of the target."*
>
> *"H. Recordkeeping: 1. Substation Infrared Inspection Form; a. When thermal anomalies are identified through an IR inspection, document this information in the APM remote software. During tech down procedures, use Form TD-3322M-F80, "Substation Infrared Inspection." Submit the form with attached images to the substation maintenance supervisor, who schedules the necessary follow-up inspections and repairs."*

[10] PG&E Utility Standard TD-3322S, – Attachment 5, Revision 7, Station and Headquarters Maintenance Template, May 28, 2021, Table 1, page 5.
[11] PG&E Utility Manual TD-3322M, – Attachment 9, Revision 11, Infrared Inspections, June 6, 2023, pages 1 and 16.

ESRB's report on the San Carlos HQ audit, SA2025-1308, included two issues with PG&E's IR inspections:

1. Many IR images lack a date stamp,
2. IR reports provided to ESRB do not include consistent and complete data.

PG&E's response to the ESRB San Carlos report explained how IR data is collected and stored and disagreed that these issues constituted a violation of GO 174 Rule 33.1. However, PG&E's response also noted that it created CAP 131307790 to review and potentially update its IR processes and reports. When the CAP is completed, PG&E should provide a copy of the next revision (e.g. Revision 11) of TD-3322M Attachment 9 and any other affected documents.

III. Field Inspection

During the field inspection, ESRB inspected the following 27 substations:[12]

Substation	City
Avena	Escalon
Banta	Tracy
Bellota	Bellota
Corral	Bellota
Country	Stockton
Eight	Stockton
Electra Powerhouse	Jackson
Electra	Jackson
French	Stockton
Hammer	Stockton
Kasson	Tracy
Lammers	Tracy
Linden	Linden
Louise	Manteca
Manteca	Manteca
Mosher	Stockton
New Hope	Lodi
Riverbank Switch Station	Escalon
Riverbank	East Oakdale
Stagg	Stockton

[12] The Banta was in the process of being fully rebuilt during the time of this audit using the following PM notifications: 74042780, 74038053, 74042781, 74055200. ESRB did not physically enter the Banta substation but visually inspected it from outside the perimeter fence to confirm that all equipment in the station had been removed. Customers normally served by Banta 1101, 1102, and 1103 feeders were being temporarily served via a mobile transformer and other equipment at the Kasson substation, which were inspected during this audit.

Substation	City
Stockton A	Stockton
Sutter Home Switch Station	Lodi
Terminous	Lodi
Tracy	Tracy
Valley Home	Valley Home
Valley Springs	Valley Springs
Weber	Stockton

IV. Field Inspection – Violations List

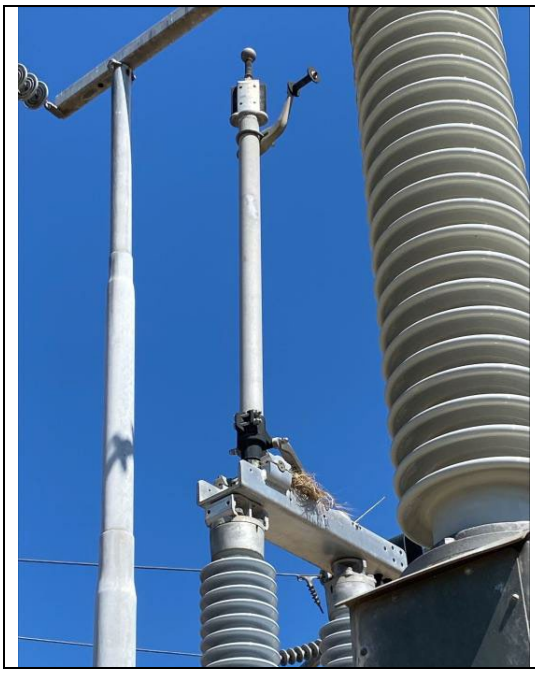
ESRB observed the following violations of GO 174, Rule 12 during the field inspection:

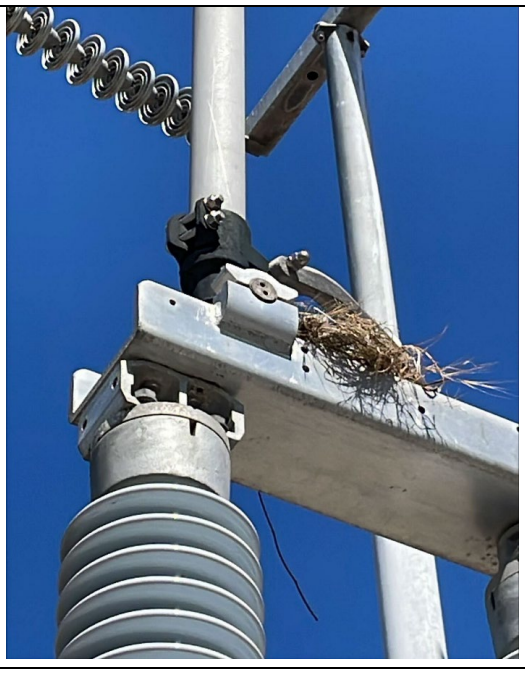
GO 174, Rule 12, General states in part:

> *"…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."*

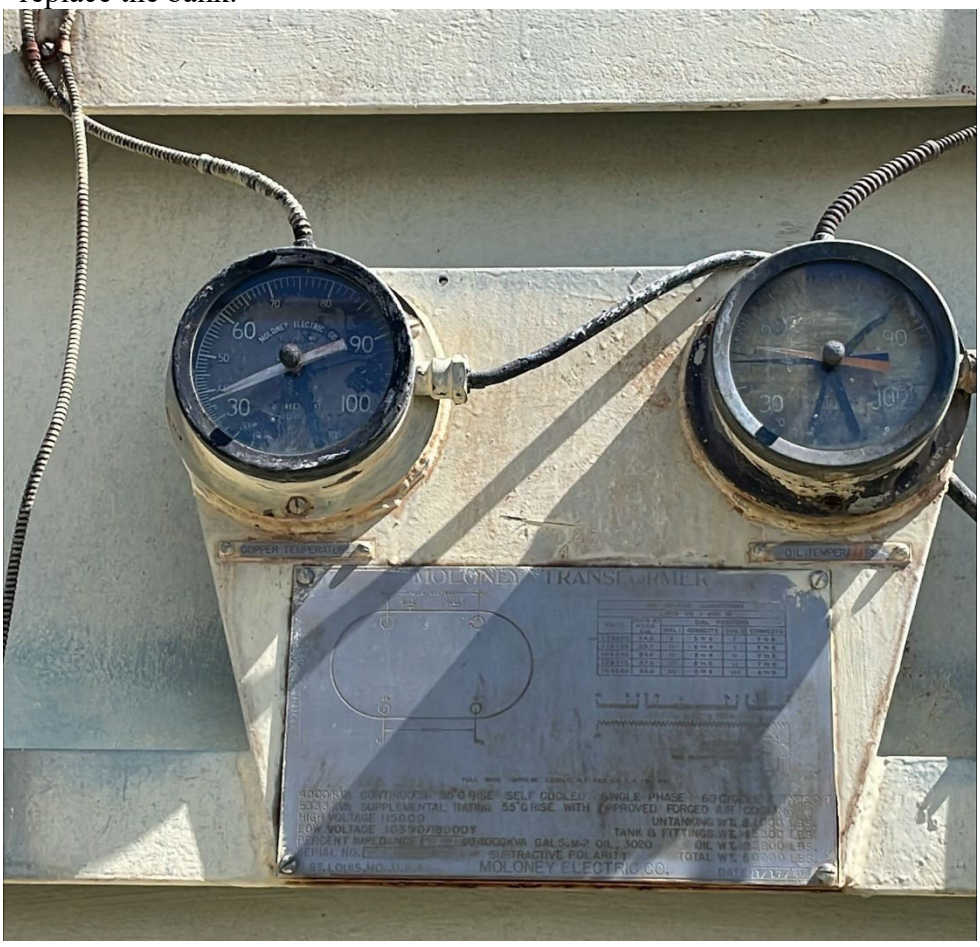
1. Avena Substation

1.1. Bird nest at base of normally open switch 145 C phase. Existing priority E notification 133056864 to correct.





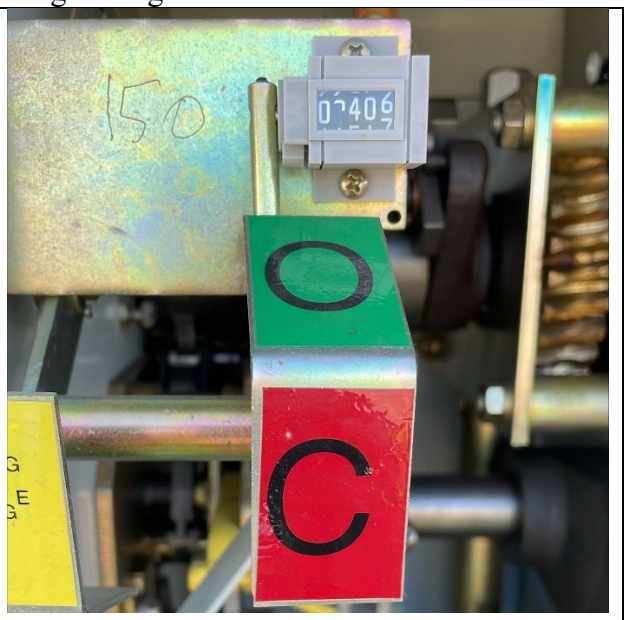
1.2. Bank 1 temperature gauges are not functioning. Existing notification 128135025 to replace the bank.



1.3. Regulator 1 B phase position indicator hands are not functioning. Existing notification 130899764 to correct.

2. Bellota Substation

2.1. Counter on circuit breaker 150 has an illegible digit.



3. Corral Substation

3.1. Cracked caps on backup batteries. Existing priority F notification 131865935 to replace batteries.

4. Country Club Substation

4.1.IPAC cooling fan is failing based on excessive noise when operating.

5. Eight Mile Substation

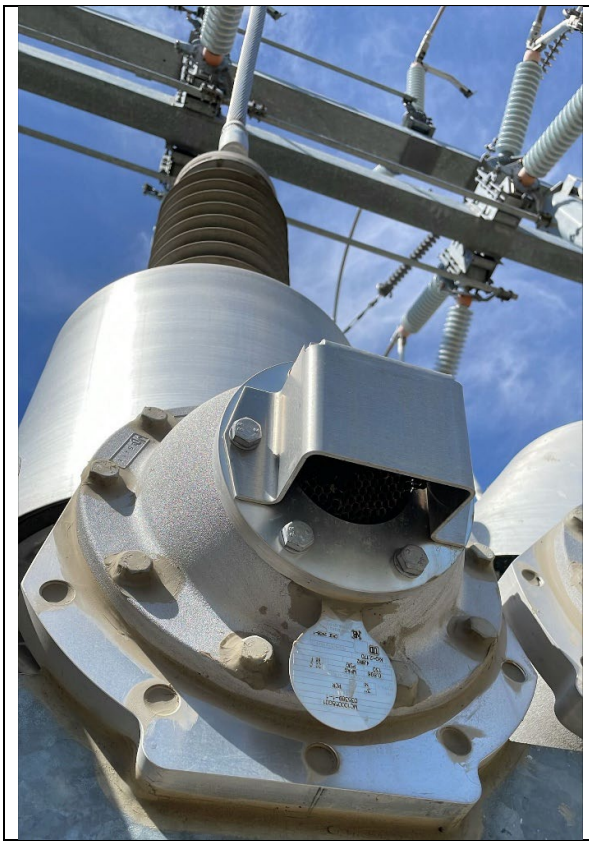
5.1.Bank 2 LTC counter is missing paint of first digit.

6. Electra Substation

6.1. Wood poles and support structures are deteriorated. Multiple existing priority E and F notifications to replace. The station is in process of being rebuilt.

7. French Camp Substation

7.1. Circuit breaker 22 has wasp nests on two phases. Existing notification 133057661 to remove.



7.2.Circuit breaker 32 has wasp nest. Existing notification 133057661 to remove.

7.3. Bank 1 temperature gauge for X3 is not functioning.

8. Hammer Substation

8.1. Circuit breaker 1103 has oil weeps on each phase. Existing notification 133004692 to repair.

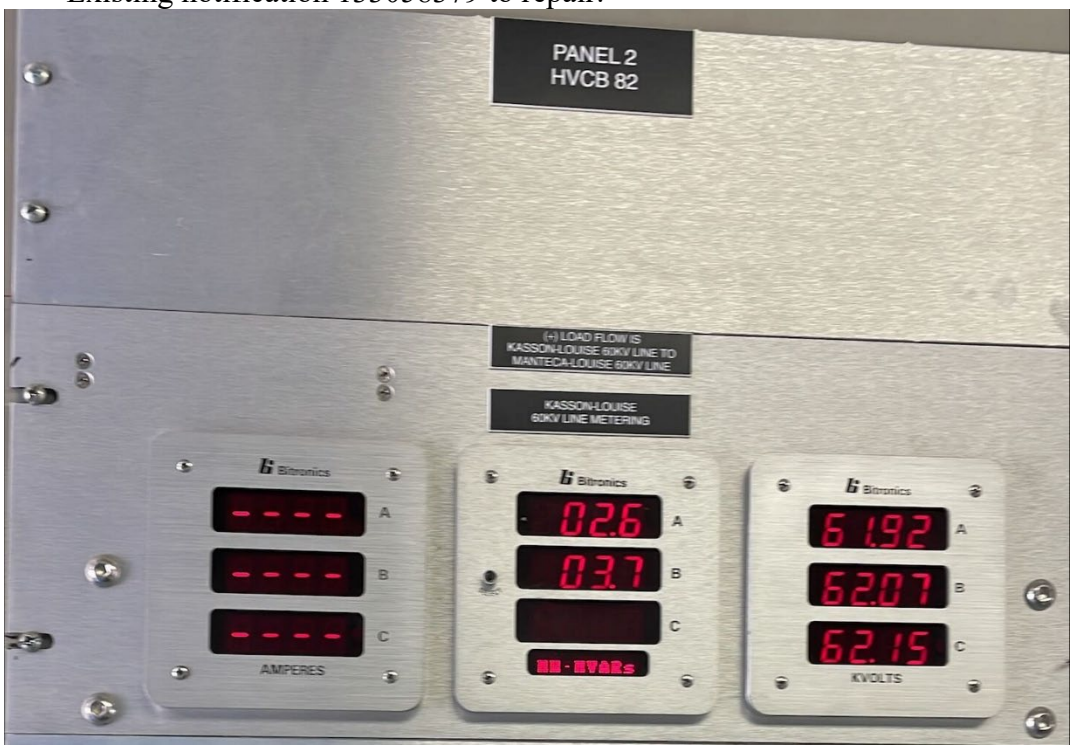
9. Linden Substation

9.1.Bank 1 B phase has empty nitrogen bottle but still has positive pressure in tank.

9.2. Bank 1 C phase has a leaking nitrogen regulator. Existing notification 13305795 to repair.

10. Louise Substation

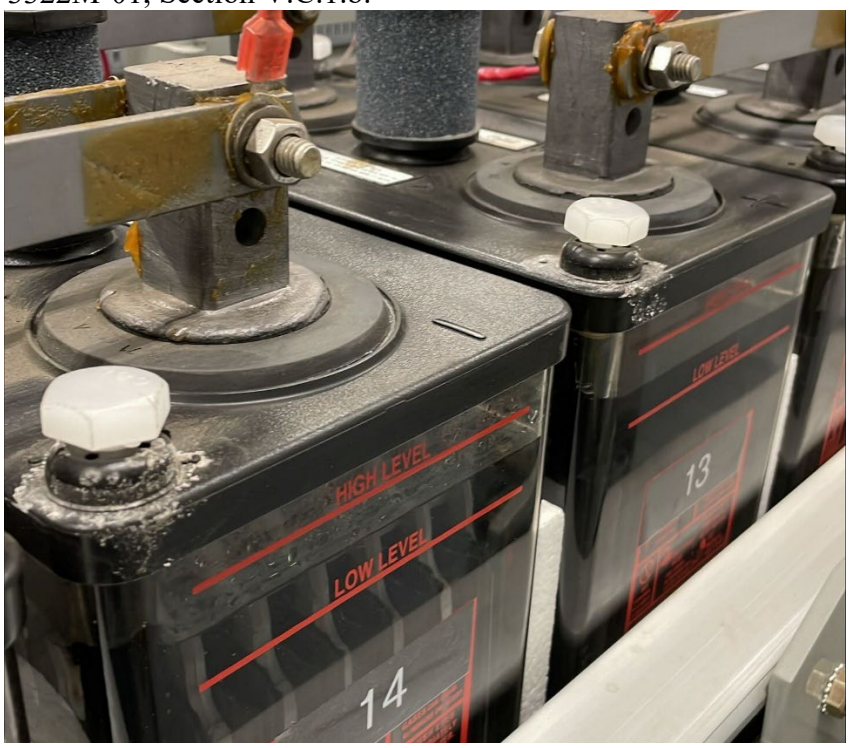
10.1. Ammeter gauge in in control room for circuit breaker 82 is not functioning. Existing notification 133058379 to repair.



11. Manteca Substation

11.1. Bank 5 C phase has an empty nitrogen tank or bad gauge, but tank still has positive pressure.

11.2. White residue near the vent caps of multiple batteries should be removed per PG&E TD-3322M-01, Section V.C.1.b.

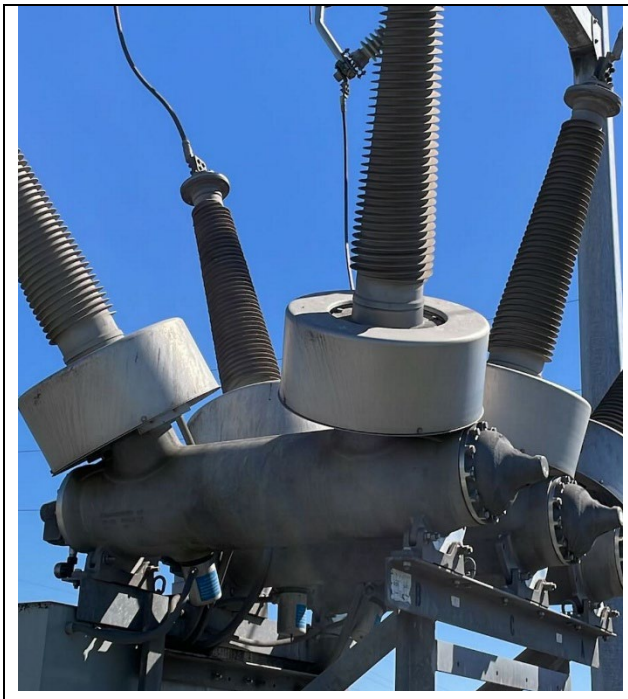


12. Mosher Substation

12.1. Bank 2 LTC is missing paint on first digit, and the last digit is not aligned.

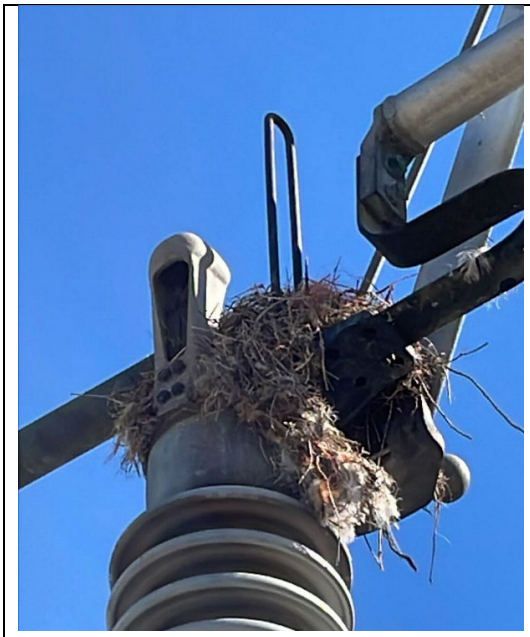
13. Riverbank SW Substation

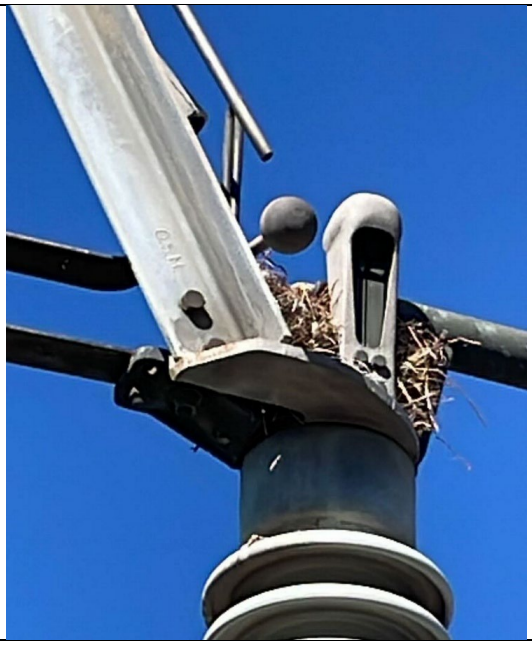
13.1. Circuit breaker 172 has bird nest in CT. Existing priority B notification 133058262 to remove.



14. Riverbank Substation

14.1. Switch 185 has bird nests in A and C phases. Existing priority B tag 133057391 to remove.



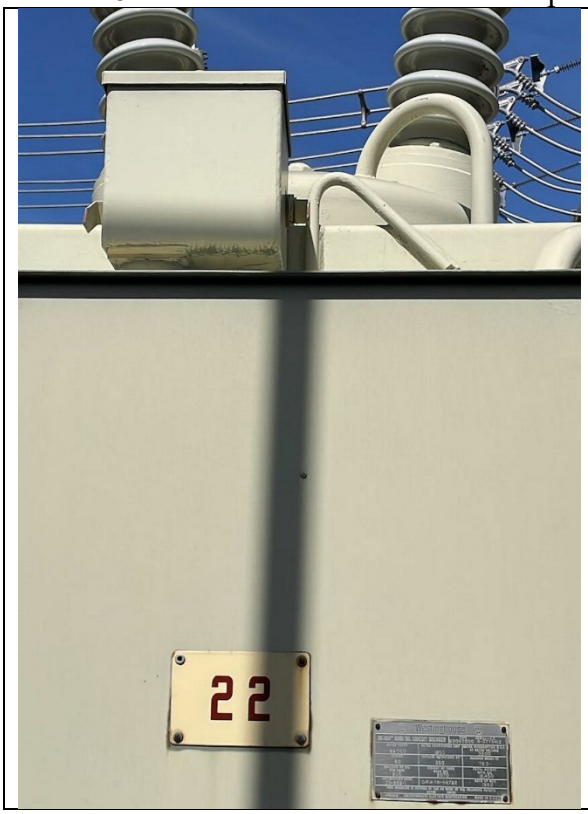


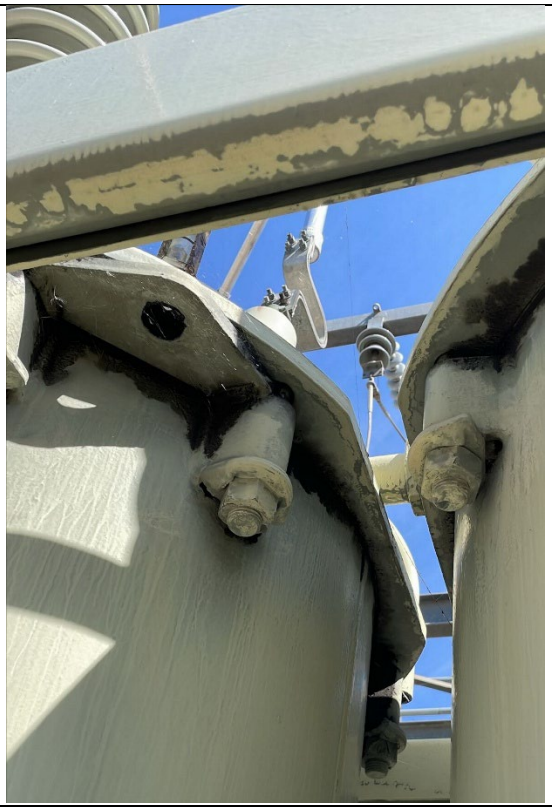
14.2. Broken barbed wire on perimeter fence. Existing priority B notification 133055352 to repair.

14.3. Security signs on perimeter fence are inside of fence rather than outside per PG&E standard. Existing priority B notification 133012039 to repair.

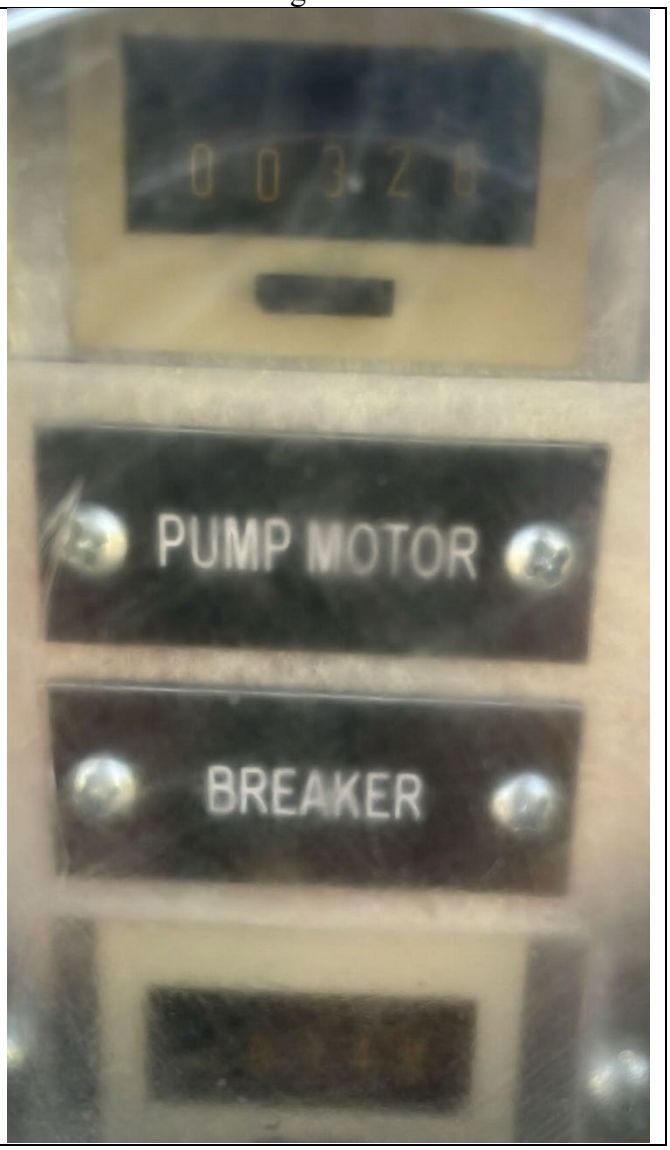
15. Stagg Substation

15.1.Circuit breaker 22 has oil weep.



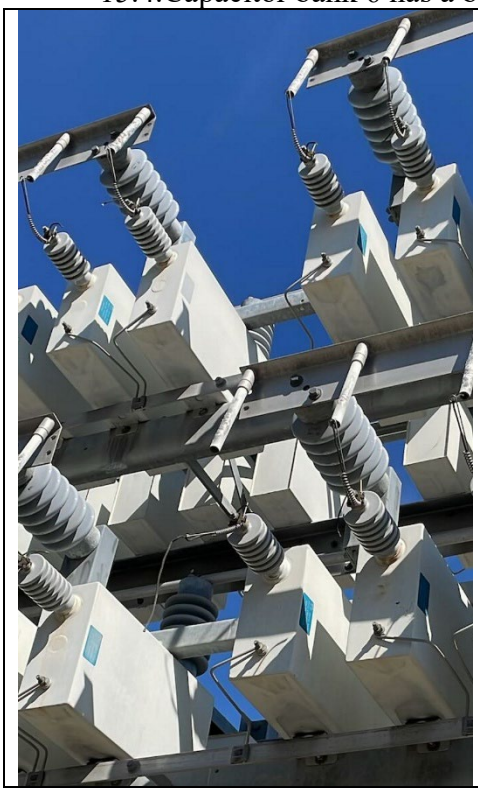


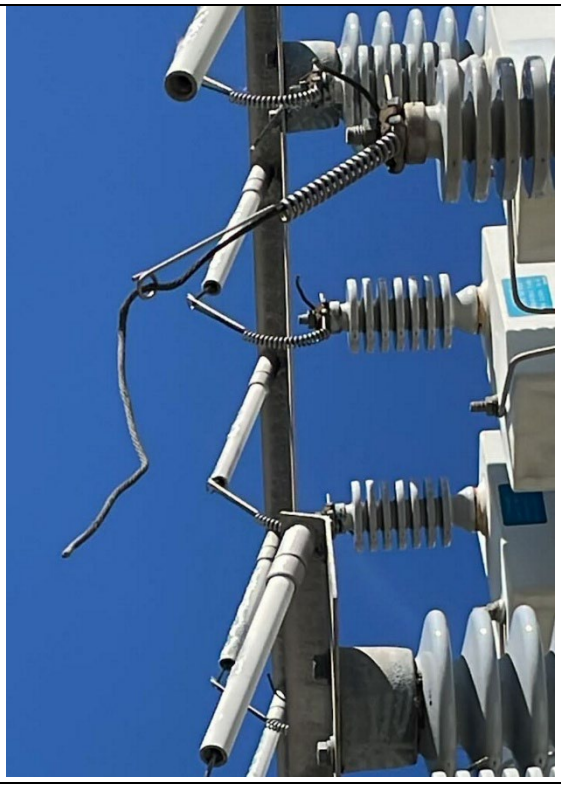
15.2.Circuit breaker 222 counters very hard to read due to cloudy window, and the cabinet could not be opened without tools to take readings.



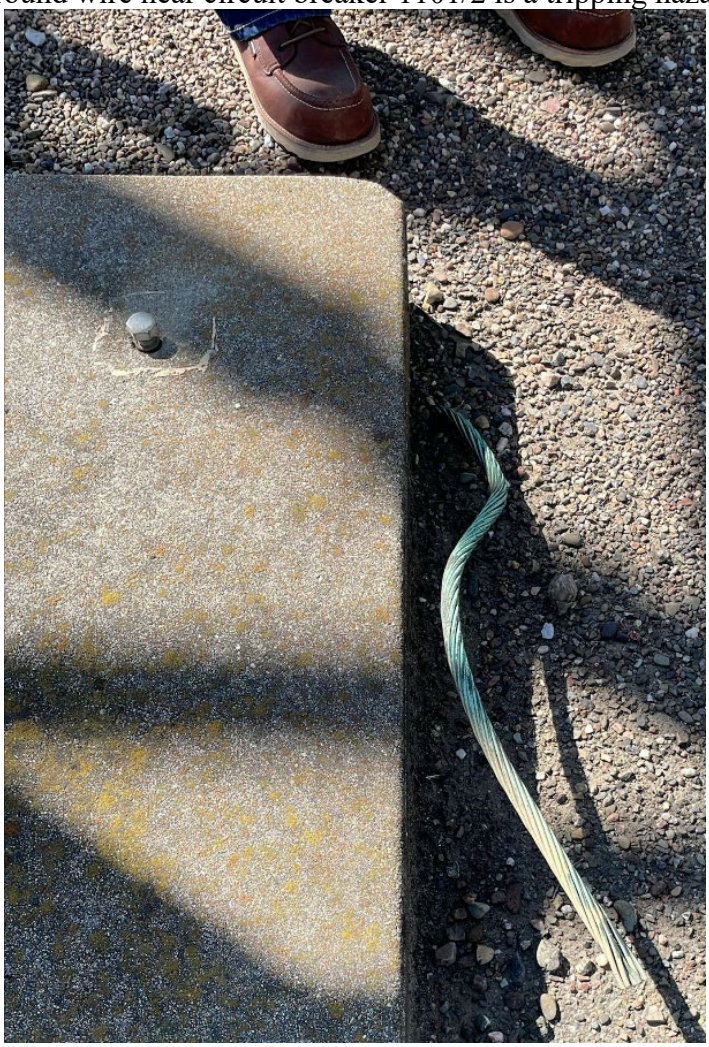
15.3.Circuit breaker 2500/2 has paint missing from counter.

15.4.Capacitor bank 6 has a blown fuse.

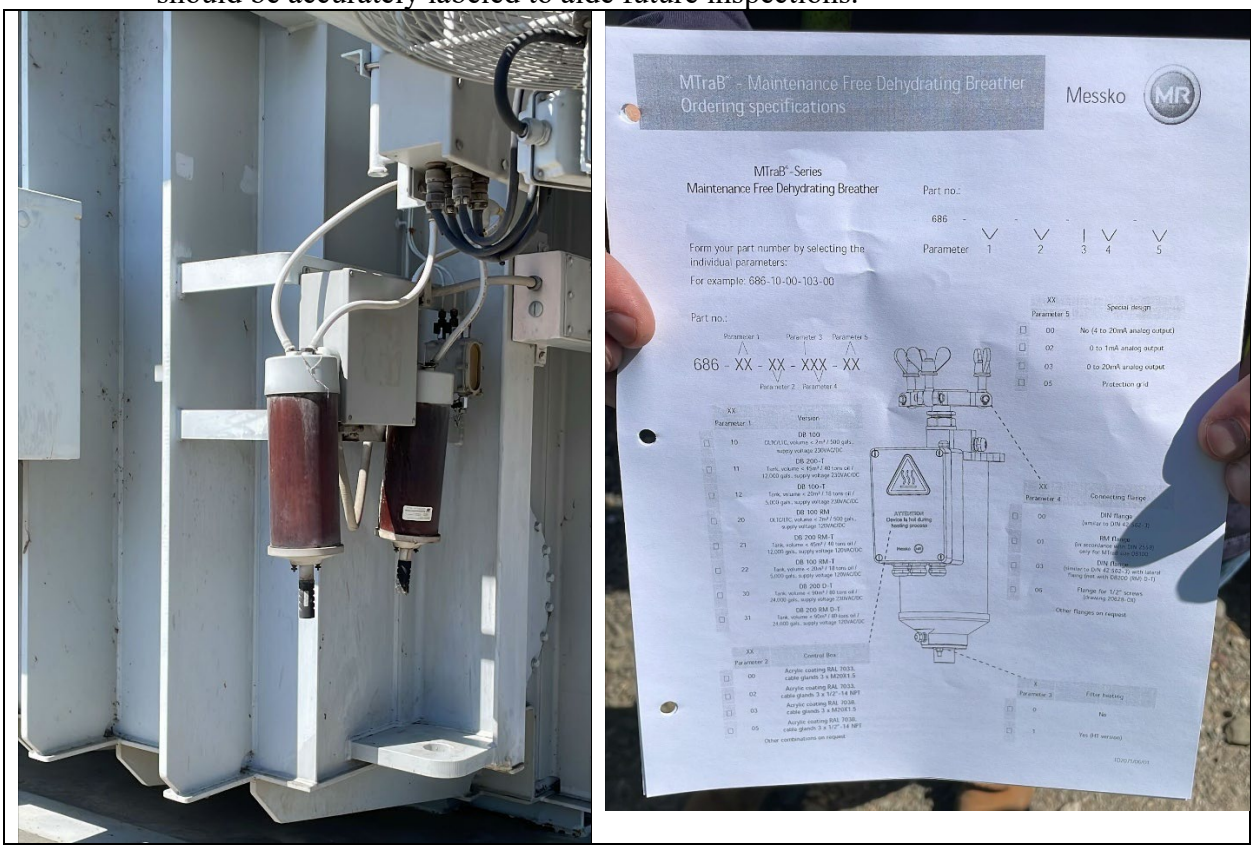




15.5.Loose ground wire near circuit breaker 1101/2 is a tripping hazard.



15.6. Bank 4 has existing notification LC 132999453 to change the discolored desiccant. However, documentation indicated this is a maintenance free breather without desiccant. If this is correct the existing notification should be closed and the canister should be accurately labeled to aide future inspections.



16. Stockton A Substation

16.1. Bank 4 has low nitrogen pressure but still has positive tank pressure. Existing notification 133070218 to repair

17. Terminous Substation

17.1. Bank 1 B phase winding temperature gauge is not reading.

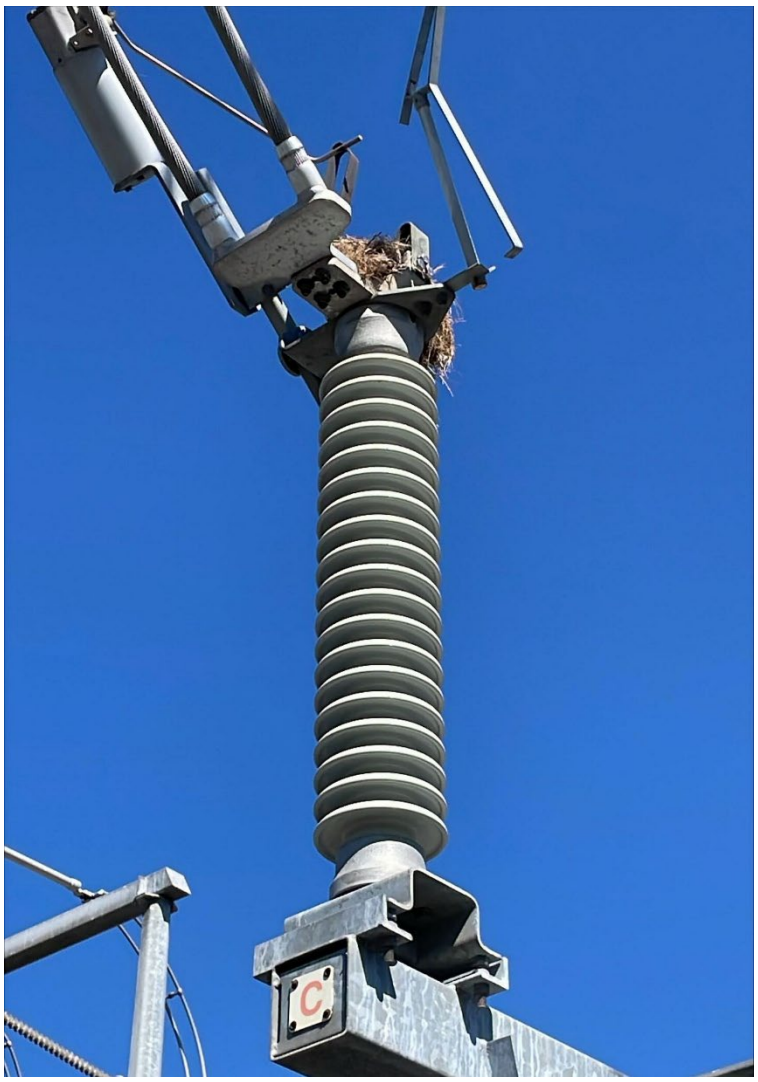
17.2.Breaker 1103/2 has a faded semaphore. Existing notification 133057662 to replace.

18. Tracy Substation

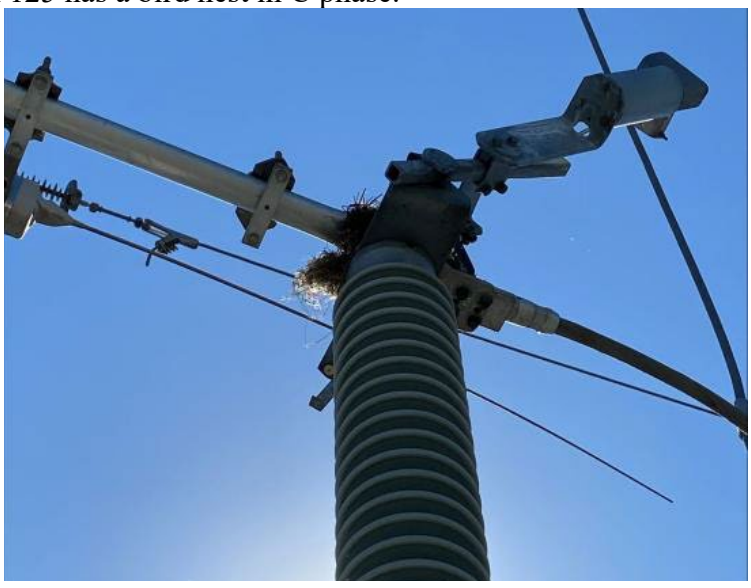
18.1.Circuit breaker 1102/2 is missing paint on counter. Existing priority B notification 133002671 to replace.

19. Valley Home Substation

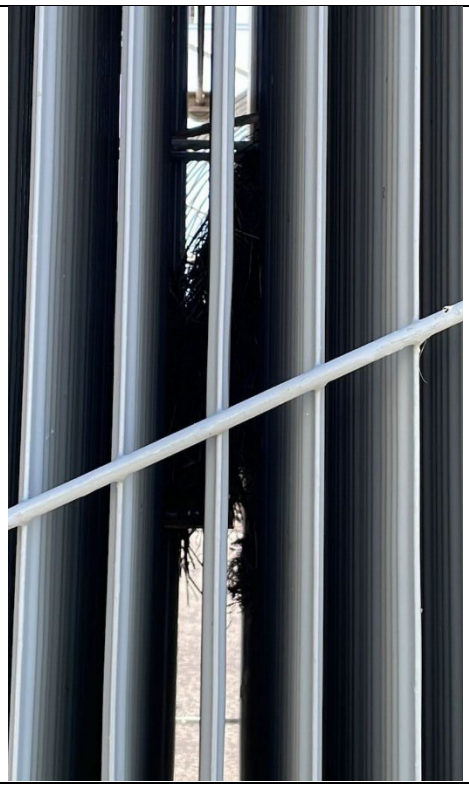
19.1.Switch 115 has a bird nest in C phase.



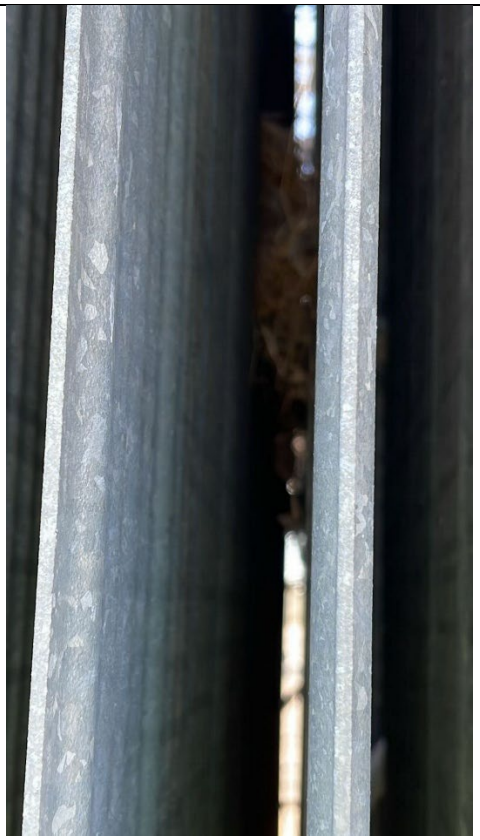
19.2.Switch 125 has a bird nest in C phase.



19.3. Bank 1 has debris from bird nest in radiator fins. Notification 133058640 to remove.



19.4. Bank 2 has debris from bird nest in radiator fans. Notification 133058690 to remove.



20. Valley Springs Substation

20.1.Bank 1 spare has nitrogen leak.

21. Weber Substation

21.1. Circuit breaker 252 has damaged counter. Existing notification 133059020 to replace.