PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
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January 22, 2025 EA2024-1244

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

SUBJECT: Electric Distribution Audit of PG&E's Kern Division

Mr. Meier:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Joe Murphy, Monica Hoskins, and Rafael Herranz of ESRB staff conducted an electric distribution audit of PG&E's Kern Division from November 18th through 22nd, 2024. During the audit, ESRB staff conducted field inspections of PG&E's distribution facilities and equipment and reviewed pertinent documents and records.

As a result of the audit, ESRB staff identified violations of General Order (GO) 95, GO 128, and GO 165. A copy of the audit findings itemizing the violations and observations is enclosed. Please provide a response no later than February 20, 2025, via 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 Joe Murphy at muj@cpuc.ca.gov or (415) 652-1847.

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 Distribution Audit Report for PG&E Kern Division

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PG&E KERN DIVISION
ELECTRIC DISTRIBUTION AUDIT FINDINGS
NOVEMBER 18-22, 2024

I. Records Review

During the distribution audit, Electric Safety and Reliability Branch (ESRB) staff reviewed the following standards, procedures, and records for PG&E's Kern Division:

- TD-2305M, Electric Distribution Preventive Maintenance Manual, March 29, 2024
- TD-2305M-JA02, Job Aid: Overhead Assessment, March 25, 2024
- TD-2305M-JA03, Job Aid: Underground Inspection, August 4, 2022
- TD-2305M-JA13, EC Job Aide: Create, Complete Cancel EC Notifications – Field Employees, April 2016
- TD-2305S, Electric Distribution Maintenance Requirements, January 31, 2020
- TD-2302S, Electric Distribution Maintenance Requirements for Overhead and Underground Equipment, Rev2: August 02, 2022
- TD-2301S, Patrols and Detailed/Intrusive Inspections of Electric Overhead and Underground Distribution Facilities, Rev1: May 15, 2020
- TD-8123S-B001, Level 2 Priority B Tag Management Requirements, April 2024
- Electric Corrective Notifications list, September 2019 – September 2024
- Patrol and Inspection Records list, September 2019 – September 2024
- Kern Division Reliability Indexes and Outage list, September 2019 – September 2024
- Kern Division New Projects list, September 2023 – September 2024
- Pole Loading Calculations list, September 2023 – September 2024
- Incoming Third-Party Notifications list, September 2019 – September 2024
- Outgoing Third-Party Notifications list, September 2019 – September 2024
- Inspector training records, September 2019 – September 2024
- Equipment test records, September 2019 – September 2024
- Intrusive Inspections, September 2023 – September 2024
- PG&E Pre-Audit Preliminary Analysis for Audit Readiness – Records Review
- Kern Division Quality Management Audit Results, 2019– 2024

II. Records Violations

ESRB staff observed the following violations during the record review portion of the audit:

1. **General Order (GO) 95, Rule 18-B (1), Maintenance Programs** states in part:

> *"Each company (including electric utilities and communications companies) shall establish and implement an auditable maintenance program for its facilities and lines for the purpose of ensuring that they are in good condition so as to conform to these rules.*
>
> *Each company must describe in its auditable maintenance program the required qualifications for the company representatives who perform inspections and/or who schedule corrective actions. Companies that are subject to GO 165 may maintain procedures for conducting inspections and maintenance activities in compliance with this rule and with GO 165.*
>
> *The maximum time periods for corrective actions associated with potential violation of GO 95 or a Safety Hazard are based on the following priority levels:*
>
> *(i) Level 1 -- An immediate risk of high potential impact to safety or reliability:*
> - *Take corrective action immediately, either by fully repairing or by temporarily repairing and reclassifying to a lower priority.*
>
> *(ii) Level 2 -- Any other risk of at least moderate potential impact to safety or reliability:*
> - *Take corrective action within specified time period (either by fully repair or by temporarily repairing and reclassifying to Level 3 priority). Time period for corrective action to be determined at the time of identification by a qualified company representative, but not to exceed: (1) six months for potential violations that create a fire risk located in Tier 3 of the High Fire-Threat District; (2) 12 months for potential violations that create a fire risk located in Tier 2 of the High Fire-Threat District; (3) 12 months for potential violations that compromise worker safety; and (4) 36 months for all other Level 2 potential violations.*
>
> *(iii) Level 3 -- Any risk of low potential impact to safety or reliability:*
> - *Take corrective action within 60 months subject to the exception specified below."*

GO 95, Rule 31.1, Design, Construction and Maintenance states in part**:**

> *"Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service.*

For all particulars not specified in these rules, design, construction, and maintenance should be done in accordance with accepted good practice for the given local conditions known at the time by those responsible for the design, construction, or maintenance of communication or supply lines and equipment."

GO 128, Rule 17.1, Design, Construction and Maintenance states in part:

"Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service.

For all particulars not specified in these rules, design, construction, and maintenance should be done in accordance with accepted good practice for the given local conditions known at the time by those responsible for the design, construction, or maintenance of [the] communication or supply lines and equipment."

PG&E's TD-2305M, Electric Distribution Preventive Maintenance Manual, March 29, 2024, does not define priority codes nor specify time frames for repairs. Previous revisions of TD-2305M listed both priority codes and specified time frames for corrective action.

PG&E's TD-2305M-JA02, Job Aid: Overhead Assessment, page 5, published on March 23, 2024, defines the priority codes and associated time frames for the response/repair action as follows for overhead facilities:

- *Priority A – Immediate risk of high potential impact to safety and reliability (due within 24 hours).*
- *Priority X – At least moderate potential impact (due up to 7 days).*
- *Priority B – At least moderate potential impact (due up to 6 months).*
- *Priority E – At least moderate potential impact (due up to 6 months in HFTD Tier 3 areas, up to 12 months in Tier 2/HFTA area, up to 36 months in Non-HFTD areas).*
- *Priority F – Low potential impact (due in 60 months).*

a) PG&E's TD-2305M-JA03, Underground Job Aid, August 4, 2022, instructs inspectors to assign a priority or to prioritize based on condition when a non-conformance is found. TD-2305M-JA03 does not provide guidance nor contain definition of priority levels nor correction completion intervals. TD-2305M-JA03 previously used the parent document, PG&E's TD-2305M, to define priorities. The current revision of PG&E's TD-2305M no longer contains priority definitions nor completion intervals.[1]

b) ESRB staff reviewed work orders created within the Kern Division from September 2019 through September 2024 and determined that PG&E did not address a total of 26,263 work orders (42.4%) by their required assigned due

[1] ESRB has noted this finding in previous audits since June 2024. ESRB requested a revision date from PG&E to address the inconsistencies listed. PG&E responded that no revision is scheduled outside of a five-year review.

date.[2] Table 1 below breaks down the 26,263 late work orders by their given priority, including the total number of late work orders completed, pending, and canceled work orders, which are included in the total.

Table 1: Late Work Orders in Kern Division

Priority Code	Late Work Orders Completed	Late Work Orders Pending*	Late Work Orders Cancelled	Total by Priority
A	2,407	3	127	2,537
X[3]	2	–	11	13
B	1,788	143	149	2,080
E	981	20,143	369	21,493
F	5	131	4	140
Total	**5,183**	**20,420**	**660**	**26,263**

* As of September 23, 2024

PG&E shall provide ESRB with its corrective action plan to complete the 20,420 late pending work orders and its preventive measures to prevent any work orders from being addressed late in the future.

Table 2 below identifies the most overdue work orders as of September 23, 2024.

Table 2: Most Overdue Work Orders**

Priority Code	Most Past Due Work Orders (WO#s)	Number of Days Past Due***
A	122217958	521
X	129112269	30
B	117937891 & 117937898	1,454
E	118092289	1,674
F	119963929	1,016

**Days past due determined using the Required End Date noted in Data Request Response 3
***As of September 23, 2024

PG&E identified work order #122217958 (A tag) on October 17, 2021, to replace a broken pole with a required end date of November 7, 2021. The notification was completed on April 12, 2023, and, as of September 23, 2024, PG&E's records indicate that the order is closed.

PG&E identified work order #129112269 (X-tag) on May 19, 2024, to replace burned pole with a required end date of May 26, 2024. The notification was completed on June 25, 2024, and, as of September 23, 2024, PG&E's records indicate that the order is closed.

[2] DRU14133_Q03_Atch01_Kern_update_Work Order History_CONF
[3] PG&E's Pre-Audit Preliminary Analysis for Audit Readiness, did not include data for Priority Code X.

PG&E identified work order #117937891 (B tag, same dates as next work order) on October 1, 2019, to replace a decayed pole with a required end date of September 30, 2020. PG&E's records indicate that the order is open as of September 23, 2024.

PG&E identified work order #117937898 (B tag, same date as above) on October 1, 2019, to replace a decayed pole with a required end date of September 30, 2020. PG&E's records indicate that the order is open as of September 23, 2024.

PG&E identified work order #118092289 (E tag) on October 23, 2019, to replace a pole with a required end date of February 23, 2020. PG&E's records indicate that the order is open as of September 23, 2024.

PG&E identified work order #119963929 (F tag) on October 10, 2020, to install a missing high voltage sign with a required end date of October 30, 2021. The notification was completed on August 11, 2024, and, as of September 23, 2024, PG&E's records indicate that the order is closed.

c) ESRB staff identified 2,410 late or late pending Kern Division Priority A work orders (22.2% of total A Priority work orders) created from September 2019 through September 2024.[4] This value is significantly greater than the 1,599 late or late pending reported by PG&E.[5] ESRB noted that 1,979 work orders completed after the required due date were designated by PG&E as "On-Time, Complete".[6] PG&E did not explain why they consider those Priority A work orders as completed on time. GO 95 Rule 18 B (1) (a) (i) Leve1 1 states "*Take corrective action immediately, either by fully repairing or by temporarily repairing and reclassifying to a lower priority*".

   Per TD-2305M-JA13, PG&E's practice is to mark Priority A work order as "TEMP" when the work can be finished within 30 days[7], instead of assigning the Priority A tag to a lower priority. GO 95 Rule 18 B (1) (a) (i) Leve1 1 states "*Take corrective action immediately, either by fully repairing or by temporarily repairing and reclassifying to a lower priority*" [8]

d) PG&E's current Job Aid TD-2305M-JA13 (EC Job Aid: Create, Complete Cancel EC Notifications – Field Employees, April 2016) lists Priority Levels A, B, E, and F. The procedure does not list Priority Level X which is cited in current TD-

[4] DRU14133_Q03_Atch01_Kern_update_Work Order History_CONF
[5] DRU14133_Q14_Atch1_Kern Distribution Audit_Response
[6] In DRU14133_Q14_Atch1_Kern Distribution Audit_Response, PG&E states, "Late Work Orders Completed exclude all on-time completed, pending, or cancelled work order notifications. Note, the count for Priority A work includes potentially late completed notifications" footnote, p. 1.
[7] DRU-5786_Multi-Division Data Request Response p. 3
[8] In DRU-5786_Multi-Division Data Request Response, PG&E states, "Due to limitations in SAP Work Management System, notifications cannot be converted efficiently to lower priorities. Hence, our definition for Temp is as follows: IF remaining work can be completed within 30 days after temporary repairs, THEN leave the Priority A notification open and SELECT "TEMP" status in SAP by COB the next business day." p. 3. The limitations of a utility's work management system does not exempt the utility with compliance with the General Orders.

2305M-JA02 (Overhead Job Aid, March 2024). Additionally, the corrective action intervals cited in current TD-2305M-JA13 do not align with the values cited in current TD-2305M-JA02. See Table 3.

Table 3: Comparison of Corrective Action Intervals

Priority	2305M-JA13	2305M-JA02
A	Immediate Response	Within 24 hours
X	Not listed	Up to 7 days
B	0-3 Months	Up to 6 months
E	3 to 12 Months	6 to 36 Months[9]
F	UG: 3 Years OH: 5 Years	Up to 60 months

e) Additionally, PG&E's Priority E (Level 2) non-conformance correction period listed in TD-2305M-JA02 is 6 to 36 months which does not meet Rule 18-B (1) ii requirement that worker safety non-conformances be corrected within 12 months.[10]

PG&E must update procedures to provide inspectors consistent guidance for non-conformance Priority (Safety Hazard Level) and corrective action intervals.

[9] TD2305M-JA02, Job Aid: Overhead Assessment, March 25, 2024 Tier 3: Up to 6 months, Tier 2: up to 12 months, Non-HFTD: up to 36 months.
[10] Ibid. p. 5 TD-2305M-JA02, Job Aid: Overhead Assessment, March 25, 2024

f) ESRB staff reviewed PG&E's Inspector Training log and noted three inspectors (1.9 % of 156 inspectors) who had no training records found.[11] [12]

PG&E must provide evidence that all inspectors are trained and qualified to perform the required inspections.

2. GO 165, Section III-C, Record Keeping states in part:

"The utility shall maintain records for (1) at least ten (10) years of patrol ***and*** *detailed inspection activities, and (2) the life of the pole for intrusive inspection activities."*

PG&E's TD-2305M, Electric Distribution Preventive Maintenance Manual, March 29, 2024, Record Retention, Record Retention Requirement, GO 165 Record Retention Guidelines Table lists requirements of 2 inspection cycles or 5 years with minimum record retention of 5 to 10 (years, note: no time unit is specified, in context, years is implied). See Figure 1.

2 G.O. 165 Record Retention Guidelines

RECORD TYPE	REQUIREMENT	MINIMUM RECORD RETENTION
OH Inspection Maps/MPs, Electric Maintenance Patrol/Inspection Daily Logs, and Paper or Electronic Notification Forms	2 Inspection cycles or 5 years, whichever is longer	10
UG Inspection Maps/MPs, Electric Maintenance Patrol/Inspection Daily Logs, and Paper or Electronic Notification Forms	2 Inspection cycles or 5 years, whichever is longer	6
OH Patrol Maps/MPs, Electric Maintenance Patrol/Inspection Daily Logs, and Paper or Electronic Notification Forms	2 Patrol cycles or 5 years, whichever is longer	5
UG Patrol Maps/MPs, Electric Maintenance Patrol/Inspection Daily Logs, and Paper or Electronic Notification Forms	2 Patrol cycles or 5 years, whichever is longer	5

Figure 1: GO 165 Record Retention Guidelines, TD-2305M

Per GO 165, Section III-C, records shall be maintained for at least 10 years for patrol and inspection activities. PG&E's TD-2305M, Electric Distribution Preventive Maintenance Manual and practices do not meet the minimum record retention requirement as prescribed in GO 165. [13]

[11] DRU14133_Q11(a)_Atch01_KE Inspector List 2019-2024_CONF
[12] Out of privacy concerns, the names and LANs of the employees are not listed in this report.
[13] ESRB has noted this finding in previous audits since June 2024. ESRB requested a revision date from PG&E to address the inconsistencies listed. PG&E responded that no revision is scheduled outside of a five-year review.

3. GO 95, Rule 31.2, Inspection of Lines states in part:

> *"Lines shall be inspected frequently and thoroughly for the purpose of ensuring that they are in good condition so as to conform with these rules. Lines temporarily out of service shall be inspected and maintained in such condition as not to create a hazard."*

GO 165, Section III-B, Standards for Inspection states in part:

> *"Each utility subject to this General Order shall conduct inspections of its distribution facilities, as necessary, to ensure reliable, high-quality, and safe operation, but in no case may the period between inspections (measured in years) exceed the time specified in Table 1."*

Table 1: Distribution Inspection Cycles (Maximum Intervals in Years)

	Patrol		Detailed		Intrusive	
	Urban	Rural	Urban	Rural	Urban	Rural
Transformers						
Overhead	1	2[1]	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Switching/Protective Devices						
Overhead	1	2[1]	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Regulators/Capacitors						
Overhead	1	2[1]	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Overhead Conductor and Cables	1	2[1]	5	5	---	---
Streetlighting	1	2	x	x	---	---
Wood Poles under 15 years	1	2	x	x	---	---
Wood Poles over 15 years which have not been subject to intrusive inspection	1	2	x	x	10	10
Wood Poles which passed intrusive inspection	---	---	---	---	20	20

a. ESRB staff identified that PG&E completed a total of 26,469 patrol and detailed inspections (3.8%) of padmount/underground (UG) and overhead (OH) electric facilities past their GO 165 required completion date, as shown in Table 4.

Table 4: Late Overhead Patrols and Inspections in East Bay Division[14]

Year	OH Patrol	OH Detailed Inspection	UG Patrol	UG Detailed Inspection	Total Structures
2019[15]	-	-	-	-	0
2020	-	-	-	1	1
2021	11,204	13,957	-	-	25,161
2022	-	-	-	-	0
2023	1,296	5	-	-	1,301
2024*	3	-	-	3	6
Total	12,503	13,962	0	4	**26,469**

* Preliminary information, final report due July 1, 2025

b. In compliance with GO 165, PG&E's Patrols and Detailed/Intrusive Inspections of Electric Overhead and Underground Distribution Facilities (TD-2301S), published on May 15, 2020, states the following:

> *"Intrusive Inspection Testing Cycle of Wood Poles – In addition to wood pole patrols, the following intrusive inspection interval criteria must be met:*
> - *Poles that have passed an intrusive inspection require an intrusive test within **20 years** of the previous intrusive test."*

ESRB staff reviewed the intrusive inspection records from September 24, 2023 to September 23, 2024 and identified that PG&E completed a total of 64 intrusive inspections of their wood poles past their GO 165 required completion date. The most past due inspections are shown in Table 5.

Table 5: Latest Intrusive Inspections in Kern Division

Equipment Number	Equipment Description	Most Recent Inspection Date	Previous Inspection Date	Days Past Due
104153918	Pole - Class: 5 : Wood : 25	6/15/2024	1/1/1999	1,992
103352898	Pole - Class: 4 : Wood : 40	6/4/2024	1/1/1999	1,981
103230727	Pole - Class: 1 : Wood : 50	5/24/2024	1/1/1999	1,970
104170044	Pole - Class: 6 : Wood : 25	5/23/2024	1/1/1999	1,969
103097712	Pole - Class: 3 : Wood : 45	5/15/2024	1/1/1999	1,961
103227468	Pole - Class: 1 : Wood : 45	12/16/2023	1/1/1999	1,810
103345578	Pole - Class: 4 : Wood : 40	12/1/2023	1/1/1999	1,795
103370390	Pole - Class: 4 : Wood : 40	12/1/2023	1/1/1999	1,795
103370411	Pole - Class: 4 : Wood : 45	11/30/2023	1/1/1999	1,794

c. ESRB identified insufficient HFTD 3 distribution tower inspection records to demonstrate PG&E's compliance of GO 165 requirements. In HFTD Tier 3 areas, patrol inspections are required annually. ESRB staff reviewed inspection records of selected distribution towers and found:

[14] DRU14620_Q049(c)_KE Late Units (2019-2024) – Calculated individual units, not Plat Maps
[15] 11 OH inspections were conducted late in 2019, but these occurred prior to the audit look-back period.

i. No inspection was conducted in 2020 on distribution towers #103912810 [16] and 103912593.[17] These towers are in an HFTD Tier 3 area requiring annual inspections as required by GO 165, Section III-B Table 1. [18]

ii. No inspection was conducted in 2023 on distribution towers #103912810 [19] and 103912593.[20] These towers are in an HFTD Tier 3 area requiring annual inspections as required by GO 165, Section III-B Table 1. [21]

iii. PG&E inspectors misidentified the distribution towers #103912810 and 103912593 as transmission assets and did not conduct the required distribution inspections for 2020 and 2023. Entries in the distribution tower inspection records in July 2020 and April 2023 state:

1. Prompt: "*Is this asset approved for an inspection?*"
   Response "*No*."
2. Comment "*Structure is in the field; Pole is a transmission-only pole. It is inspected by another program*." [22]

PG&E's TD-2305M-JA02, Job Aid , Pole/Structures, Distribution Towers / Steel Lattice states "*General Guidance: You are required to record a distribution inspection for structures carrying distribution voltage*."

iv. PG&E inspection log [23] incorrectly states that distribution towers #103912810 and 103912593 were inspected in 2020 and 2023 when these towers were not inspected in 2020 and 2023.

v. PG&E inspection log [24] incorrectly lists the Wildfire Tier for distribution tower #103912810 as "Neither" [neither Tier 2 nor Tier 3]. The tower is in an HFTD Tier 3 area.[25] ESRB notes that the Wildfire Tier listed for #103912810 in 2021, 2022, and 2023 entries correctly lists Tier 3.

[16] Inspection record DRU14740_Q03_Atch10_2020 OHI 103912810_CONF dated June 20, 2020 incorrectly states that the facility is a transmission only pole and not approved for inspection.
[17] Inspection record DRU14740_Q03_Atch02_2021 OHI 103912593_CONF dated June 20, 2020 incorrectly states that the facility is a transmission only pole and not approved for inspection.
[18] ESRB reviewed PG&E transmission inspection records DRU14740_Kern Post-Audit Response to determine if other programs inspected these two towers. No transmission inspection was conducted in 2020 or 2023. Transmission inspections were conducted on July 2, 2021, March 22, 2022, and May 30, 2024.
[19] Inspection record DRU14740_Q03_Atch13_2023 OHI 103912810_CONF dated April 29, 2023 incorrectly states that the facility is a transmission only pole and not approved for inspection.
[20] Inspection record DRU14740_Q03_Atch05_2023 OHI 103912593_CONF dated April 29, 2023 incorrectly states that the facility is a transmission only pole and not approved for inspection.
[21] See ESRB review of transmission note above.
[22] See inspection records cited above.
[23] DRU14133_Q04(a)_Atch01_KE PI Data (2019-2024) 2020-2024 Asset Based tab. See entries for Equipment #103912810 and 103912593 in 2020 and 2023.
[24] Ibid, #103912810 on 7/20/2020.
[25] CPUC High Fire-Threat District (HFTD) Map

Distribution towers SAP #103912810 and 103912593 are part of the former Midway-Santa Maria transmission line. The line was converted from transmission to distribution assets prior to 2019. Inspection records of the two distribution towers indicate that no lattice towers along the converted Midway-Santa Maria were inspected as required by GO 165, Section III-B Table 1 in 2020 and 2023.

PG&E must implement procedures and conduct training to assure that all structures are inspected at the required intervals.

4. **GO 95, Rule 56.2, Overhead Guys, Anchor Guys and Span Wires, Use** states in part:

> *"Guys shall be attached to structures, as nearly as practicable, at the center of load. They shall be maintained taut and of such strength as to meet the safety factors of Rule 44."*

PG&E's TD-2305M-JA02, Job Aid: Overhead Assessment, March 25, 2024 Rev. 13, Miscellaneous Other Compelling Abnormal Conditions, Guy Broken/Slack/Corroded states, *"Pole must be straight with Guy no more than an arm's length (3ft) from taut, that does not have significant impact on the structural integrity of the pole."* See Figure 2.

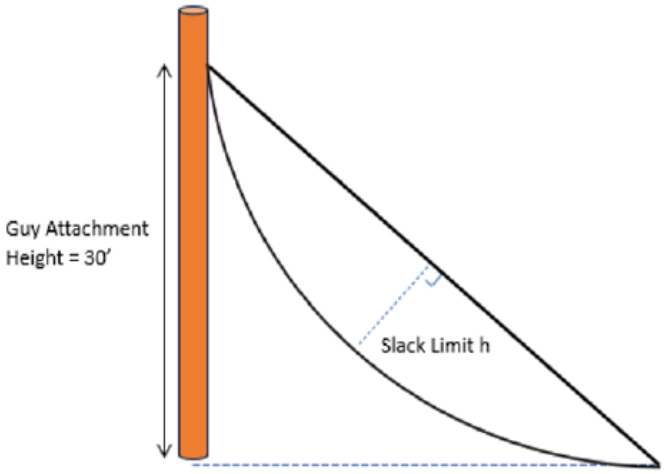

Figure 2: Guy slack limit, TD-2305M-JA02

Per GO 95, Rule 56.2, guys are to be maintained taut. [26] PG&E's TD-2305M-JA02 allows a deviation from taut by as much as 3 feet without regard to length or angle of attachment. [27]

PG&E's TD-2305M-JA02, Job Aid, Miscellaneous Other Compelling Abnormal Conditions, Guy Broken/Slack/Corroded does not comply with GO 95, Rule 56.2 requiring guys to be maintained taut in all circumstances.

[26] Taut: Stretched or pulled tight; not slack. Oxford English dictionary.
[27] ESRB revised PG&E's FDA Tag Evaluation, Guy Loose/Adjust ATS Report 006.4.3-23.9 Sept 2023, an analysis of guy slack limits to achieve a taut guy at a lean of 10 %. The analysis assumed 30-foot attachment points and various angles of down guys. The analysis did not evaluate stresses on poles without guying per Rule 56.2 nor the effects of slack guys on Safety Factors per Rule 44. The analysis included the statement: "Pole overload and pole lean are two different phenomena, and pole may be overloaded without guy support before overall lean reaches [PG&E's] allowable limit."

III. Field Inspection

During the field inspection, ESRB staff inspected the following facilities in PG&E's Kern Division, listed in Table 6:

Table 6: Kern Division Field Inspection Locations

Location	Structure Type	SAP ID Number	Latitude	Longitude
1	Wood Pole	103996879	35.31718333	-119.0117806
2	Wood Pole	100155547	35.31759167	-119.0116722
3	Wood Pole	103921340	35.31605833	-119.0117556
4	Underground Vault	107117614	35.31486111	-119.0115583
5	Underground Vault	107111402	35.31403056	-119.0115194
6	Wood Pole	100201379	35.40710833	-119.0253056
7	Wood Pole	100201374	35.41008056	-119.0255278
8	Wood Pole	100201363	35.40749722	-119.0255194
9	Wood Pole	100203955	35.40769167	-119.0255444
10	Wood Pole	103906100	35.41368056	-119.0356
11	Wood Pole	100143650	35.41366111	-119.0360417
12	Wood Pole	100241020	35.41393611	-119.036025
13	Wood Pole	100239926	35.41415833	-119.0360944
14	Wood Pole	100239925	35.41412778	-119.03575
15	Underground Vault	108325405	35.30214722	-119.0782778
16	Padmount	108244625	35.30215833	-119.079225
17	Padmount	108244628	35.30179722	-119.0677958
18	Pedestal	107064283	35.30258056	-119.0779333
19	Padmount	108244627	35.30301389	-119.0781028
20	Wood Pole	100151944	35.17950556	-119.0028611
21	Wood Pole	100151941	35.17952778	-119.0015917
22	Wood Pole	100230512	35.17946944	-119.0030222
23	Wood Pole	100238426	35.40293056	-119.1530444
24	Wood Pole	104211145	35.40283611	-119.1528944
25	Wood Pole	100122056	35.40251944	-119.1525028
26	Wood Pole	100122054	35.40201667	-119.1519
27	Wood Pole	108325466	35.40244722	-119.1529472
28	Padmount	107068232	35.43363056	-119.07055
29	Underground Vault	107127188	35.43385	-119.0708778
30	Underground Vault	107072026	35.43399167	-119.0709
31	Underground Vault	107072020	35.43380278	-119.070825
32	Underground Vault	107068902	35.43475833	-119.0714861
33	Padmount	107067968	35.43473056	-119.0714111
34	Wood Pole	100214111	35.52590833	-118.7429806
35	Wood Pole	100214114	35.60773889	-118.9497
36	Wood Pole	100214119	35.60898889	-118.9496694
37	Wood Pole	100214121	35.609675	-118.9497083
38	Wood Pole	100214140	35.61055833	-118.9496694

Location	Structure Type	SAP ID Number	Latitude	Longitude
39	Wood Pole	100214125	35.61146667	-118.9496694
40	Wood Pole	100214145	35.61140556	-118.9495556
41	Wood Pole	103235906	35.61323056	-118.9496694
42	Wood Pole	100182472	35.59020278	-119.3375472
43	Wood Pole	100182468	35.59059444	-119.3375639
44	Wood Pole	100182464	35.59086944	-119.3376833
45	Wood Pole	100182402	35.58981667	-119.3371417
46	Wood Pole	100139180	35.60416389	-119.3490917
47	Wood Pole	103126228	35.63789722	-119.3316028
48	Wood Pole	100180275	35.50886944	-119.2727972
49	Wood Pole	100180277	35.50927778	-119.2730417
50	Wood Pole	100160951	35.50944167	-119.2729556
51	Underground Vault	108250600	35.510625	-119.2726361
52	Underground Vault	107118426	35.51065	-119.2742694
53	Underground Vault	107129123	35.51066111	-119.2754667
54	Padmount	107063746	35.51071667	-119.2763528
55	Padmount	107157703	35.49932778	-119.2897194
56	Padmount	107146161	35.49944722	-119.2885806
57	Wood Pole	100203672	35.49948611	-119.2887583
58	Wood Pole	100203676	35.49965	-119.2892306
59	Wood Pole	100203678	35.49988056	-119.2901222
60	Wood Pole	100203679	35.49985	-119.2907944
61	Lattice Tower	103912810	35.11004167	-120.0948333
62	Lattice Tower	103912593	35.10995833	-120.0929861
63	Wood Pole	100193462	35.109975	-120.09285
64	Wood Pole	100193463	35.11126667	-120.0927111
65	Wood Pole	100167429	35.06164444	-120.0103611
66	Wood Pole	103253906	35.06053611	-120.0116889
67	Wood Pole	100220339	34.92818889	-119.652625
68	Wood Pole	100190895	34.927525	-119.6527417
69	Wood Pole	100190900	34.92738056	-119.6527778
70	Wood Pole	100190905	34.927375	-119.6515056
71	Wood Pole	103902539	34.92739167	-119.6539167
72	Wood Pole	100190909	34.93781667	-119.6325694
73	Wood Pole	100219955	34.92694167	-119.5412611
74	Wood Pole	100189623	34.92698333	-119.5418556
75	Wood Pole	100219920	34.92677778	-119.5393528
76	Wood Pole	100197968	35.39982222	-119.4615944
77	Wood Pole	104179845	35.39922222	-119.45275
78	Wood Pole	103834220	35.39928889	-119.4522389
79	Wood Pole	100196257	35.39926667	-119.4519361
80	Wood Pole	100196453	35.39924167	-119.4519806
81	Wood Pole	100209819	35.40086389	-119.4703222
82	Wood Pole	100209821	35.40067222	-119.4702611
83	Wood Pole	100209793	35.40086667	-119.4698417

Location	Structure Type	SAP ID Number	Latitude	Longitude
84	Wood Pole	100172404	35.48994444	-119.5444556
85	Wood Pole	103135176	35.49983333	-119.5432889

IV. Field Inspection Violations

ESRB staff observed the following violations during the field inspection:

1. **GO 95, Rule 18 A (3), Resolution of Potential Violations of General Order 95 and Safety Hazards** states:

> *"If a company, while performing inspections of its facilities, discovers a Safety Hazard(s) on or near a communications facility or electric facility involving another company, the inspecting company shall notify the other entity of such Safety Hazard(s) no later than ten (10) business days after the discovery."*

ESRB's finding related to the above rule is listed in Table 7:

Table 7: GO 95, Rule 18 A (3) Finding

Location	Finding	Notes
43	Non-conformance incorrectly assigned.	Work order EC 127214313 created for an exposed ground of PG&E equipment. The exposed ground was NOT associated with PG&E equipment but for communications equipment. PG&E created a third-party notification for this issue.

2. **GO 95, Rule 22.8 A (1), Design, Construction and Maintenance** states in part:

> *"Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service."*

ESRB's finding related to the above rule is listed in Table 8:

Table 8: GO 95, Rule 22.8 A (1) Finding

Location	Finding	Notes
81	Exposed ground	Existing work order EC 127214313, for pole replacement. Work order priority increased to X priority.

3. **GO 95, Rule 31.1, Design, Construction and Maintenance** states in part:

> *"Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service."*

ESRB's findings related to the above rule are listed in Table 9:

Table 9: GO 95, Rule 31.1 Findings

Location	Finding	Notes
6	Excessive pole lean.	
7	Missing animal guard.	Work order EC #129833013 created during audit to correct issue.
14	Service drop detached from the weatherhead.	Work order EC #129833791 created during audit to correct issue.
26	Missing animal guard.	Work order EC #129836518 created during audit to correct issue.
34	Four splices in span, roadside phase	
46	Misidentified pole. Incorrect bar code and SAP number on pole and map.	
47	Misidentified pole. Incorrect bar code and SAP number on pole and map.	
49	Missing XFMR animal guard	
70	Excessive pole lean.	
75	Bent pole, overloaded.	

4. **GO 95, Rule 35, Vegetation Management** states in part:

> *"When a supply or communication company has actual knowledge, obtained either through normal operating practices or notification to the company, that*

its circuit energized at 750 volts or less shows strain or evidences abrasion from vegetation contact, the condition shall be corrected by reducing conductor tension, rearranging or replacing the conductor, pruning the vegetation, or placing mechanical protection on the conductor(s).”

ESRB’s finding related to the above rule is listed in Table 10:

Table 10: GO 95, Rule 35 Finding

Location	Finding	Notes
14	Strain on service drop.	Work order EC #129833791 created during audit to correct issue.

5. **GO 95, Rule 38, Minimum Clearance of Wires from Other Wires** states in part:

“The minimum vertical, horizontal or radial clearances of wires from other wires shall not be less than the values given in Table 2 and are based on a temperature of 60° F. and no wind. “

Table 2, Case 19 C: The radial separation between guys and conductors supported on the same poles for communication conductors (Including Open Wire, Cables and Service Drops) must be at least 3 inches.”

ESRB’s findings related to the above rule are listed in Table 11:

Table 11: GO 95, Rule 38 Findings

Location	Finding	Notes
11	Insufficient clearance between down guy and communication line.	
42	Insufficient clearance between down guy and communication line.	

6. **GO 95, Rule 56.7-B Anchor Guys** states:

“In order to prevent trees, buildings, messengers, metal–sheathed cables or other similar objects from grounding portions of guys above guy insulators, it is suggested that anchor guys be sectionalized, where practicable, near the highest level permitted by this Rule”

ESRB’s finding related to the above rule is listed in Table 12:

Table 12: GO 95, Rule 56.7-B Finding

Location	Finding	Notes
22	Vegetation spanning down guy insulator.	Repaired in field.

7. **GO 95, Rule 54.8 C (4) Clearances between Supply Service Drops and Other Conductors** states:

> *"The radial clearance between supply service drop conductors and communication service drop conductors may be less than 48 inches as specified in Table 2, Column C, Cases 4 and 9; Column D, Cases 3 and 8, but shall be not less than 24 inches. Where within 15 feet of the point of attachment of either service drop on a building, this clearance may be further reduced but shall be not less than 12 inches."*

ESRB's finding related to the above rule is listed in Table 13:

Table 13: GO 95, Rule 54.8 C (4) Finding

Location	Finding	Notes
14	Insufficient service drop clearance to communication service drops.	Work order EC #129833791 created during audit to correct issue.

8. **GO 95, Rule 56.2 Overhead Guys, Anchor Guys and Span Wires** states:

> *"Guys shall be attached to structures, as nearly as practicable, at the center of load. They shall be maintained taut and of such strength as to meet the safety factors of Rule 44."*

ESRB's finding related to the above rule is listed in Table 14:

Table 14: GO 95, Rule 56.2 Finding

Location	Finding	Notes
82	Slack span guy, 4 ft deflection.	Over road.

9. GO 95, Rule 56.9 Guy Marker (Guy Guard) states:

> *"A substantial marker of suitable material, including but not limited to metal or plastic, not less than 8 feet in length, shall be securely attached to all anchor guys. Where more than one guy is attached to an anchor rod, only the outermost guy is required to have a marker."*

ESRB's finding related to the above rule is listed in Table 15:

Table 15: GO 95, Rule 56.9 Finding

Location	Finding	Notes
65	Missing down guy marker.	Repaired in field.

10. GO 95, Rule 51.6 A, High Voltage Marking states in part:

> *"Poles which support line conductors of more than 750 volts shall be marked with high voltage signs. This marking shall consist of a single sign showing the words "HIGH VOLTAGE", or pair of signs showing the words "HIGH" and "VOLTAGE", not more than six (6) inches in height with letters not less than 3 inches in height. Such signs shall be of weather and corrosion–resisting material, solid or with letters cut out therefrom and clearly legible. The grounding conductor from each ground rod to the base of the pole shall not be less than 1 foot below the surface of the ground."*

ESRB's findings related to the above rule are listed in Table 16:

Table 16: GO 95, 51.6 A Findings

Location	Finding	Notes
24	Missing High Voltage Sign.	Repaired in field.
44	Damaged High Voltage Sign.	Work order EC #129842280 created during audit to correct issue.
84	Damaged High Voltage Sign.	
85	Missing High Voltage Sign.	

11. GO 128, Rule 17.8, Identification of Manholes, Handholes, Subsurface and Self-contained Surface-mounted Equipment Enclosures states in part:

> *"Manholes, handholes, subsurface and self-contained surface-mounted equipment enclosures shall be marked as to ownership to facilitate identification by persons authorized to work therein and by other persons performing work in their vicinity."*

ESRB's finding related to the above rule is listed in Table 17:

Table 17: GO 128, Rule 17.8 Finding

Location	Finding	Notes
4	Faded, unreadable mark of ownership.	Repaired in field.

12. GO 95, Rule 18-B (1), Maintenance Programs states in part:

> *"Each company (including electric utilities and communications companies) shall establish and implement an auditable maintenance program for its facilities and lines for the purpose of ensuring that they are in good condition so as to conform to these rules.*
>
> *Each company must describe in its auditable maintenance program the required qualifications for the company representatives who perform inspections and/or who schedule corrective actions. Companies that are subject to GO 165 may maintain procedures for conducting inspections and maintenance activities in compliance with this rule and with GO 165.*
>
> *The maximum time periods for corrective actions associated with potential violation of GO 95 or a Safety Hazard are based on the following priority levels:*
>
> *(iv) Level 1 -- An immediate risk of high potential impact to safety or reliability:*
> - *Take corrective action immediately, either by fully repairing or by temporarily repairing and reclassifying to a lower priority.*
>
> *(v) Level 2 -- Any other risk of at least moderate potential impact to safety or reliability:*
> - *Take corrective action within specified time period (either by fully repair or by temporarily repairing and reclassifying to Level 3 priority). Time period for corrective action to be determined at the time of identification by a qualified company representative, but not to exceed: (1) six months for potential violations that create a fire risk located in Tier 3 of the High Fire-Threat District; (2) 12 months for potential violations that create a fire risk located in Tier 2 of the High Fire-Threat District; (3) 12 months for potential*

violations that compromise worker safety; and (4) 36 months for all other Level 2 potential violations.

(vi) Level 3 -- Any risk of low potential impact to safety or reliability:

- *Take corrective action within 60 months subject to the exception specified below."*

GO 95, Rule 31.1, Design, Construction and Maintenance states in part**:**

"Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service."

During the field audit, ESRB observed the following existing non-conformances with past due corrective actions. ESRB findings related to the above rules are listed in Table 18:

Table 18: Observed Field Findings with Past Due Work Orders

Loc	Non-conformance	GO / Rule	Existing EC	HFTD Tier	Due Date
1	Missing HV sign	95/51.6 A	124809346	Non-HFTD	10/2023
3	Loose animal guard, primary	95/31.1	124809296	Non-HFTD	10/2023
13	Decayed pole	95/49.1 A (1)	118473819	Non-HFTD	4/2024
35	Replace pole, decayed	95/49.1 A (1)	123883223	Tier 2	5/2020 FSR: 8/2024
36	Replace pole, decayed	95/49.1 A (1)	117170564	Tier 2	5/2020 FSR: 8/2024
37	Replace pole, decayed	95/49.1 A (1)	117170565	Tier 2	6/2023 FSR: 8/2024
38	Replace cross arm	95/49.2 C (44)	123881537	Tier 2	6/2023 FSR: 8/2024
49	Replace pole	95/49.1 A (1)	124048531	Non-HFTD	7/2023
61	Broken tower/replace	95/48.2 (44)	121370374	Tier 3	5/2022
76	Broken crossarm	95/49.2 C (44)	127196631	Non-HFTD	10/2024
76	Animal guard broken, replace	95/31.1	127196631	Non-HFTD	10/2024
79	Incorrect connector	95/31.1	127197762	Non-HFTD	10/2024
80	Broken crossarm	95/49.2 C (44)	127197488	Non-HFTD	10/2024
80	High sign missing	95/51.6 A	127197488	Non-HFTD	10/2024
81	Decayed cross arm	95/49.2 C (44)	127214313	Non-HFTD	10/2024

Loc	Non-conformance	GO / Rule	Existing EC	HFTD Tier	Due Date
81	Decayed pole	95/49.1 A (1)	127214313	Non-HFTD	10/2024
83	Decayed pole	95/49.1 A (1)	127213903	Non-HFTD	10/2024
83	Decayed cross arm	95/49.2 C (44)	127213903	Non-HFTD	10/2024
83	Loose hardware	95/49.2 C	127213903	Non-HFTD	10/2024

V. Observations

1. Existing Non-Conformances.

ESRB observed the following non-conformances during the field portion of the audit. PG&E has previously noted these non-conformances and has pending, on-time work orders to correct the non-conformances. ESRB observed non-conformances with pending work orders are listed in Table 19.

Table 19: Observed Field Findings with On-Time Pending Work Orders

Loc	Non-conformance	GO / Rule	Existing EC	HFTD Tier
1	Loose animal guard primary	95/31.1	124809346	Non-HFTD
12	Down guy marker	95/56.9	128719806	Non-HFTD
20	Buried anchor	95/31.1	126827850	Non-HFTD
26	Idle facility, remove	95/31.6	111477435	Non-HFTD
34	High voltage sign missing	95/51.6 A	123886309	Tier 2
34	HW Framing	95/49.2 C	123886309 Due 6/23 FSR 8/24	Tier 2
39	High voltage sign missing	95/51.6 A	123881535	Tier 2
39	Cross arm decay	95/49.2 C (44)	123881535	Tier 2
63	High voltage sign missing	51.6 A	118996037	Tier 3
65	Splice under tie wire	95/31.1	128751227	Tier 2
66	Bird caged conductor	95/31.1	128751102	Tier 2
67	High voltage sign missing	95/51.6 A	129076270	Non-HFTD
67	Missing visibility strips	95/31.1	129076270	Non-HFTD
69	High voltage sign missing	95/51.6 A	129070989	Non-HFTD
69	Incorrect connector (secondary on primary)	95/31.1	129070989	Non-HFTD
71	High voltage sign missing	95/51.6 A	129076445	Non-HFTD
79	X Arm broken	95/49.2 C (44)	127197762	Non-HFTD
84	Buried anchor	95/31.1	121974645	Non-HFTD

2. **GO 95, Rule 18, Reporting and Resolution of Safety Hazards Discovered by Utilities** states in part:

> *"For purposes of this rule, "Safety Hazard" means a condition that poses a significant threat to human life or property..."*

GO 95, Rule 18-A, Resolution of Potential Violations of General Order 95 and Safety Hazards states in part:

> *"(3) If a company, while performing inspections of its facilities, discovers a Safety Hazard(s) on or near a communications facility or electric facility involving another company, the inspecting company shall notify the other*

entity of such Safety Hazard(s) no later than ten (10) business days after the discovery.

(4) To the extent a company that has a notification requirement under (2) or (3) above cannot determine the facility owner/operator, it shall contact the pole owner(s) within ten (10) business days if the subject of the notification is a Safety Hazard, or otherwise within a reasonable amount of time not to exceed 180 days after discovery. The notified pole owner(s) shall be responsible for promptly (normally not to exceed five business days) notifying the company owning/operating the facility if the subject of the notification is a Safety Hazard, or otherwise within a reasonable amount of time not to exceed 180 days, after being notified of the potential violation of GO 95."

During the field inspection, ESRB observed the following third-party safety concerns listed in Table 20:

Table 20: Third-Party Audit Observations

Location	Finding	Notes
1	Unsecure communications equipment box.	
6	Unattached vertical communications line Broken/loose lashing from communication lines.	
8	Unattached vertical communications line. Broken communications ground.	
10	Communication lines secured with ropes rather than proper messenger material.	
11	Broken communication ground.	PG&E created a third-party notification for this issue during the audit (TPN 129833495).
13	Broken/loose lashing from communication lines.	PG&E created a third-party notification for this issue during the audit (TPN 129833690).
42	Strain on communications service drop.	PG&E created a third-party notification for this issue during the audit (TPN 129422200).
43	Exposed communication ground.	PG&E created a third-party notification for this issue during the audit (TPN 129842184).

Location	Finding	Notes
44	Exposed communication ground.	PG&E created a third-party notification for this issue during the audit (TPN 129842323).
44	Customer wire on supply service drop.	PG&E created a third-party notification for this issue during the audit (TPN 129842204).
50	Loose communication ground.	PG&E created a third-party notification for this issue during the audit (TPN 129072642).
58	Exposed communication ground.	PG&E created a third-party notification for this issue during the audit (TPN 129844584).
60	Broken communication riser cover.	PG&E created a third-party notification for this issue during the audit (TPN 129844645
77	Lashing loose from communication lines.	PG&E created a third-party notification for this issue during the audit (TPN 129852772).
82	Communication guy marker missing, Exposed communication ground, Low communication line over road (~15 ft.)	
85	Loose vertical communication line.	