

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



August 31, 2021

TA2021-921

Lise Jordan, Sr. Director  
Regulatory Compliance and Quality Assurance  
Pacific Gas and Electric Company (PG&E)  
77 Beale Street  
San Francisco, CA 94105

**SUBJECT:** Electric Transmission Audit of PG&E's Metcalf-Concord Division

Dear Ms. Jordan:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission, Charles Mee, Oge Enyinwa, and Caroline Thierry of ESRB conducted a transmission audit of PG&E's Metcalf-Concord Division from May 24 to May 28, 2021. ESRB staff reviewed PG&E's procedures and records and conducted field inspection of PG&E's transmission facilities and equipment,

During the audit, my staff identified violations of one or more General Orders. A copy of the audit findings itemizing the violations is enclosed. Please provide a response no later than September 28, 2021, by electronic copy of all remedial actions and preventive measures taken by PG&E to correct the identified violations and prevent the recurrence of such violations. The response should indicate the date of the remedial actions and preventive measures completed. For any outstanding items not addressed, please provide the projected completion dates of all corrective actions for the violations outlined in Sections II and IV of the enclosed CPUC Audit Report.

If you have any questions concerning this audit, please contact Charles Mee at (415) 730-7012 or [charles.mee@cpuc.ca.gov](mailto:charles.mee@cpuc.ca.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Banu Acimis".

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

Enclosure: CPUC Audit Report of PG&E Metcalf-Concord Division Electric Transmission Audit

Attachment 1: Transmission Facilities missing last Patrol/Inspection records

Cc: Lee Palmer, Director, Safety and Enforcement Division, CPUC  
Nika Kjensli, Program Manager, ESRB, SED, CPUC  
Charles Mee, Senior Utilities Engineer- Specialist, ESRB, SED, CPUC  
Oge Enyinwa, Senior Utilities Engineer- Specialist, ESRB, SED, CPUC  
Nathan Sarina, Senior Utilities Engineer (Supervisor), ESRB, SED, CPUC  
Rickey Tse, Senior Utilities Engineer (Supervisor), ESRB, SED, CPUC

**CPUC AUDIT REPORT OF  
PG&E METCALF-CONCORD DIVISION  
ELECTRIC TRANSMISSION AUDIT  
May 24 – 28, 2021**

**I. Records Review**

During the record review part of the audit, ESRB staff reviewed the following records for the Metcalf-Concord Division provided by PG&E:

- PG&E's "Electric Transmission Preventive Maintenance Manual (ETPM) TD-1001M" Rev 3, Rev 4, and Rev 5
- PG&E's utility procedures, standards, guidelines, and job aids for electric transmission facility inspections
- Maps of transmission circuits
- A list of transmission circuits and tower count
- A list of transmission facilities
- Lists of patrol, enhanced inspection, and drone inspections for electric transmission facilities
- A list of non-routine patrols for electric transmission facilities
- Third-Party Notification and Resolution of Potential Violations and Safety Hazards
- Notification to Third-Party Non-Utility of Nonconformance
- PG&E's utility procedures, standards, guidelines, and job aids for electric transmission vegetation management
- A list of vegetation management for transmission circuits
- Open, closed, and canceled notifications
- Four pole loading calculations
- A list of PG&E's training courses
- PG&E's utility standard and procedures for transmission work verification, vegetation management quality assurance, and vegetation management audit

**II. Records Violations**

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

**General Order (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."*

1. ESRB compared PG&E’s transmission facility list in PG&E’s data response "DR 07 – Metcalf-Concord Facilities" with PG&E’s patrol and inspection records in PG&E’s data response “DR08” and noted that PG&E did not provide inspection records for a total of 2553 facilities that were required to be conducted in 2019, 2020, or 2021. Please refer to Attachment 1. Please see Table 1 for four example facilities that are missing inspection records conducted in 2019, 2020, and 2021. PG&E needs to provide inspection records, for the transmission facilities listed in Attachment 1, that PG&E conducted in 2019, 2020, or 2021. If PG&E cannot provide the requested records, please explain why.

**Table 1: Examples of facilities missing patrol or inspection records**

<b>Transmission Tower ID Number</b>	<b>Last Inspection Type</b>	<b>Last Inspection Date</b>
ETL.1040 - 006/043	Ground Patrol	5/21/2018
ETL.1130 - 050/377	Routine Patrols	12/31/2019
ETL.1130 - 050/377	Routine Patrols	12/31/2019
ETL.2482 - 000/001	Detailed Inspection	8/2/2019

2. **PG&E's TD-1001M-B009, Revised Inspection Guidelines, Section 3.6** states:

*"All overhead transmission line facilities are patrolled annually. Patrols are performed on a line-base frequency. A detailed facility inspection (i.e. detailed ground or aerial inspections) may be considered as a patrol, but a patrol cannot be considered as, or substituted for any of the inspection methods."*

PG&E’s Overhead Inspection Frequency Table in the **TD-1001M-B009, Revised Inspection Guidelines** listed overhead inspection frequencies:

**Table 1. Overhead Inspection Frequencies**

Voltage (kV)	Inspection Type	Structure Type	Non-HFTD (years)	Non-HFTD Areas of Concern <sup>[3]</sup> (years)	HFTD Tier 2 and Zone 1 (years)	HFTD Tier 3
500	Detailed Ground <sup>[1]</sup>	Steel (non-critical)	3	Annually	3	Annually
	Climbing <sup>[1]</sup>	Steel (non-critical)	12 (and as triggered)	Annually	3	Annually
	Detailed Ground and Climbing <sup>[1]</sup>	Steel (critical)	3 (and as triggered)	Annually	3	Annually
	High Water Table Inspection (Bay Waters Foundation)	Steel	5	5	3	Annually
	Infrared	Steel	5 (and as triggered)	5	3	Annually
230 115 70 60	Detailed Ground and Aerial, or Detailed Ground and Climbing <sup>[2]</sup>	Steel	5	Annually	3	Annually
	High Water Table Location Inspection (Bay Waters Foundation)	Steel	5	5	5	Annually
	Detailed Ground and Aerial	Wood	5	Annually	3	Annually
	Climbing <sup>[4]</sup> or aerial lift	Wood	As triggered	As triggered	As triggered	As triggered
	Infrared	Steel or Wood	5 (and as triggered)	5 (and as triggered)	3	Annually

[1] Detailed Ground and Climbing inspections are proposed for 2020; aerial inspections do not currently gather all information from 500kV climbing inspections.

[2] Aerial can be selected as an option in lieu of Climbing for non-500kV structures if photos informing structural integrity are included in the aerial inspections (to substitute for the rattle test performed in Climbing inspections).

[3] All Non-HFTD Areas of Concern structures will be inspected in 2020 to gain an understanding of asset health, then will shift to a revised timeline (TBD) in 2021.

[4] Climbing of wood poles is not typically performed as part of routine inspections. Climbing is performed as-triggered per Utility Standard TD-2325S, "Inspecting, Testing, and Maintaining Wood Poles."

PG&E did not meet patrol and inspection frequency requirements as prescribed above. Table 2 shows a breakdown of the number of patrols and inspections conducted past due dates:

**Table 2: Late Inspections and Patrols**

Inspection Type	Number of Inspections Past Due Date	Percentage of Past Due Date Inspections
Detailed Inspection	16	0.2%
Aerial detailed inspection	487	6.0%
Detailed Ground Inspection	7,480	91.5%
Climbing Inspection	195	2.4%
<b>Total</b>	<b>8,178</b>	<b>100%</b>

Table 3 provides examples of the most overdue inspections:

**Table 3: Most Overdue Inspections by Type**

<b>Inspection Type</b>	<b>Inspection Location</b>	<b>Due Date</b>	<b>Date Completed</b>	<b>Number of Overdue Days</b>
Detailed Inspection	ETL.2480 - 003/018A	12/31/2019	01/27/2021	393
Aerial detailed inspection	ETL.3742 - 000/003	08/31/2020	12/24/2020	115
Detailed Ground Inspection	ETL.6830 - 004/092 ETL.6830 - 004/092	02/24/2020	12/31/2020	311
Climbing Inspection	ETL.5463 - 041/16 ETL.5463 - 041/172	04/10/2021	12/31/2021	265

3. **PG&E's last two versions of its ETPM, Revision 4, effective 11/20/2018 and Revision 5, effective August 31, 2020, define the priority codes and associated due dates for the corrective actions:**

**PG&E ETPM Rev 04, Published on 11/20/2018, Priority Codes**

<b>Priority Code</b>	<b>Priority Code Priority Description</b>
<b>A</b>	The condition is urgent and requires immediate response and continued action until the condition is repaired or no longer presents a potential hazard. SAP due date will be 30 days to allow time for post-construction processes and notification close-out.
<b>B</b>	Corrective action is required within 3 months from the date the condition is identified. The condition must be reported to the transmission line supervisor as soon as practical.
<b>E</b>	Corrective action is required within 12 months from the date the condition is identified.
<b>F</b>	Corrective action is recommended within 24 months from the date the condition is identified, (due beyond 12 months, not to exceed 24 months). Requires Director approval.
1. QCRs must report immediately any "Priority Code A" abnormal condition to the transmission line supervisor and GCC.	
2. In addition, QCRs must report any "Priority Code B" condition to the transmission line supervisor as soon as practical, to ensure that correction occurs within the appropriate time.	

**PG&E ETPM Rev 05, Published on 08/31/2020, Priority Codes**

<b>Priority Code<sup>1</sup></b>	<b>Priority Description</b>
A <sup>2</sup>	The condition is urgent and requires <b>immediate</b> response and continued action until the condition is repaired or no longer presents a potential hazard. SAP due date will be 30 days to allow time for post-construction processes and notification close-out.
B <sup>3</sup>	Corrective action is required within <b>3 months</b> from the date the condition is identified. The condition must be reported to the transmission line supervisor as soon as practical.
E	Corrective action is required within <b>12 months</b> from the date the condition is identified. <b><i>EXCEPT FOR ITEMS WITHIN HFTD TIER 3 ARE REQUIRED WITHIN 6 MONTHS<sup>4</sup>.</i></b>
F	Corrective action is recommended within <b>24 months</b> from the date the condition is identified, (due beyond 12 months, not to exceed 24 months). <b><i>EXCEPT FOR ITEMS WITHIN HFTD TIER 3 ARE REQUIRED WITHIN 6 MONTHS AND WITHIN HFTD TIER 2 ARE REQUIRED WITHIN 12 MONTHS<sup>5</sup>.</i></b>
1) Refer to 2.3.5.2, “Priority Code Due Dates for High Fire Risk Conditions within HFTDs” and 2.3.5.3, “Priority Code Due Dates for Non-Fire Risk Conditions within HFTDs.”	
2) QCRs must report immediately any “Priority Code A” abnormal condition to the transmission line supervisor, and the transmission supervisor or QCR contacts GCC.	
3) In addition, QCRs must report any “Priority Code B” condition to the transmission line supervisor as soon as practical, to ensure that correction occurs within the appropriate time.	
4) If the condition in the HFTD Tier 3 does NOT create a fire risk (non-threatening) the corrective action is required within 12 months.	
5) If the condition in the HFTD Tier 3 OR Tier 2 does NOT create a fire risk (non-threatening) the corrective action is required within 24 months.	

PG&E did not correct identified deficiencies according to PG&E’s assigned due dates. ESRB staff reviewed work orders (WOs) from "DR 16 – Open-Closed Notifications" and found a total of 1,653 past due work orders, including 661 late open work orders and 992 late closed work orders. Table 4 below is a breakdown of the 1,653 past due work orders for each priority.

**Table 4 - Number and percentage of work orders past their scheduled completion dates by priority codes**

Priority Codes	Number of Late WOs	Percentage of Late WOs
A	9	0.5%
B	106	6.4%
E	1,535	92.9%
F	3	0.2%
<b>Total</b>	<b>1,653</b>	<b>100.0%</b>

Table 5 below shows the longest overdue WO for each priority.

**Table 5 – Examples of WOs that were completed late**

Priority Codes	Most Overdue WOs	Corrective Action Completion Date	Scheduled Completion Date	Days Overdue
<b>A</b>	118017834	6/16/2020	11/16/2019	213
<b>B</b>	117052989	6/29/2020	7/16/2019	349
<b>E</b>	114494421	3/17/2021	4/12/2019	705
<b>F</b>	114317088	8/19/2019	6/30/2019	50

### III. Field Inspection List

During the field inspection, ESRB staff inspected PG&E’s transmission facilities listed in the following Table 6:

**Table 6: Structures Inspected During Field Visit**

Location	Structure Number	Circuits	Voltage (kV)
1	033/139	Tesla-Metcalf	500
2	001/009	Los Esteros-Metcalf	230
3	006/128	Monta Vista-Los Gatos	60
4	006/129	Monta Vista-Los Gatos	60
5	006/130	Monta Vista-Los Gatos	60
6	006/131	Monta Vista-Los Gatos	60
7	000/009	Stelling-Wolfe	115



<b>Location</b>	<b>Structure Number</b>	<b>Circuits</b>	<b>Voltage (kV)</b>
8	001/009	Monta Vista-Wolfe Stelling-Monta Vista (Guest) Stelling-Wolfe (Guest)	115
9	000/000B	Stelling-Monta Vista	115
10	000/000A	Monta Vista-Wolfe	115
11	000/006A	Whisman-Monta Vista	115
12	007/071	Sneath Lane-Pacifica	60
13	007/072	Sneath Lane-Pacifica	60
14	007/073	Sneath Lane-Pacifica	60
15	?000/001	Sneath Lane-Half Moon Bay	60
16	?000/002	Sneath Lane-Half Moon Bay	60
17	?000/003	Sneath Lane-Half Moon Bay	60
18	?000/004	Sneath Lane-Half Moon Bay	60
19	?000/005	Sneath Lane-Pacifica-Half Moon Bay	60
20	?000/006	Sneath Lane-Pacifica-Half Moon Bay	60
21	?000/007	Sneath Lane-Half Moon Bay	60
22	?000/008	Sneath Lane-Half Moon Bay	60
23	003/029	Sneath Lane-Half Moon Bay	60
24	003/030	Sneath Lane-Half Moon Bay	60
25	003/031	Sneath Lane-Half Moon Bay	60
26	014/090	Jefferson-Martin	230/60
27	014/091	Jefferson-Martin	230/60
28	014/093	Jefferson-Martin	230/60
29	014/093A	Jefferson-Martin	230
30	014/094	Millbrae-Sneath Lane	60
31	010/049	Ravenswood-San Mateo #1 Ravenswood-San Mateo #2	230
32	046/188	Pittsburg-San Mateo	230
33	000/007	San Mateo-Bair	60
34	000/007	San Mateo-Bay Meadows #1 San Mateo-Bay Meadows #2	115
35	010/072	Ravenswood-San Mateo San Mateo-Belmont	230
36	001/008	San Mateo-Bair	60

<b>Location</b>	<b>Structure Number</b>	<b>Circuits</b>	<b>Voltage (kV)</b>
37	001/008	San Mateo-Bay Meadows #1 San Mateo-Bay Meadows #2	115
38	009/071	Ravenswood-San Mateo San Mateo-Belmont	115
39	046/186	Pittsburg-San Mateo	230
40	010/047	Ravenswood-San Mateo #1 Ravenswood-San Mateo #2	230
41	009/070	Ravenswood-San Mateo San Mateo - Belmont	115
42	001/008	San Mateo-Bay Meadows #1 San Mateo-Bay Meadows #2	115
43	001/020	Sobrante-Grizzly-Claremont #1	115
44	001/018	Sobrante-Grizzly-Claremont #2	115
45	002/021	Sobrante-Grizzly-Claremont #1	115
46	002/019	Sobrante-Grizzly-Claremont #1	115
47	011/071	Oleum-G #1 Oleum-G #2	115
48	005/039	Sobrante-G #1 Sobrante-G #2	115
49	005/036	Sobrante-R #1 Sobrante-R #2	115
50	005/035	Sobrante-R #1 Sobrante-R #2	115
51	005/038	Sobrante-G #1 Sobrante-G #2	115
52	005/037	Sobrante-G #1 Sobrante-G #2	115
53	005/053	Sobrante-Grizzly-Claremont#1	115
54	007/050	Sobrante-Grizzly-Claremont#2	115
55	004/031	Moraga-Claremont #1 Moraga-Claremont #2	115
56	021/118	Parkway-Moraga Bahia-Moraga	230
57	021/117	Parkway-Moraga Bahia-Moraga	230

<b>Location</b>	<b>Structure Number</b>	<b>Circuits</b>	<b>Voltage (kV)</b>
58	021/116	Parkway Moraga Bahia Moraga	230
59	022/123	Parkway-Moraga Bahia-Moraga	230
60	003/038	Sobrante-Grizzly-Claremont #1	115
61	004/035	Sobrante-Grizzly-Claremont #2	115
62	000/005	Moraga-Claremont #1	115
63	000/005A	Moraga-Claremont #2	115
64	036/167	Lakeville-Sobrante Ignacio-Sobrante	230
65	006/035	Parkway-Moraga Bahia-Moraga	230
66	006/036	Parkway-Moraga Bahia-Moraga	230
67	036/167A	Lakeville-Sobrante Ignacio-Sobrante	230
68	036/168	Lakeville-Sobrante Ignacio-Sobrante	230
69	001/011	Pittsburg-Kirker-Columbia Steel	230
70	001/010	Pittsburg-Martinez #1	115
71	001/013	Pittsburg-Clayton #1	115
72	001/012	Pittsburg-Columbia Steel Pittsburg-Kirker-Columbia Steel	115
73	002/011	Pittsburg-Clayton #3 Pittsburg-Clayton #4	115
74	001/012	Pittsburg-Martinez #1 Pittsburg-Martinez #2	115
75	002/011	Pittsburg-San Ramon Pittsburg-Tassajara	230
76	002/011	Pittsburg-Tesla #1 Pittsburg-Tesla #2	230
77	001/011	Pittsburg-Eastshore Pittsburg-San Mateo	230
78	029/0175	Contra Costa PP-Contra Costa Sub Birds Landing SS-Contra Costa Sub	230

<b>Location</b>	<b>Structure Number</b>	<b>Circuits</b>	<b>Voltage (kV)</b>
79	000/003A	Contra Costa-Dupont	60
80	000/003B	Contra Costa-Dupont	60
81	000/003C	Contra Costa-Dupont	60
82	021/015	Contra Costa-Pittsburg Contra Costa-Balfour	60
83	021/014	Contra Costa-Pittsburg Contra Costa-Balfour	60
84	001/010	Contra Costa-Moraga #1 Contra Costa-Moraga #2	230
85	001/010	Contra Costa-Las Positas Contra Costa-Lone Tree	230
86	000/004	Contra Costa-Dupont	60
87	000/003AB	Contra Costa-Dupont	60
88	000/003AA	Contra Costa-Dupont	60
89	028/171	Birds Landing SS-Contra Costa Sub Birds Landing SS-Contra Costa PP	230
90	007/049	Dumbarton-Newark	115
91	000/001A	Newark-Northern Receiving Station #1	115
92	000/002	Newark-Ames #1 Newark-Ames #2	115
93	000/002	Newark-Ames #3 Newark-Ames Distribution	115
94	000/001B	Newark-Northern Receiving Station #1	115
95	000/001	Newark-Fremont #1 Newark-Fremont #2	115
96	000/001	Newark-Ames #1 Newark-Ames #2	115
97	000/001C	Newark-Northern Receiving Station #1	115
98	000/001	Newark-Ames #3 Newark-Ames Distribution	115
99	000/002B	Newark-Fremont #1	115
100	000/002A	Newark-Fremont #2	115

Location	Structure Number	Circuits	Voltage (kV)
101	000/003	Newark-Ames #3 Newark-Ames Distribution	115
102	000/003	Newark-Ames #1 Newark-Ames #2	115
103	000/002A	Newark-Northern Receiving Station #1	115
104	0007/050	Dumbarton-Newark	115
105	000/003	San Ramon-Moraga Tassajara-Newark	230
106	000/001	San Ramon Research Center Tap Tassajara-Newark	230
107	000/003	Tes Tap	230
108	000/002	Tes Tap	230
109	000/001	Tes Tap	230
110	021/085	Pittsburg-San Mateo Pittsburg-Eastshore	230
111	021/085	Tes Tap	230
112	000/002	San Ramon-Moraga Tassajara-Newark	230
113	000/001A	San Ramon-Moraga	230
114	000/001B	San Ramon-Moraga	230
115	000/001C	San Ramon-Moraga	230
116	004/023	Tassajara-Newark	230
117	000/003	San Ramon-Radum	60
118	000/002	San Ramon-Radum	60
119	000/001	San Ramon-Radum	60
120	000/001	San Ramon-Moraga	230

#### IV. Field Inspection – Violations

ESRB staff observed the following violations during the field inspection.

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

*"Electrical supply and communications 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."*

ESRB identified the following tower structures which either need to be repaired or replaced, shown in Table 7.

**Table 7: Bent Tower Members**

<b>Location</b>	<b>Structure Number</b>	<b>Deficiencies</b>
45	002/021	Bent tower member
82	021/015	Bent tower member
90	007/049	Bent tower member

**2. GO 95, Rule 61.7, Stepping** states in part:

*"All towers which are required to be climbed by workmen shall be provided with steps or ladders. Steps or ladders shall start at not less than 7 feet 6 inches from the ground line or from any easily climbed foreign structure, within 6 feet of a tower, from which one could reach or step, including tower footings. The spacing between steps on the same side of the tower legs shall not exceed 36 inches."*

The first climbing step at the location given in Table 8 is less than 7 feet 6 inches and needs to be corrected.

**Table 8: Climbing Step Issue**

<b>Location</b>	<b>Structure Number</b>	<b>Deficiencies</b>
78	029/0175	The first climbing step is less than 7 feet 6 inches above the ground

**3. General Order 95, Rule 51.6 – Marking and Guarding, High Voltage Marking** states:

*"A. High Voltage Marking*

*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."*

**General Order 95, Rule 61.6 – Marking and Guarding** states:

*"A. Marking*

*All towers shall be equipped with signs designed to warn the public of the danger of climbing same. Additionally, such signs shall include a graphic depiction of the dangers of falling or electrocution associated with climbing the towers. Such signs shall be placed and arranged so that they may be read from the four corners of the tower. Such signs shall be neither less than 8 feet nor more than 20 feet above the ground except where the lowest horizontal member of the tower is more than 20 feet above the ground in which case the sign shall be not more than 30 feet above the ground."*

ESRB identified the following missing signage and high visibility strips given in Table 9.

**Table 9: Structures Missing Signs**

<b>Location</b>	<b>Structure Number</b>	<b>Deficiencies</b>
6	006/131	One "High Voltage" sign not legible
71	001/013	Missing one "Danger - Do Not Climb" sign
72	001/012	Missing one "Danger - Do Not Climb" sign

**4. General Order 95, Rule 31.6 – Abandoned Lines** states:

*"Lines or portions of lines permanently abandoned shall be removed by their owners so that such lines shall not become a public nuisance or a hazard to life or property. For the purposes of this rule, lines that are permanently abandoned shall be defined as those lines that are determined by their owner to have no foreseeable future use."*

ESRB identified the following abandoned facilities listed in Table 10 below:

**Table 10: Abandoned Facilities not Removed**

<b>Location</b>	<b>Structure Number</b>	<b>Deficiencies</b>
5	006/130	The abandoned telephone conduit riser at the pole needs to be removed.
32	014/094	The abandoned switching platform and switch ground need to be removed.

**5. General Order 95, Rule 35 – Vegetation Management** states:

*"Where overhead conductors traverse trees and vegetation, safety and reliability of service demand that certain vegetation management activities be performed in order to establish necessary and reasonable clearances, the minimum clearances set forth in Table 1, Cases 13 and 14, measured between line conductors and vegetation under normal conditions shall be maintained. (Also see Appendix E for tree trimming guidelines.) These requirements apply to all overhead electrical supply and*

communication facilities that are covered by this General Order, including facilities on lands owned and maintained by California state and local agencies."

ESRB identified the following vegetation management issues shown in Table 11.

**Table 11: Vegetation Management Issues**

Location	Structure Number	Deficiencies
3	007/072	Vegetation clearance not maintained
14	007/073	Vegetation clearance not maintained
23	003/029	Vegetation clearance not maintained
39	046/186	Vegetation clearance not maintained
44	001/018	Vegetation clearance not maintained (tree touching tower)
72	001/012	Vegetation beneath the tower needs removal
83	021/014	1) Vegetation clearance not maintained 2) Rusty metal chains left on structure members needs removal

**6. General Order 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 identified missing or broken animal and anti-climb guards. Table 12 below shows locations where animal guards need to be replaced or repaired.

**Table 12: Deficient Animal or Anti-Climb Guards**

Location	Structure Number	Deficiencies
1	033/139	Missing an animal guard at one of the footings
95	000/001	Bird spikes have fallen off

**7. General Order 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."*

**PG&E TD-1001M-JA12 – Identifying Foundation Condition on Transmission Line Structures and Supports** provides foundation condition levels and priority code levels based on foundation condition.



ESRB identified the following deficiencies related to structure foundations. Table 13 below shows the locations that have foundations that require repair.

**Table 13: Deficient Foundations**

Location	Structure Number	Deficiencies
7	000/009	One footing is buried.
10	000/000A	One footing is completely buried The transition station footings are partially buried
72	001/012	Vegetation beneath the tower needs removal
75	002/011	One footing is covered
110	021/085	One footing is buried

**8. General Order 95, Rule 61.3 – Material and Strength** states in part:

**"A. Material**

**(1) Tower Members:** *Tower members shall have a thickness of metal equivalent to the following: Galvanized steel: Main corner members, 3/16 inch; other members, 1/8 inch.*

*Painted steel: Main corner members, 1/4 inch; other members, 3/16 inch. All iron or steel members of towers and all hardware subject to injurious corrosion under the prevailing conditions shall be protected by galvanizing, painting or other treatment which will effectively retard corrosion."*

ESRB identified atmospheric corrosion on some steel towers that require protection given in Table 14.

**Table 14 – Tower Components with Atmospheric Corrosion**

Location	Asset Number	Deficiencies
26	014/090	Tower has significant rust on its members
49	005/036	Tower has significant rust on its members
50	005/035	Tower has significant rust on its members
66	006/036	Tower has significant rust on its members
68	036/168	The jumper dampeners have significant rust

**9. General Order 95, Rule 31.1 - Design, Construction, and Maintenance** states:

*"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."*

ESRB identified the following incorrect labels on the following structures given in Table 15.

**Table 15: Structure Label Deficiencies**

<b>Location</b>	<b>Structure Number</b>	<b>Deficiencies</b>
91	000/001A	The structure is incorrectly labeled.
94	000/001B	This structure is incorrectly labeled.
97	000/001C	This structure is incorrectly labeled.
109	000/001	The structure labeling is illegible

**10. General Order 95, Rule 31.1 - Design, Construction, and Maintenance** states:

*"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."*

ESRB identified the following insulator issue given in Table 16.

**Table 16: Insulator Deficiency**

<b>Location</b>	<b>Structure Number</b>	<b>Deficiency</b>
24	003/030	The insulator is out of plumb with the pole

**Attachment 1:** Transmission Facilities missing last Patrol/Inspection records