APPENDIX A

SETTLEMENT AGREEMENT BETWEEN PACIFIC GAS AND ELECTRIC COMPANY, THE SAFETY AND ENFORCEMENT DIVISION OF THE CALIFORNIA PUBLIC UTILITIES COMMISSION, COALITION OF CALIFORNIA UTILITY EMPLOYEES, AND THE OFFICE OF THE SAFETY ADVOCATE RESOLVING ORDER INSTITUTING INVESTIGATION I.19-06-015

Pacific Gas and Electric Company ("PG&E"), the Safety and Enforcement Division ("SED") of the California Public Utilities Commission ("CPUC" or "Commission"), Coalition of California Utility Employees ("CUE"), and the Office of the Safety Advocate ("OSA") are hereinafter collectively referred to as the Settling Parties. On the following terms and conditions, the Settling Parties hereby agree to settle, resolve, and dispose of all claims, allegations, liabilities and defenses within the scope of Commission proceeding I.19-06-015 entitled "*Order Instituting Investigation on the Commission's Own Motion Into the Maintenance, Operations and Practices of Pacific Gas and Electric Company with Respect to its Electric Facilities"* ("2017/2018 Wildfire OII" or "proceeding"), including all such claims, allegations, liabilities and defenses related to the 37, Adobe, Atlas, Camp, Cascade, Cherokee, La Porte, Lobo, McCourtney, Norrbom, Nuns, Oakmont/Pythian, Partrick, Pocket, Point, Potter/Redwood, Sulphur, Tubbs, and Youngs Fires (the "2017 Northern California Wildfires and 2018 Camp Fire").

This Settlement Agreement is entered into as a compromise of disputed claims and defenses in order to minimize the time, expense, and uncertainty of continued litigation. The Settling Parties agree to the following terms and conditions as a complete and final resolution of all claims made by SED and all defenses raised by PG&E in this proceeding. This Settlement Agreement constitutes the sole agreement between the Settling Parties concerning the subject matter of this proceeding. PG&E, CUE, and OSA brought no claims in this proceeding.

I. PARTIES

The parties to this Settlement Agreement are SED, PG&E, CUE, and OSA.

A. SED is a division of the Commission charged with enforcing compliance with the Public Utilities Code and other relevant utility laws and the Commission's rules, regulations, orders, and decisions. SED is also responsible for investigations of utility incidents, including fires, and assisting the Commission in promoting public safety.

B. PG&E is a public utility, as defined by the California Public Utilities Code. It serves a population of approximately 16 million in a 70,000-square-mile service area within Northern and Central California.

C. CUE is a coalition of unions that represent approximately 34,000 people who work for investor-owned and publicly-owned utilities in California, and for contractors who perform work for utilities and project developers.

D. OSA is an advocacy unit within the Commission charged with advocating for the continuous and cost-effective improvement of the safety management and safety performance of public utilities. To achieve this goal, OSA advocates for effective public utility safety

management and infrastructure improvements and for the transparency of safety information, as well as assists the Commission in holding public utilities accountable for their safe operation.

II. RECITALS

The Settling Parties have stipulated to the facts and violations set forth below for the purpose of this Settlement. The Settling Parties also agree that PG&E has complied with all of the requirements listed in Sections V (PG&E Report Required) and VI (Immediate Corrective Actions) of the 2017/2018 Wildfire OII.

A. Stipulated Facts

The relevant stipulated facts relating to the 2017 Northern California Wildfires and 2018 Camp Fire and SED's investigation are set forth in Exhibit A to this Settlement Agreement.

B. Violations

SED's alleged violations are presented in Exhibit B to this Settlement Agreement. For the purposes of this Settlement Agreement, Exhibit B also identifies those violations which PG&E disputes or does not contest. The fact that PG&E is not contesting some of these violations is not a concession that the violations occurred, is inadmissible in evidence in court or in any other legal proceeding, and cannot and should not be used for any purpose in any litigation or any other legal proceeding.

III. AGREEMENT

To settle this proceeding, PG&E shall (1) not seek rate recovery of wildfire-related expenses and capital expenditures in the amount of $1,625,000,000, as specified below, and (2) incur costs of $50,000,000 associated with the PG&E Shareholder-Funded System Enhancement Initiatives specified below and described further in Exhibit C to this Settlement Agreement.

A. No Recovery of Certain Wildfire-Related Expenditures

PG&E shall not seek rate recovery of the following wildfire-related expenditures in future applications, which will total $1,625,000,000:

Description	Expense	Capital	Estimated Amount
Distribution Safety Inspections Expense (excludes repairs) (FRMMA[1]/WMPMA[2])	$157,000,000	-	$157,000,000

[1] FRMMA is the Fire Risk Mitigation Memorandum Account.
[2] WMPMA is the Wildfire Mitigation Plan Memorandum Account.

Distribution Safety Repairs Expense (FRMMA/WMPMA)[3]	$79,000,000	-	$79,000,000
Transmission Safety Inspections Expense (excludes repairs) (TO)[4]	$225,000,000	-	$225,000,000
Transmission Safety Repairs Expense (TO)[5]	$205,000,000	-	$205,000,000
AWRR Base Camp and Admin Expense (FHPMA[6])	$36,000,000	-	$36,000,000
2017 Northern California Wildfires CEMA[7] Expense and Capital (for amounts associated with fires for which SED or CAL FIRE have alleged violations) (CEMA)	$86,000,000	$66,000,000	$152,000,000
2018 Camp Fire CEMA Expense (CEMA)	$435,000,000	-	$435,000,000
2018 Camp Fire CEMA Capital for Restoration (CEMA)	-	$253,000,000	$253,000,000
2018 Camp CEMA Capital for Temporary Facilities[8]	-	$84,000,000	$84,000,000
Total:	$1,222,000,000[9]	$403,000,000	$1,625,000,000

The amounts set forth in the table above include estimates for expenses and capital expenditures that have not yet been recorded. To the extent the recorded costs for each account apart from Transmission Safety Repairs total an amount that is different from $1,420,000,000, then the amount for which PG&E shall not seek rate recovery for Transmission Safety Repairs will be adjusted so that the total amount for which PG&E shall not seek rate recovery equals $1,625,000,000. PG&E will file a Tier 2 Advice Letter within 30 days of a Commission decision approving the settlement, which will provide updated recorded amounts for the foregoing

[3] Includes $26 million forecasted for 2020.
[4] Transmission costs are recovered through PG&E's Federal Energy Regulatory Commission ("FERC")-jurisdictional Transmission Owner ("TO") rate case.
[5] Total forecasted transmission safety repairs costs for 2019 are $369 million. Only a portion are included here to reach $1.625 billion total.
[6] FHPMA is the Fire Hazard Prevention Memorandum Account.
[7] CEMA is the Catastrophic Event Memorandum Account.
[8] Includes $66 million forecasted for 2020.
[9] Amounts do not sum due to rounding.

accounts. If projects funded by the "Camp CEMA Capital for Temporary Facilities" account are still ongoing at that time, PG&E will file another Tier 2 Advice Letter when those projects are completed and the associated capital expenditures have been recorded, and propose a final allocation of the amounts for which PG&E shall not seek rate recovery in accordance with the allocation principle set forth in this paragraph.

B. PG&E Shareholder-Funded System Enhancement Initiatives

A description of the PG&E Shareholder-Funded System Enhancement Initiatives is set forth in Exhibit C to this Settlement Agreement.

The Settling Parties agree on the following estimates of duration and funding requirements for each of the System Enhancement Initiatives identified below. The actual duration and funding level for each of the System Enhancement Initiatives may be modified upon agreement by PG&E and SED, as long as shareholder-provided settlement funds for the System Enhancement Initiatives total $50 million.

PG&E shall submit reports to SED every six months regarding progress and implementation of each of the below System Enhancement Initiatives until the end of the six-month period in which PG&E has completed the System Enhancement Initiatives. PG&E's semi-annual reports shall, at a minimum, describe progress on each of the initiatives and indicate amounts expended compared to PG&E's estimate for the work. PG&E and SED will meet and make a good faith effort to reach agreement on the contents of each semi-annual report. SED understands that the estimates provided by PG&E for each of the initiatives are high-level estimates only, subject to revision and do not constitute a promise by PG&E to complete any System Enhancement Initiative within the estimate provided. If PG&E becomes aware that it will not fully expend the shareholder settlement funds estimated for a System Enhancement Initiative, it shall inform SED as part of its semi-annual report, and PG&E and SED shall make a good faith effort to reach agreement on the method of expending any remaining funds.

Duration and Funding Estimates for PG&E Shareholder-Funded System Enhancement Initiatives

Shareholder-Funded System Enhancement Initiatives	**Estimated Duration (Years)[10]**	**Estimated Shareholder Funding (Millions)**
Tree Crew Training and Certificate Program	3	$6.25
Pre-Inspector Training and Certificate Program	3	$3.5
Vegetation Management Oversight Pilot	1	$10.0
Development of Recommendations for General Order 165 Revisions	1	—[11]

[10] The estimated duration runs from the Effective Date.

[11] For any System Enhancement Initiative listed with "—" in the Estimated Shareholder Funding column, the Settling Parties expect any costs to be de minimis or full time employee time only. The Settling Parties have not allocated any shareholder funding to these System Enhancement Initiatives because they expect that the costs of tracking the expenditure of such funds would outweigh the benefits.

Shareholder-Funded System Enhancement Initiatives	Estimated Duration (Years)[12]	Estimated Shareholder Funding (Millions)
Accelerating Commercialization of Non-Diesel Temporary Generation	3	$10.0
LiDAR Asset Analysis	1[13]	$0.5
Independent Root Cause Analysis	1	$3.0
Fuel Reduction Funding	1[14]	$2.0
Resilience Centers Grant Program	5[15]	$2.0
Funding to California Foundation for Independent Living Centers	1[16]	$5.0
Officer Safety Town Halls	5	—
Semi-Annual Wildfire Mitigation Meetings	3	—
ISO 55000 Certification	Make good faith effort to initiate final ISO 55000 certification assessment by end of 2020	$1.0
Independent Wildfire Safety Audits	3	$6.0
Verification of Safety-Related Filings	3	—
Quarterly Reporting on Electric Maintenance Work	3	—
Local Government Vegetation Management Data Sharing	3	—
Local Government System Hardening Data Sharing	3	—
Documentation of "Near Hit" Potential Fire Incidents	3[17]	—
Study of Distribution and Transmission System	Not specified	$0.75
TOTAL		$50.0

C. This Settlement Agreement shall become effective ("Effective Date") upon (1) approval by the Commission in a written decision, (2) following such approval by the Commission, approval of the United States Bankruptcy Court, Northern District of California,

[12] The estimated duration runs from the Effective Date.
[13] Within one year of the Effective Date, PG&E will implement the pilot program.
[14] Funds shall be disbursed or committed for future disbursement by one year from the Effective Date.
[15] Funds shall be disbursed within five years of the Effective Date.
[16] Funds shall be disbursed, or committed for future disbursement, within one year of the Effective Date.
[17] PG&E will review with OSA and SED annually to assess the utility of the data being provided and confirm that the parties wish to continue receiving the data. PG&E will continue this sharing for up to three years following the Effective Date as long as annual reviews determine an ongoing interest or unless the Wildfire Mitigation Plan Proceeding (Rulemaking 18-10-007) determines a scope for utility reporting of "near hit" data that in substance supersedes this System Enhancement Initiative.

San Francisco Division ("Bankruptcy Court") in PG&E's bankruptcy proceeding, *In Re Pacific Gas and Electric Company*, Case No. 19-30088 (DM), and (3) the effectiveness of a Plan of Reorganization ("PoR") that approves the implementation of this Settlement Agreement.

IV. OTHER MATTERS

A. The Settling Parties agree to seek expeditious approval of this Settlement Agreement and the terms of the settlement, and to use their reasonable efforts to secure Commission approval of it without change, including by filing a joint motion seeking approval of this Settlement Agreement and any other written filings, appearances, and other means as may be necessary to secure CPUC approval. PG&E agrees to use reasonable efforts to secure Bankruptcy Court approval of the same, without change, including by filing a motion seeking approval and making any other required filings, appearances, and other means as may be necessary to secure Bankruptcy Court approval.

B. The Settling Parties agree to actively and mutually defend this Settlement Agreement if its adoption is opposed by any other party in proceedings before the Commission. In accordance with Rule 12.6 of the Commission's Rules of Practice and Procedure, if this Settlement Agreement is not adopted by the Commission, its terms are inadmissible in any evidentiary hearing unless their admission is agreed to by the Settling Parties. In the event the Commission rejects or proposes alternative terms to the Settlement Agreement, Settling Parties reserve all rights set forth in Rule 12.4 of the Rules of Practice and Procedure. The provisions of Paragraph IV.A and B shall impose obligations on the Settling Parties immediately upon the execution of this Settlement Agreement.

C. This Settlement Agreement shall not preclude the non-PG&E parties in this proceeding from opposing any request by PG&E to recover any costs PG&E has incurred or may in the future incur as a result of the 2017 Northern California Wildfires and 2018 Camp Fire; provided, however, that the non-PG&E Settling Parties shall not assert that any violations or conduct underlying the violations alleged or identified by SED in this proceeding are the basis for future disallowances, violations, or penalties, except to the extent PG&E seeks to recover in rates third-party claims costs arising from such wildfires.

D. SED agrees to release and refrain from instituting, directing, or maintaining any violations or enforcement proceedings against PG&E related to the 2017 Northern California Wildfires and 2018 Camp Fire based on the information: (a) known, or that could have been known, to SED at the time that SED executes this Settlement Agreement, or (b) substantially similar to the facts alleged in the SED Fire Reports. This information will include any reports or findings made by the California Department of Forestry and Fire Protection ("CAL FIRE") and information produced in *In re PG&E Corp. & Pacific Gas and Electric Company*, U.S.D.C., 3:19-cv-05257-JD and in *California North Bay Fire Cases*, Cal. Super., No. CJC17004955.

E. Nothing in this Settlement Agreement constitutes a waiver by SED of its legal obligations, authority, or discretion to investigate and enforce applicable safety requirements and standards (including, without limitation, provisions of GO 95 and GO 165) as to any future conduct by PG&E that SED may identify as the basis for any alleged violation(s). SED shall retain such authority regardless of any factual or legal similarities that future conduct and any

alleged violation(s) may have to PG&E's conduct/alleged violations related to the 2017 Northern California Wildfires and 2018 Camp Fire. Accordingly, any such similarities shall not preclude non-PG&E parties from using future conduct and alleged violation(s) as a basis for seeking future disallowances.

F. The Settling Parties have bargained in good faith to reach the agreement set forth herein. The Settling Parties intend the Settlement Agreement to be interpreted as a unified, interrelated agreement. The Settling Parties agree that no provision of this Settlement Agreement shall be construed against any of them because a particular party or its counsel drafted the provision. The representatives of the Settling Parties signing this Settlement Agreement are fully authorized to enter into this Settlement Agreement.

G. The rights conferred and obligations imposed on any of the Settling Parties by this Settlement Agreement shall inure to the benefit of or be binding on that Settling Party's successors in interest or assignees as if such successor or assignee was itself a party to this Settlement Agreement.

H. Should any dispute arise between the Settling Parties regarding the manner in which this Settlement Agreement or any term shall be implemented, the Settling Parties agree, prior to initiation of any other remedy, to work in good faith to resolve such differences in a manner consistent with both the express language and the intent of the Settling Parties in entering into this Settlement Agreement.

I. This Settlement Agreement is not intended by the Settling Parties to be precedent for any other proceeding, whether pending or instituted in the future. The Settling Parties have assented to the terms of this Settlement Agreement only for the purpose of arriving at the settlement embodied in this Settlement Agreement. Each Settling Party expressly reserves its right to advocate, in other current and future proceedings, or in the event that the Settlement Agreement is rejected by the Commission, positions, principles, assumptions, arguments and methodologies which may be different than those underlying this Settlement Agreement, and the Settling Parties expressly declare that, as provided in Rule 12.5 of the Commission's Rules of Practice and Procedure, this Settlement Agreement should not be considered as a precedent for or against them.

J. The Settling Parties are prohibited from filing a petition for modification of a Commission decision approving this Settlement Agreement regarding any issue resolved in this Settlement Agreement.

K. This Settlement Agreement may be executed in counterparts.

L. The Settling Parties hereby agree that this Settlement Agreement is entered into as a compromise of disputed claims and defenses in order to minimize the time, expense, and uncertainty of continued litigation in the 2017/2018 Wildfire OII.

M. Nothing in this Settlement Agreement relieves PG&E from any safety responsibilities imposed on it by law or Commission rules, orders, or decisions.

N. In reaching this Settlement Agreement, the Settling Parties expect and intend that neither the fact of this settlement nor any of its specific contents will be admissible as evidence of fault or liability in any other proceeding before the Commission, any other administrative body, or any court. In this regard, the Settling Parties are relying on Evidence Code Section 1152(a) and Public Utilities Code Section 315. Furthermore, such use of this Settlement Agreement or any of its contents in any other proceeding before the Commission, any other administrative body, or any court would frustrate and interfere with the Commission's stated policy preference for settlements rather than litigated outcomes. See Pub. Util. Code § 1759(a).

IN WITNESS WHEREOF, the Settling Parties hereto have duly executed this Settlement Agreement.

[Signatures immediately follow this page]

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Dated: December 17, 2019

Pacific Gas & Electric Company

By: Robert S. Kenney

Robert S. Kenney
Vice President, State and
Regulatory Affairs
Pacific Gas & Electric Company

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Dated: 12/17/19

Safety and Enforcement Division
California Public Utilities Commission

By: _____

Leslie L. Palmer
Director, Safety and Enforcement Division
California Public Utilities Commission

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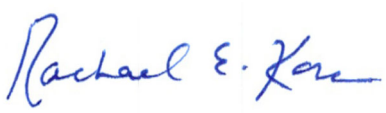
Dated: December 17, 2019

Coalition of California Utility Employees



By: _____

Rachael E. Koss
Attorney for Coalition of California Utility Employees

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Dated: 12/17/2019

Office of the Safety Advocate

By: _____

Rebecca Vorpe
Attorney for Office of the Safety Advocate

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Exhibit A

Stipulated Facts Relevant to the 2017 Northern California Wildfires and 2018 Camp Fire

I. Stipulated Facts Relevant to the 2017 Northern California Wildfires

A. Definitions

1. 2017 October Fire Siege: SED investigated 17 fires that were alleged to have been caused by PG&E's facilities in October 2017.

2. CEMA[1] Patrol: A type of vegetation management ("VM") visual inspection under PG&E's Drought and Tree Mortality Response Program. A CEMA Patrol performed in the Wildland-Urban Interface ("WUI"), defined as areas where homes are built near or among lands prone to wildland fire, is referred to as a CEMA WUI Patrol.

3. Pre-inspectors: Term used by PG&E to describe Vegetation Management (VM) inspectors that inspect vegetation along PG&E's lines to identify vegetation hazards or clearance issues related to electric facilities and prescribe direction for trim or removal to Tree Contractors.

4. Project Management Database: The Project Management Database is a PG&E database used to track PG&E's annual vegetation management plan and schedule vegetation management work.

5. SED 2017 Report: SED's individual investigation reports for each of the 17 fires that occurred in October 2017.

6. Tree Contractors: Term used by PG&E to describe employees or contractors that perform physical trimming or removal of vegetation identified by pre-inspectors.

B. General Observations

7. PG&E VM pre-inspectors do not record the characteristics, such as tree height or diameter, of the individual trees they inspect unless tree work is prescribed for the tree.

[1] CEMA is the acronym for PG&E's Catastrophic Event Memorandum Account. The term also is used at PG&E to refer to PG&E's Drought and Tree Mortality Response Program.

8. With one exception, none of the subject trees for which SED identified a vegetation management related violation were identified for trimming or removal by PG&E VM pre-inspectors during the pre-inspections for the previous five years leading up to the 2017 October Fire Siege. The one exception was the subject tree for the Pocket Fire which was trimmed twice in the same five-year time frame.

9. SED requested PG&E's contracted fire investigator's reports for the 2017 October Fire Siege incidents. On August 3, 2018, PG&E informed SED that no such reports existed. As of the date that SED executed this Settlement Agreement, SED has not received any such reports from PG&E.[2]

C. Stipulated Facts Relevant to Specific Fires

Adobe

10. For purposes of resolving this proceeding, PG&E does not contest SED's finding that on October 8, 2017, at approximately 2234 hours, a eucalyptus tree fell and contacted overhead conductors of PG&E's Dunbar-1101 12 kV circuit. When the tree damaged PG&E's insulated conductors, the Adobe Fire ignited near 8555 Sonoma Highway in Kenwood, Sonoma County.[3]

11. On October 10, 2017, PG&E filed an Electric Safety Incident Report concerning an incident that occurred near 8555 Sonoma Highway (Highway 12), Kenwood, Sonoma County.[4] When PG&E was granted access to the incident location, PG&E observed a eucalyptus tree that had fallen and was laying on three of the conductors of a Dunbar 1101 (12 kV) primary tap line on the ground.[5] The eucalyptus tree was approximately 120 feet tall and rooted approximately 60 feet from the distribution conductors.[6]

12. Between December 14, 2012, and October 8, 2017, PG&E did not identify the subject eucalyptus tree for vegetation trim or removal.[7]

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[2] Attachment 1 (PGE-CPUC_DR-071918_Common_Q04).
[3] SED 2017 Report, Adobe 001.
[4] PG&E Response to Notice re California Wildfires ("Alsup Report"), 3:14-cr-00175-WHA, ECF 956, Exhibit L at 1 (December 31, 2018), which is available in the record at SED Camp Report, CAMP-0136. All additional citations to the SED Camp Report for facts related to the 2017 Northern California Wildfires are citations to exhibits to the Alsup Report, which are the factual reports for the 2017 Northern California Wildfires filed therewith.
[5] SED Camp Report, CAMP-0137 (Alsup Report, Exhibit L (Adobe) at 2).
[6] SED Camp Report, CAMP-0137 (Alsup Report, Exhibit L (Adobe) at 2).
[7] SED 2017 Report, Adobe 007-9.

13. In Mark Porter's[8] report evaluating the subject eucalyptus tree's failure, he identified the subject eucalyptus tree as an "epicormic shoot approximately 109 feet high, [that] was weakly attached to a rotting stump."[9] The report also identified that "the epicormics shoot developed with a one-sided buttress root"[10] [11] which created an "unequaled mechanical stress."[12] Mr. Porter concluded that "this failure was preventable had a qualified arborist inspected the tree and the site conditions."[13]

14. PG&E's Project Management Database indicates that a 2015 CEMA WUI Patrol was completed on the subject circuit.[14] However, after a search of its records, PG&E was unable to locate the maps for these patrols.[15] PG&E's vegetation management records associated with this incident location, produced to the CPUC on February 28, 2018, indicate that no work was prescribed at the incident location during this CEMA patrol, as no inspection record or work order is created unless PG&E determines that work is indeed necessary after a CEMA inspection.[16]

15. Work for a cross-arm replacement (work order #103891848) was completed on January 14, 2010, 15 days after its original December 31, 2009, due date.[17]

Atlas

16. For purposes of resolving this proceeding, PG&E does not contest SED's finding that on October 8, 2017, a black oak tree fell on one of PG&E's Pueblo-1104 12 kV conductors, bringing it to the ground and igniting a fire (Atlas 1). On the same date but at a second location, a branch from a valley oak tree fell and contacted PG&E's Pueblo-1104 12 kV overhead conductors thus igniting another fire (Atlas 2).The two fires burned into each other, and together are called the Atlas Fire.[18]

[8] International Society of Arboriculture (ISA) Certified Arborist #WE465, contracted by CAL FIRE.
[9] SED 2017 Report, Adobe 010.
[10] SED 2017 Report, Adobe 010.
[11] Buttress roots are the roots at the trunk base that help support the tree and equalize mechanical stress.
[12] SED 2017 Report, Adobe 010.
[13] SED 2017 Report, Adobe 065.
[14] SED 2017 Report, Adobe 093 (Response to CPUC Common Data Request Question 10 – Part 3).
[15] SED 2017 Report, Adobe 093 (Response to CPUC Common Data Request Question 10 – Part 3).
[16] SED 2017 Report, Adobe 093 (Response to CPUC Common Data Request Question 10 – Part 3); *see also* Utility Bulletin: TD-7102B-007, Second Patrol – Scope of Work Requirements, July 17, 2017 (produced as part of PG&E's Attachment B Report at PGE-2017Wildfires-OII-0000003192) at 2 ("Trees identified for work are issued on a Work Request to TC [the tree contractors]."); *id.* at 4 ("Trees identified by PI [pre-inspector] as requiring work are entered into a handheld device.").
[17] SED 2017 Report, Adobe 089-91 (work order).
[18] SED 2017 Report, Atlas 001.

17. On October 21, 2017, when PG&E was granted access to the Atlas 1 incident location, PG&E observed a California black oak tree that had broken at the base and was lying on the ground near the Atlas 1 incident location.[19] The base of the California black oak tree was burned and rooted approximately 20 feet from the distribution conductors.[20]

18. On October 19, 2017, when PG&E was granted access to the Atlas 2 incident location, PG&E observed a broken tree limb and broken field-phase primary insulator on the Pueblo 1104 (12 kV) Circuit.[21] A tree limb had fallen from a California white oak/valley oak rooted approximately 15 feet from the distribution conductors and came to rest on the lower of two communications cables.[22]

19. In Mark Porter's report evaluating the black oak tree in the Atlas 1 fire area, he stated that the tree displayed "extensive decay in the trunk as well as the buttress roots" and concluded that "[s]ince the black oak had such dangerous conditions close to high voltage lines, it should have been condemned years ago, due to the severity of the consequences."[23]

20. In other parts of Mark Porter's report relevant to Atlas 2, he stated that he "observed a structural branch defect on a 19-inch diameter valley oak tree…" and noted that "[t]he branch of the valley oak broke at a codominant stem." Mr. Porter "concluded that the valley oak codominant branch failure (a defect) could have been avoided if correctional pruning had been employed years earlier. Both tree failures have visible defects."[24]

21. Repair work for a utility pole (work order #102506022) was completed on August 19, 2013, 676 days after its original October 3, 2011, due date.[25]

Cascade

22. For purposes of resolving this proceeding, PG&E does not contest SED's finding that on October 8, 2017, at approximately 2234 hours, two PG&E 12-kV overhead conductors contacted each other and ignited the Cascade Fire, near 13916 Cascade Way in Browns Valley, Yuba County.[26]

[19] SED Camp Report, CAMP-0147-148 (Alsup Report, Exhibit M (Atlas) at 2-3) (note, the identification of the Atlas 1 and Atlas 2 incident locations, as defined by the CPUC's December 7, 2017, letter, in Alsup Report, Exhibit M, is the opposite of the terminology used in the SED 2017 Report and in these factual stipulations).
[20] SED Camp Report, CAMP-0147-148 (Alsup Report, Exhibit M (Atlas) at 2-3).
[21] SED Camp Report, CAMP-0147-148 (Alsup Report, Exhibit M (Atlas) at 2-3).
[22] SED Camp Report, CAMP-0147-148 (Alsup Report, Exhibit M (Atlas) at 2-3).
[23] SED 2017 Report, Atlas 011.
[24] SED 2017 Report, Atlas 012.
[25] SED 2017 Report, Atlas 104-108 (work order).
[26] SED 2017 Report, Cascade 001.

23. On October 8, 2017, at 2257 hours, PG&E records indicate that 9 of the 13 meters downstream of Fuse 17841 recorded a smart meter event indicative of power loss.[27] Fuse 17841 is the nearest protection device upstream of the incident location.

24. On October 13, 2017, a CAL FIRE-contracted engineer, Jim Nolt, identified excessive slack in the high-voltage distribution conductors and evidence of recent arcing on the two conductors.[28]

25. On October 17, 2017, PG&E accessed the incident location to assist CAL FIRE in collecting evidence and observed that the secondary service line at the incident location appeared to be damaged at mid-span.[29]

26. Between the date of PG&E's 2009 detailed inspection and October 8, 2017, PG&E's routine patrols and detailed inspections of distribution facilities that included PG&E pole numbers 101288638 and 101288646 did not identify excessive conductor sag between these poles or any other risks that might contribute to conductor-to-conductor contact.[30]

Lobo

27. For purposes of resolving this proceeding, PG&E does not contest SED's finding that on October 8, 2017, at approximately 2327 hours, a ponderosa pine tree fell onto PG&E 21 kV overhead conductors near 11218 Lone Lobo Trail in Nevada City, Nevada County. The tree contact caused the ignition of the Lobo Fire.[31]

28. On October 8, 2017, at 2327 hours, PG&E's Line Recloser ("LR") 48484 operated and reclosed. LR 48484 was the nearest, upstream LR relative to the incident location.[32]

29. From September 13-15, 2016, a PG&E VM contractor felled 46 ponderosa pine trees around the subject ponderosa pine tree, which increased the exposure of the subject tree.[33]

[27] SED 2017 Report, Cascade 080.
[28] SED 2017 Report, Cascade 063.
[29] SED 2017 Report, Cascade 081.
[30] SED 2017 Report, Cascade 005.
[31] SED 2017 Report, Lobo 0001.
[32] SED 2017 Report, Lobo 0015-6.
[33] SED 2017 Report, Lobo 0008.

30. In Mark Porter's report evaluating the ponderosa pine tree failure, he stated that he identified an extended open cavity that spanned approximately 40 inches above the groundline to the failure point at 14 feet.[34] Mr. Porter concluded that the open cavity, which faced the conductor span, could have been identified during a routine VM inspection; thus, the subject tree should have been removed prior to the incident.[35] In addition, Mr. Porter stated that the loss of neighboring trees changed the wind dynamics affecting the subject tree.[36]

31. PG&E's Project Management Database indicates that a 2014 CEMA Patrol was completed on the subject circuit.[37] However, after a search of its records, PG&E was unable to locate the maps for these patrols.[38] PG&E's vegetation management records associated with this incident location, provided to the CPUC on February 28, 2018, indicate that no work was prescribed at the incident location during this CEMA patrol, as no inspection record or work order is created unless PG&E determines that work is indeed necessary after a CEMA inspection.[39]

32. Between November 13, 2012 and October 8, 2017, PG&E's VM pre-inspectors did not identify the subject ponderosa pine tree for vegetation trim or removal.[40]

McCourtney

33. For purposes of resolving this proceeding, PG&E does not contest SED's finding that on October 8, 2017, at approximately 2348 hours, the McCourtney Fire ignited at two separate locations along the PG&E Grass Valley 1103, 12 kV circuit. An 80-foot ponderosa pine tree fell onto PG&E 12 kV conductors and ignited a fire near 11253 Orion Way in Grass Valley, Nevada County. Shortly afterward, a 12 kV conductor broke at a clamp connector at the source-side of an LR and fell to the ground thus igniting a fire at 11228 McCourtney Road in Grass Valley, Nevada County.[41]

[34] SED 2017 Report, Lobo 0010.
[35] SED 2017 Report, Lobo 0012.
[36] SED 2017 Report, Lobo 0012.
[37] SED 2017 Report, Lobo 0281 (Response to CPUC Common Data Request Question 10 – Part 3).
[38] SED 2017 Report, Lobo 0281 (Response to CPUC Common Data Request Question 10 – Part 3).
[39] SED 2017 Report, Lobo 0281 (Response to CPUC Common Data Request Question 10 – Part 3); *see also* Utility Bulletin: TD-7102B-007, Second Patrol – Scope of Work Requirements, July 17, 2017 (produced as part of PG&E's Attachment B Report at PGE-2017Wildfires-OII-0000003192) at 2 ("Trees identified for work are issued on a Work Request to TC [the tree contractors]."); *id.* at 4 ("Trees identified by PI [pre-inspector] as requiring work are entered into a handheld device.").
[40] SED 2017 Report, Lobo 0006-8.
[41] SED 2017 Report, McCourtney 0001.

34. On October 8, 2017, at approximately 2345 hours, PG&E LR 58498 measured a ground fault of 51.4 amps.[42]

35. Based on PG&E's 2014 and 2016 overhead distribution patrol documentation for the incident area near 11228 McCourtney Road, PG&E did not identify issues related to the incident facilities.[43]

36. Based on PG&E's 2012 and 2017 overhead distribution detailed inspection documentation for the incident area near 11228 McCourtney Road, PG&E did not identify issues related to the incident facilities.[44]

37. Between 2013 and 2017, PG&E VM pre-inspectors did not identify the subject ponderosa pine (near 11253 Orion Way) for vegetation trim or removal.[45]

38. In Mark Porter's report evaluating the subject ponderosa pine tree (near 11253 Orion Way), he noted that the subject tree displayed visible wood decay and missing buttress roots. Mr. Porter concluded that the tree defect could have been identified during a routine tree inspection and should have been abated.[46]

Norrbom

39. For purposes of resolving this proceeding, PG&E does not contest SED's finding that on October 8, 2017, at approximately 2200 hours, a branch of a black oak tree fell and contacted the overhead conductors of PG&E's Sonoma 1103, 12 kV circuit located near 16200 Norrbom Road in Sonoma, Sonoma County. The tree contact ignited the Norrbom Fire.[47]

40. In Mark Porter's report evaluating the subject black oak tree, he noted that the tree had a cavity with pre-existing decay. The report also noted indications of contact with high voltage distribution wires on the tree bark.[48]

41. Between 2013 and October 8, 2017, PG&E VM personnel did not identify the subject black oak tree (near 16200 Norrbom Road) for vegetation trim or removal.

[42] SED 2017 Report, McCourtney 0019-20.
[43] SED 2017 Report, McCourtney 0006-7.
[44] SED 2017 Report, McCourtney 0006-7.
[45] SED 2017 Report, McCourtney 0008-11.
[46] SED 2017 Report, McCourtney 0011-12.
[47] SED 2017 Report, Norrbom 001.
[48] SED 2017 Report, Norrbom 010.

Nuns

42. For purposes of resolving this proceeding, PG&E does not contest SED's finding that on October 8, 2017, at approximately 2218 hours, a branch from an alder tree fell and contacted overhead, secondary voltage conductors of PG&E's Dunbar 1101 circuit supplying power to 1210 Nuns Canyon Road in Glen Ellen, Sonoma County. The tree contact ignited the Nuns Fire.[49]

43. In Mark Porter's report evaluating the subject alder tree, he did not note any visual signs of decay that may have contributed to the branch failure.[50]

44. On September 22, 2017, PG&E identified vegetation (not the alder tree branch) that had made contact with and was causing strain on a secondary service line and created a work order (#113271607) to abate the vegetation contacting the line.[51] PG&E asserts that, based on an assessment of several factors in accordance with PG&E policies, PG&E assigned the work order a priority determination reflecting that the identified issue needed prompt but not immediate resolution.[52] SED contends that the comments provided on the work order, suggesting a safety concern, required more immediate action than October 8, 2017.

Oakmont/Pythian

45. For purposes of resolving this proceeding, PG&E does not contest SED's finding that on October 13, 2017, at approximately 1533 hours, a Douglas fir tree fell and contacted overhead conductors of PG&E's Dunbar 1101, 12 kV circuit located near 8050 Pythian Road in Santa Rosa, Sonoma County. The tree contact ignited the Oakmont/Pythian Fire.[53]

46. In Mark Porter's report evaluating the subject Douglas fir tree, he described the tree as "structurally sound and healthy as it lay horizontally supported by neighboring trees" and he did not note any abnormalities or defects on the tree.[54]

[49] SED 2017 Report, Nuns 001.
[50] SED 2017 Report, Nuns 021.
[51] SED 2017 Report, Nuns 098-100 (work order).
[52] SED 2017 Report, Nuns 098-100 (work order).
[53] SED 2017 Report, Oakmont 001.
[54] SED 2017 Report, Oakmont 009-10.

47. On November 30, 2011, PG&E identified pole #101957837 for reinforcement based on the measured, reduced shell thickness at groundline.[55] On November 30, 2011, intrusive inspection notes a 0% remaining strength and 0% wood strength.[56] However, on September 4, 2012, following a visual "stubbing" inspection, PG&E noted that its inspector determined that the pole did not require reinforcement.[57] PG&E stated that a subsequent intrusive inspection in 2017 and a recent field visit confirmed that no stubbing or reinforcement was necessary.[58] SED notes that PG&E did not reinforce the pole and in subsequent three intrusive inspections in 2012 and twice in 2017, wood strength increased to 100% and remaining strength remained at 0%.

48. On October 13, 2017, two troublemen patrolled most but not all of the circuit spans downstream of Fuse 1251.[59] Downstream of Fuse 1251, the circuit forks, with one line going towards the east ("the east line"), and the other line going towards the northwest ("the northwest line").[60] The troubleman who patrolled the east line identified wires down, which he isolated prior to closing Switch 14261 and LR 160, which was upstream of Fuse 1251.[61] The northwest line traverses a hill and was patrolled by the second troubleman.[62] This troubleman patrolled the northwest line up to a gate at the end of Pythian Road, and, from this vantage point, performed a visual inspection of the line beyond the gate.[63] He concluded that the portion of the line he could see was intact, but he could not see the portion of the line beyond the crest of the hill.[64] Although the troubleman could not see part of the circuit beyond the crest of the hill, PG&E proceeded to close LR 160, thus energizing the downstream circuit portions past LR 416 and up to the incident location.[65]

49. Pole replacement work related to woodpecker damage to a pole (work order #103891251) was completed 69 days after its original 2011 due date, on August 18, 2011.[66] However, PG&E noted that the work order in question was completed as part of PG&E's CPUC approved plan to address a backlog of work orders; under this plan, the work was completed on time. Regardless, the work was completed late.

[55] SED 2017 Report, Oakmont 407-09 (pole report).
[56] SED 2017 Report, Oakmont 408 (pole report).
[57] SED 2017 Report, Oakmont 408 (pole report).
[58] SED 2017 Report, Oakmont 407-08 (pole report).
[59] SED 2017 Report, Oakmont 404-05 (Response to CPUC Oakmont/Pythian Data Request Question 2).
[60] SED 2017 Report, Oakmont 404-05 (Response to CPUC Oakmont/Pythian Data Request Question 2).
[61] SED 2017 Report, Oakmont 404-05 (Response to CPUC Oakmont/Pythian Data Request Question 2).
[62] SED 2017 Report, Oakmont 404-05 (Response to CPUC Oakmont/Pythian Data Request Question 2).
[63] SED 2017 Report, Oakmont 404-05 (Response to CPUC Oakmont/Pythian Data Request Question 2).
[64] SED 2017 Report, Oakmont 404-05 (Response to CPUC Oakmont/Pythian Data Request Question 2).
[65] SED 2017 Report, Oakmont 021.
[66] SED 2017 Report, Oakmont 411-415 (work order).

Partrick

50. For purposes of resolving this proceeding, PG&E does not contest SED's finding that on October 8, 2017, at approximately 2348 hours, a coast live oak tree fell and contacted overhead conductors of PG&E's Pueblo 2103, 12 kV circuit at 1721 Partrick Road in Napa, Napa County. One of the 12 kV conductors fell to the ground and, as a result, ignited the Partrick Fire.[67]

51. When PG&E was granted access to the incident location on October 18, 2017, PG&E observed that a 20-inch diameter coast live oak tree, approximately 50 feet tall and rooted approximately 40 feet uphill from the distribution conductors, had broken near the base.[68] One of the two phases on a 12kV tap line on the Pueblo 2103 Circuit was on the ground.[69]

52. In Mark Porter's report evaluating the subject oak tree, he stated that he observed that the tree failure was associated with visual decay symptoms or pre-existing wounds and defects.[70]

53. Between 2013 and October 8, 2017, PG&E VM personnel did not identify the subject oak tree for vegetation trim or removal.

Pocket

54. For purposes of resolving this proceeding, PG&E does not contest SED's finding that on October 9, 2017, at approximately 0330 hours,[71] a valley oak tree fell onto PG&E's 12 kV overhead conductors near the intersection of Ridge Ranch Road and Ridge Oaks Road in Geyserville, Sonoma County. The tree contact ignited the Pocket Fire.[72]

55. On October 17, 2017, when PG&E was permitted to access the incident location, PG&E observed that a top section of a California white oak/valley oak tree had broken and was laying on at least one conductor serving the Cloverdale 1102 (12 kV) Circuit, near the intersection of Ridge Ranch Road and Ridge Oaks Road.[73] The California white oak/valley oak was rooted approximately 15 feet from the distribution conductors.[74] At least one conductor was on the ground.[75]

[67] SED 2017 Report, Partrick 001.
[68] SED Camp Report, CAMP-0250-251 (Alsup Report, Exhibit X (Partrick) at 1-2).
[69] SED Camp Report, CAMP-0250-251 (Alsup Report, Exhibit X (Partrick) at 1-2).
[70] SED 2017 Report, Partrick 009.
[71] SED 2017 Report, Pocket 013.
[72] SED 2017 Report, Pocket 001.
[73] SED Camp Report, CAMP-0260-262 (Alsup Report, Exhibit Y (Pocket) at 2-4).
[74] SED Camp Report, CAMP-0260-262 (Alsup Report, Exhibit Y (Pocket) at 2-4).
[75] SED Camp Report, CAMP-0260-262 (Alsup Report, Exhibit Y (Pocket) at 2-4).

56. In Mark Porter's report evaluating the subject oak tree failure, he stated that he observed a trunk cavity approximately 2'-5" wide and 2'-9" long with woundwood surrounding the cavity. Mr. Porter also stated in his report that the "tree would typically be condemned during an arborist inspection, primarily due to the proximity of powerlines (an immovable target)."[76]

57. Between 2012 and October 9, 2017, PG&E VM personnel trimmed the subject white oak/valley oak tree twice.[77]

Point

58. For purposes of resolving this proceeding, PG&E does not contest SED's finding that on October 9, 2017, at approximately 0110 hours, a limb from a valley oak tree fell onto a PG&E 12 kV overhead conductor, which ignited the Point Fire near 22894 State Highway 26 in West Point, Calaveras County.[78]

59. On or around October 9, 2017, after CAL FIRE collected what it believed to be potentially relevant evidence at an area of interest for the Point Fire, PG&E personnel disposed of a broken crossarm and a damaged portion of a conductor that had been replaced during restoration work.[79] PG&E states that PG&E personnel acted without knowledge of disposing of potentially relevant evidence, and without intent to destroy or conceal potentially relevant evidence.[80] Public Utilities Code Section 316 and GO 95, Rule 19 require a utility to provide SED access to physical evidence under the utility's physical control, custody or possession related to a reportable incident.[81]

60. CAL FIRE's arborist found the subject limb to be sound with no evidence of disease or decay at the break point.[82]

[76] SED 2017 Report, Pocket 008-9.
[77] Attachment 2 (PGE-CPUC_DR-112117_Common_Q11); Attachment 3 (PGE-CPUC_00010331); Attachment 4 (PGE-CPUC_00010329).
[78] SED 2017 Report, Point 001.
[79] SED 2017 Report, Point 216-18, Point 220-21 (February 16, 2018 letter from PG&E to CPUC; March 16, 2018 letter from PG&E to CPUC).
[80] SED 2017 Report, Point 216-18, Point 220-21 (February 16, 2018 letter from PG&E to CPUC; March 16, 2018 letter from PG&E to CPUC).
[81] Public Utilities Code § 316 and GO 95, Rule 19.
[82] SED 2017 Report, Point 019.

Potter/Redwood

61. For purposes of resolving this proceeding, PG&E does not contest SED's finding that on October 8, 2017, at approximately 2334 hours, a valley oak tree limb fell onto a PG&E 60 kV overhead transmission at 13801 N. Busch Road in Potter Valley, Mendocino County, and that on October 9, 2017, at approximately 0027 hours, a valley oak tree limb fell onto PG&E's 12 kV overhead distribution conductors at 9100 Main Street in Potter Valley, Mendocino County. The tree contacts ignited the Potter Fire and combined with a spot fire found in Redwood Valley which was subsequently called the Redwood Fire.[83]

62. During the early morning of October 9, 2017, a PG&E troubleman drove down Hawn Creek Road at the time of the 9100 Main Street incident and did not recall seeing any damage to PG&E equipment or evidence that fire burned any area on the east side of the road, where 9100 Main Street is located.[84] The same troubleman later drove down the same road and recalled seeing one of three phases down on the east side of the road.[85] Crew members who completed repair work the following day observed only a limited area of burned vegetation and no burned structures on 9100 Main Street.[86] It was also PG&E's understanding that no PG&E facilities had been collected by CAL FIRE from 9100 Main Street during its investigation of the Potter/Redwood Fire.[87] PG&E did not believe there was a reportable event at 9100 Main Street and therefore did not file an incident report.[88]

63. On November 6, 2017, CAL FIRE notified PG&E that it was requesting data related to three additional sites, one of which was the Redwood incident location.[89] According to CAL FIRE, the fire on the property of 9100 Main Street was confirmed to be a separate fire from an overhead conductor which later burned together with the fire near 13801 North Busch Road. The three fires burned together and were named the Redwood incident.[90]

[83] SED 2017 Report, Potter Redwood 001, 004.
[84] SED 2017 Report, Potter Redwood 89 (Redwood Location Fact Report).
[85] SED 2017 Report, Potter Redwood 89 (Redwood Location Fact Report).
[86] SED 2017 Report, Potter Redwood 019.
[87] SED 2017 Report, Potter Redwood 019 (quoting Response to CPUC Redwood Location 2 Data Request Question 1).
[88] SED 2017 Report, Potter Redwood 019 (quoting Response to CPUC Redwood Location 2 Data Request Question 1).
[89] SED 2017 Report, Potter Redwood 019.
[90] SED 2017 Report, Potter Redwood 034.

64. On October 10, 2017, PG&E crews completed repair work at the Redwood incident location for a repair installing approximately 100 feet of new 12 kV conductor and related splices.[91] However, after a search of its records, PG&E states that it has been unable to locate the work order for this repair.[92]

65. PG&E's Project Management Database indicates that a 2016 CEMA WUI Patrol was completed on the subject circuit.[93] However, after a search of its records, PG&E was unable to locate the maps for these patrols.[94] PG&E's vegetation management records associated with this incident location, produced February 28, 2018, indicate that no work was prescribed at the incident location during this CEMA patrol, as no inspection record or work order is created unless PG&E determines that work is indeed necessary after a CEMA inspection.[95]

66. In Charles Martin's[96] reports evaluating both trees involved in the Potter/Redwood incident, he did not identify structural defects, disease, or other pests that negatively affected the subject trees.[97]

Sulphur

67. For purposes of resolving this proceeding, PG&E does not contest SED's finding that on October 8, 2017, a PG&E pole that was part of its Redbud 1102 circuit failed and fell to the ground which resulted in arcing and ignition of the Sulphur Fire. The Sulphur Fire ignited at 1350 Sulphur Bank Drive in Clearlake Oaks, Lake County.[98]

[91] SED 2017 Report, Potter Redwood 094 (Response to CPUC Redwood Location 2 Data Request Question 5).
[92] SED 2017 Report, Potter Redwood 094 (Response to CPUC Redwood Location 2 Data Request Question 5).
[93] SED 2017 Report, Potter Redwood 096 (Response to CPUC Common Data Request Question 10 – Part 3).
[94] SED 2017 Report, Potter Redwood 096 (Response to CPUC Common Data Request Question 10 – Part 3).
[95] SED 2017 Report, Potter Redwood 096 (Response to CPUC Common Data Request Question 10 – Part 3); *see also* Utility Bulletin: TD-7102B-007, Second Patrol – Scope of Work Requirements, July 17, 2017 (produced as part of PG&E's Attachment B Report at PGE-2017Wildfires-OII-0000003192) at 2 ("Trees identified for work are issued on a Work Request to TC [the tree contractors]."); *id.* at 4 ("Trees identified by PI [pre-inspector] as requiring work are entered into a handheld device.").
[96] Charles Martin is a CAL FIRE employee who is a Registered Professional Forester and Arborist.
[97] SED 2017 Report, Potter Redwood 013-14.
[98] SED 2017 Report, Sulphur 001.

68. On October 13, 2017, while performing restoration work, PG&E states that a PG&E contractor inadvertently removed the burnt second pole from the field during its normal course of clearing and hauling burnt PG&E poles.[99] PG&E states that this happened after the Sulphur Fire and after CAL FIRE collected what was believed, at the time, to be all potentially relevant evidence for the fire.[100] PG&E believes that the contractor disposed of the pole without knowledge that it may have been relevant evidence and without intent to destroy or conceal relevant evidence.[101] PG&E later alerted SED explaining what happened to the pole and stated that PG&E attempted to retrieve it from the landfill to which it had been delivered, but the landfill manager reported that there was no way to locate the specific pole.[102] Public Utilities Code Section 316 and GO 95, Rule 19 require a utility to provide SED access to physical evidence under the utility's physical control, custody or possession related to a reportable incident.[103]

69. PG&E's Project Management Database indicates that a 2016 CEMA WUI Patrol was completed on the subject circuit.[104] However, after a search of its records, PG&E states that it is unable to locate the maps for these patrols.[105] PG&E's vegetation management records associated with this incident location, produced February 28, 2018, indicate that no work was prescribed at the incident location during this CEMA patrol, as no inspection record or work order is created unless PG&E determines that work is indeed necessary after a CEMA inspection.[106]

70. Between October 17, 2008, and October 8, 2017, PG&E's detailed inspection documentation did not identify issues with the incident pole.[107]

71. Between September 2000 and October 8, 2017, PG&E's intrusive inspection documentation did not identify issues with the incident pole.[108]

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[99] SED 2017 Report, Sulphur 062 (February 16, 2018 letter from PG&E to CPUC), Sulphur 068-69 (Response to CPUC Sulphur Data Request Question 4).
[100] SED 2017 Report, Sulphur 062 (February 16, 2018 letter from PG&E to CPUC), Sulphur 068-69 (Response to CPUC Sulphur Data Request Question 4).
[101] SED 2017 Report, Sulphur 062 (February 16, 2018 letter from PG&E to CPUC), Sulphur 068-69 (Response to CPUC Sulphur Data Request Question 4).
[102] SED 2017 Report, Sulphur 062 (February 16, 2018 letter from PG&E to CPUC), Sulphur 068-69 (Response to CPUC Sulphur Data Request Question 4).
[103] Pub. Util. Code § 316 and GO 95, Rule 19.
[104] SED 2017 Report, Sulphur 065 (Response to CPUC Common Data Request Question 10 – Part 3).
[105] SED 2017 Report, Sulphur 065 (Response to CPUC Common Data Request Question 10 – Part 3).
[106] SED 2017 Report, Sulphur 065 (Response to CPUC Common Data Request Question 10 – Part 3); *see also* Utility Bulletin: TD-7102B-007, Second Patrol – Scope of Work Requirements, July 17, 2017 (produced as part of PG&E's Attachment B Report at PGE-2017Wildfires-OII-0000003192) at 2 ("Trees identified for work are issued on a Work Request to TC [the tree contractors]."); *id.* at 4 ("Trees identified by PI [pre-inspector] as requiring work are entered into a handheld device.").
[107] SED 2017 Report, Sulphur 006.
[108] SED 2017 Report, Sulphur 006.

Youngs (Maacama)

72. For purposes of resolving this proceeding, PG&E does not contest SED's finding that on October 8, 2017, at approximately 2130 hours, a valley oak tree fell onto PG&E's 12 kV overhead conductors near 995 Maacama Lane in Healdsburg, Sonoma County. The tree contacted PG&E's conductors and caused the ignition of the Youngs Fire.[109]

73. On October 18, 2017, PG&E visited the incident location and observed that a California white oak/valley oak tree had broken near its mid-section and was laying on the ground near fallen conductors for the Fulton 1102 (12 kV) Circuit.[110] The California white oak/valley oak tree had a diameter at breast height of approximately 30 inches, was rooted uphill approximately 20 feet from the distribution conductors, and is estimated to be approximately 50 feet tall.[111] PG&E believes the California white oak/valley oak tree broke at a height of approximately 19 feet above ground.[112]

74. Between January 2, 2013 and October 8, 2017, PG&E VM personnel did not identify the subject white oak/valley oak tree for vegetation trim or removal.[113]

75. According to the CAL FIRE lead investigator, Charlie Laird, the subject white oak/valley oak tree exhibited an extended internal cavity and a vertical open cavity.[114]

II. Stipulated Facts Relevant to the 2018 Camp Fire

A. Definitions

76. Aerial Patrol – Visual observations to identify abnormalities (i.e., obvious structural problems or hazards) or circumstances that will negatively impact safety; aerial patrols are conducted by helicopter.[115]

77. Center Phase – The phase between the Left and Right Phases.

78. C-hook – Hardware that is part of an insulator assembly used to attach an insulator assembly to a structure or tower.

[109] SED 2017 Report, Youngs 001.
[110] SED 2017 Report, Youngs 065-066.
[111] SED 2017 Report, Youngs 066.
[112] SED 2017 Report, Youngs 066.
[113] SED 2017 Report, Youngs 007-8.
[114] SED 2017 Report, Youngs 013, 014.
[115] SED Camp Report, CAMP-0035.

79. Insulator Assembly – A string of insulators and associated attachment hardware between a high-voltage conductor and a tower structure used to provide mechanical support and electrically isolate the conductor from the tower and other support structures.

80. Detailed Climbing Inspection – A detailed supporting-structure-based observation involving climbing of a structure to determine if there are any abnormal or hazardous conditions that adversely impact safety, service reliability, or asset life.[116]

81. Detailed Ground Inspection – A detailed visual observation used to look for abnormalities or circumstances that will negatively impact safety, reliability, or asset life, typically done from the ground with binoculars.[117] Individual elements and components are examined carefully through visual and/or routine diagnostic tests, and each abnormal condition is graded and/or recorded.[118]

82. Hanger plate – A part of a tower that serves as an attachment point from which insulator assemblies are suspended.

83. Hold-down anchor – Hardware used to anchor an insulator assembly from excessive movement, typically when the insulator assembly is subject to the effects of upward tension because of its location on a tower with lower elevation than an adjacent tower.

84. Left Phase - For an observer facing a tower in the southerly direction along the Caribou-Palermo line, the phase on the left-hand side of the tower.

85. Right Phase – For an observer facing a tower in the southerly direction along the Caribou-Palermo line, the phase on the right-hand side of the tower.

86. Runner arm – A steel cross-member on a structure that can be used to suspend insulator assemblies.

87. SED Camp Report – SED's investigation report for the 2018 Camp Fire.

88. Suspension Insulator – A type of insulator that is suspended from the cross-members of a tower and is used to support conductors while electrically insulating them from the tower.

[116] SED Camp Report, CAMP-0035.
[117] SED Camp Report, CAMP-0035.
[118] SED Camp Report, CAMP-0035.

89. Transposition Jumper – A conductor used to complete a phase reconfiguration of the transmission line. The phase reconfiguration consists of a realignment of a phase conductor from the position it occupies on one side of the tower to a different position on the opposite side of the tower for the purpose of improving the electrical characteristics of the transmission line.

B. Stipulated Facts Relevant to 2018 Camp Wildfire

90. The Camp Fire burned approximately 153,336 acres.[119]

91. The Camp Fire resulted in 85 confirmed fatalities and destroyed 18,804 structures.[120]

92. CAL FIRE identified an ignition point near the community of Pulga in Butte County.[121]

93. CAL FIRE identified a second ignition point located near the intersection of Concow Road and Rim Road in the city of Concow in Butte County.[122] PG&E does not concede that there was a second independent ignition point.

November 8, 2018

94. Wind speed and wind gusts recorded at 0610 hours at the Stirling City weather station were 10.27 mph and 36.39 mph respectively.[123] The Stirling City weather station is the closest PG&E weather station to the two ignition points identified by CAL FIRE. The November 1, 2019 Exponent report regarding a study of PG&E's Caribou-Palermo Assets states that the average wind speed experienced by the Caribou-Palermo (North) transmission line, in 2010, was 10.7 mph.[124]

95. The line current on the Caribou-Palermo 115kV Transmission Line for the period from 0400 to 0615 hours is reflected in Figure 1 of SED's Camp Report, which is based on Supervisory Control and Acquisition Data ("SCADA") from the Palermo Substation.[125]

96. PG&E's Caribou-Palermo 115 kV Transmission Line connects PG&E's Palermo Substation and Caribou #1 Powerhouse.[126]

[119] SED Camp Report, CAMP-0002.
[120] SED Camp Report, CAMP-0001-2.
[121] SED Camp Report, CAMP-0038.
[122] SED Camp Report, CAMP-0038.
[123] SED Camp Report, CAMP-0009.
[124] SED Camp Report, CAMP-0597-598 and CAMP-0601, Figure 38.
[125] SED Camp Report, CAMP-0021, Figure 1.
[126] SED Camp Report, CAMP-0009.

97. At 0615 hours, Palermo Substation relay detected a ground fault current of 256 Amps and opened Circuit Breaker ("CB") 152.[127]

98. At 0615 hours, Caribou #1 Powerhouse relay detected a ground fault current of 202 Amps and opened CB 112. The fault was isolated with both circuit breakers Palermo CB 152 and Caribou CB 112 opening.[128]

99. According to CAL FIRE's website, the fire started at 0629 hours at 39.82º latitude and -121.44º longitude. These coordinates correspond to a location near Tower :27/222 of the Caribou-Palermo 115 kV Transmission Line.[129]

100. At 0630 hours, a PG&E employee observed fire in the vicinity of Tower :27/222, and this observation was reported to 911 by PG&E employees.[130]

101. At 0645 hours, PG&E LR 1704 operated and the Big Bend 1101 12 kV Distribution Circuit experienced an outage.[131]

102. LR 1704 is a protection device on PG&E's Big Bend 1101 12 kV Distribution Circuit.[132]

103. Between approximately 0900 and 1300 hours, PG&E conducted an aerial patrol of the Caribou-Palermo 115 kV Transmission Line. At Tower :27/222, the patrol identified a suspension insulator supporting a transposition jumper that had disconnected from an arm on the tower.[133]

104. Following PG&E's aerial patrol, PG&E filed an Electric Incident Report at 1806 hours explaining that "PG&E experienced an outage on the Caribou-Palermo 115 kV Transmission Line in Butte County."[134]

November 9, 2018

105. A PG&E employee on patrol arrived at the location of the pole with LR 1704 on the Big Bend 1101 12 kV Distribution Circuit and observed that the pole and other equipment was on the ground.[135]

[127] SED Camp Report, CAMP-0009.
[128] SED Camp Report, CAMP-0009.
[129] SED Camp Report, CAMP-0009-10.
[130] SED Camp Report, CAMP-0010.
[131] SED Camp Report, CAMP-0010.
[132] SED Camp Report, CAMP-0010.
[133] SED Camp Report, CAMP-0010.
[134] SED Camp Report, CAMP-0010, CAMP-040.
[135] SED Camp Report, CAMP-0046.

November 12, 2018

106. North of LR 1704, a PG&E employee observed wires down and damaged and downed poles near the intersection of Concow Road and Rim Road. At this location, the employee observed several snapped trees, with some on top of the downed wires.[136]

November 13, 2018

107. PG&E assisted CAL FIRE in collecting evidence related to an outage on the Big Bend 1101 12 kV Distribution Circuit.[137]

108. CAL FIRE provided PG&E with receipts for evidence collected prior to PG&E's arrival at the site near the intersection of Concow Road and Rim Road.[138]

November 14, 2018

109. PG&E assisted CAL FIRE in collecting evidence from Tower :27/221 and Tower :27/222 on the Caribou-Palermo 115 kV Transmission Line.[139] Towers :27/221 and :27/222, as well as their associated equipment, were initially installed between 1919 and 1921, and first went into service on May 6, 1921.[140] Portions of the line have been replaced over time as a result of routine maintenance and emergency work.[141]

110. PG&E identified original Great Western Power drawings for the construction of Great Western Power Line Number Three (a portion of which is now the line referred to as the Caribou-Palermo line) and the records show that certain components on the line may be original vintage. An example of Great Western Power documents that appear to be associated with Great Western Power Line Number Three is a drawing of a "Suspension Hook" dated "10-11-12."[142]

111. The C-hook that broke on Tower :27/222 on the Caribou-Palermo 115 kV Transmission Line (the "incident hook") bears certain similarities to a C-hook manufactured by Ohio Brass, as determined by design drawings.[143]

[136] SED Camp Report, CAMP-0046.
[137] SED Camp Report, CAMP-0046.
[138] SED Camp Report, CAMP-0046.
[139] SED Camp Report, CAMP-0045-46.
[140] SED Camp Report, CAMP-0008-9.
[141] Attachment 5 (PGE-CPUC_12062018-DR_001_Q37).
[142] Attachment 6 (PGE-CPUC_12062018-DR_002_Q11); Attachment 7 (PGE-CPUC_12062018-DR_002_Q12); Attachment 8 (PGE-CAMP-CPUC-0000031180).
[143] Attachment 8 (PGE-CAMP-CPUC-0000031180).

112. CPUC staff were at the site to observe the evidence collection.

113. At Tower :27/221 the CPUC staff observed that the right phase insulator hold-down anchor was disconnected.[144] PG&E found this condition during an inspection on September 11, 2018, and assigned it Priority Code E in accordance with its Electric Transmission Preventive Maintenance ("ETPM") Manual.[145] Under the ETPM Manual, Priority Code E conditions must be addressed within 12 months.[146]

114. Post-Camp Fire inspections of the Caribou-Palermo line identified three conditions relating to hold-down anchors that resulted in Priority Code A notifications.[147]

115. At Tower :27/222 a suspension insulator had disconnected from its hanger plate, and was hanging from the transposition jumper wire, approximately 20-30 feet above the ground.[148]

116. At Tower :27/222, the C-hook holding the left phase suspension insulator (the incident hook) broke and became disconnected from its hanger plate.[149] During evidence collection in November 2018, CAL FIRE took possession of that portion of the incident hook that remained attached to the insulator. PG&E gained access to the area near Tower :27/222 after CAL FIRE collected evidence that it deemed relevant to its investigation. PG&E and SED have been unable to locate the remainder of the incident hook.[150]

117. SED made a close visual observation and took photographs before the incident hook was placed in a CAL FIRE truck bed.[151] In SED's assessment: the smooth portion is an indication of wear that occurred over a long period of time prior to failure; the rough upper portion of the cross-section fractured at the time of the incident.[152] PG&E expresses no opinion on SED's assessment. CAL FIRE collected the incident hook on Tower :27/222 with PG&E's assistance in November 2018. Neither PG&E nor the CPUC are in possession of the incident hook. As of the date of this stipulation, neither PG&E nor the CPUC has been able to conduct any metallurgical analysis or testing of the incident hook.

[144] SED Camp Report, CAMP-0022, Figure 2.
[145] SED Camp Report, CAMP-450-535.
[146] SED Camp Report, CAMP-0468.
[147] SED Camp Report, CAMP-0656-661.
[148] SED Camp Report, CAMP-0022, Figure 3.
[149] SED Camp Report, CAMP-0011, CAMP-0045-46.
[150] Attachment 9 (PGE-CPUC_12062018-DR_002_Q02).
[151] SED Camp Report, CAMP-0023, Figure 4.
[152] SED Camp Report, CAMP-0011 and CAMP-0023, Figure 4.

118. PG&E's transmission inspection procedures, effective prior to and at the time of the Camp Fire, state that components displaying material loss greater than 50% should receive a Priority Code A maintenance notification and be immediately repaired or made safe.[153]

119. Prior to the incident hook breaking on Tower :27/222, the incident hook attached a suspension insulator to a hanger plate on the Tower.

120. There was wear on the working eye of the runner arm where the incident hook was attached on Tower :27/222—both the working eye on the runner arm and the working eye on the attached hanger plate displayed some degree of wear.[154]

121. Arc flash marks were present on the transposition jumper and a steel cross-member and leg on Tower :27/222.[155]

November 15, 2018

122. At approximately 1800 hours, CAL FIRE held a press conference during which it identified a "possible second origin related to the Camp incident in the Concow area."[156]

November 16, 2018

123. At approximately 1600 hours, PG&E submitted the Electric Incident Report[157] for the second ignition point identified by CAL FIRE at the intersection of Concow Road and Rim Road. PG&E reported an outage on the Big Bend 1101 12 kV Distribution Circuit.[158]

124. CPUC Resolution E-4184 requires electric utilities to report electric incidents within 2 hours of a reportable incident during normal working hours or within 4 hours of a reportable incident outside of normal working hours.[159]

[153] SED Camp Report, CAMP-0474, Table 8.
[154] SED Camp Report, CAMP-0024, Figure 6.
[155] SED Camp Report, CAMP-0023, Figure 5.
[156] SED Camp Report, CAMP-0010.
[157] SED Camp Report, CAMP-0010.
[158] SED Camp Report, CAMP-0010.
[159] CPUC Resolution E-4184.

November 19, 2018

125. CAL FIRE removed a tree from an area near the intersection of Concow Road and Rim Road as evidence. CPUC staff were present to see the tree loaded on a trailer. CPUC staff also saw a PG&E crew waiting to assist with removal of PG&E equipment from the area at the request of CAL FIRE.

December 2018

126. PG&E announced the launch of the Wildfire Safety Inspection Program ("WSIP") to perform accelerated and enhanced inspections of its electric distribution, transmission, and other facilities.[160] PG&E implemented the WSIP following the 2018 Camp Fire.[161]

127. The WSIP enhanced inspections for transmission facilities involved climbing and utilizing drones to inspect the Caribou-Palermo 115 kV Transmission Line in detail. WSIP inspections are based on a Failure Modes and Effects Analysis ("FMEA") conducted by PG&E shortly after the Camp Fire in November 2018.[162] The FMEA identifies potential points of failure on transmission assets that could cause a fire ignition. The FMEA involved determination of the ways that an asset or component might fail (i.e., failure modes) and determination of whether the failure may result in an ignition source. Based on the FMEA, inspection techniques for how those failure modes could be evaluated were developed. WSIP inspectors use mobile technology and electronic checklists (known as "Pronto Forms") to document inspection findings electronically.[163] According to a PG&E data request response, a Centralized Inspection Review Team (CIRT), comprising individuals with relevant engineering and field expertise personnel that collectively have knowledge and background in transmission and distribution system maintenance and engineering, reviews inspection findings to determine the final priority of identified conditions.[164]

[160] Business Wire, PG&E Announces Enhanced Wildfire Prevention and Safety Efforts Including Expanded Inspections; Additional Support for Camp Fire Victims and Their Families (Dec. 10, 2018), *available at* https://www.businesswire.com/news/home/20181210005882/en/PGE-Announces-Enhanced-Wildfire-Prevention-Safety-Efforts.
[161] SED Camp Report, CAMP-0547.
[162] Attachment 10, (PGE-CPUC_06252019-DR_SED-007_Q06_Camp Fire).
[163] Attachment 10, (PGE-CPUC_06252019-DR_SED-007_Q06_Camp Fire).
[164] Attachment 10, (PGE-CPUC_06252019-DR_SED-007_Q06_Camp Fire).

March 6, 2019

128. PG&E's ETPM Manual defines the following Priority Codes:

Table 1. Transmission Notification Priority Codes[165]

Priority Code	Priority Description
A	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	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.
E	Corrective action is required within **12 months** from the date the condition is identified.
F	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.

129. PG&E provided the CPUC 29 Priority Code "A" maintenance notifications resulting from inspections of the Caribou-Palermo 115 kV Transmission Line that occurred on or after November 8, 2018. The same inspections also identified 495 Priority Code "B," "E" and "F" maintenance notifications for the Caribou-Palermo 115 kV Transmission Line. Those inspections included climbing inspections of the line conducted before the launch of WSIP and climbing and drone inspections conducted pursuant to that program.[166,167]

March 29, 2019

130. PG&E removed equipment from Tower :24/199, a transposition tower on the Caribou-Palermo 115 kV Transmission Line at the request of law enforcement. Neither PG&E nor SED have physical custody of the equipment that was removed. To PG&E's and SED's knowledge, CAL FIRE has not identified Tower :24/199 as a cause of the Camp Fire.

[165] *See* Electric Transmission Preventative Maintenance Manual TD-1001M, Publication Date: 11/20/2018, Rev: 04 (produced as part of PG&E's Attachment B Report at PGE-2017Wilfires-OII-0000001151) at 19 (description of Priority Codes, Table 5). Previous version Rev: 03 dated 5/12/16 is in SED Camp Report at CAMP-0468. Rev:04 is modified from Rev:03 to add Director approval for Priority Code F conditions.
[166] SED Camp Report, CAMP-0536-538.
[167] SED Camp Report, CAMP-0539-541.

131. The C-hook removed from the right phase suspension insulator on Tower :24/199 displayed material loss of over 50% in the cross section where it made contact with the hanger plate. SED observed that the cross-section of the C-hook, where the material was worn away, was flat and smooth.[168] PG&E expresses no opinion on SED's assessment.

May 15, 2019

132. CAL FIRE investigators determined that the Camp Fire was caused by electric "transmission lines owned and operated by Pacific Gas and [Electric] (PG&E) located in the Pulga area."[169]

133. CAL FIRE investigators also determined that "[t]he cause of a second fire was determined to be vegetation into electrical distribution lines owned and operated by PG&E."[170]

November 1, 2019

134. Exponent completed a report titled "PG&E Caribou-Palermo Asset Condition Investigation."[171] The report concluded, among other things:

a. From 2001 to November 2018, the Caribou-Palermo line was subjected to similar ground inspection and patrol frequencies as comparison lines. These inspections and patrols yielded comparable normalized high-priority tag counts between Caribou-Palermo and comparison lines.[172,173]

b. The Caribou-Palermo line was confirmed to have greater post-Camp Fire high-priority ("A" and "B") repair tag counts than all selected comparison lines, as well as an increased per-structure high-priority tag rate when normalized for the number of steel lattice towers.[174]

[168] SED Camp Report, CAMP-0012, CAMP-0025, Figure 9.
[169] SED Camp Report, CAMP-0037-38.
[170] SED Camp Report, CAMP-0037-38.
[171] SED Camp Report, CAMP-0542-626.
[172] To best compare lines of different lengths with different numbers of structures, tag counts were normalized by the number of steel lattice towers based on approximations from PG&E's GIS data.
[173] SED Camp Report, CAMP-0626.
[174] SED Camp Report, CAMP-0625.

c. Cold-end insulator hardware-related issues were responsible for the highest number of "A" priority post-Camp Fire tags on Caribou-Palermo, and the second highest number of "B" priority tags.[175]

d. Foundation-related issues accounted for the greatest number of "B" tags.[176]

e. Tags were generated due to burial of the tower footings or steel lattice members. This type of soil coverage can increase the risk of corrosion of buried steel components. However, unlike wear, soil movement does not necessarily represent tower damage. Further assessment would be required to determine if soil movement associated with high-priority tags resulted in damage.[177]

f. The Caribou-Palermo, Bucks Creek-Rock Creek, and Cresta-Rio Oso lines, each located within the North Fork Feather River Canyon, exhibited high-priority cold-end hardware wear tag counts more than three times higher than the next highest comparison line when normalized for steel lattice towers.[178]

g. Caribou-Palermo North[179] experiences higher annual average wind speeds than non-adjacent comparison lines. Lines analyzed within the North Fork Feather River Canyon may have increased wear tag rates associated with longer-duration high-wind conditions. No apparent correlation between wear tags and temperature, precipitation, or peak wind speed (50-year return) was observed.[180]

h. PG&E's post-Camp Fire enhanced inspection procedures, including CIRT or DIRT[181] reviews, have led to substantial improvements in identifying progressive or wear-related insulator hardware damage.[182]

[175] SED Camp Report, CAMP-0625.
[176] SED Camp Report, CAMP-0625.
[177]SED Camp Report, CAMP-0570.
[178] SED Camp Report, CAMP-0625.
[179] For an explanation of Caribou-Palermo North and Caribou-Palermo South designations, see SED Camp Report, CAMP-0556.
[180] SED Camp Report, CAMP-0626.
[181] PG&E's Drone Inspection Review Team.
[182] SED Camp Report, CAMP-0626.

i. Caribou-Palermo and other North Fork Feather River Canyon lines appear to have a unique set of factors that contributed to increased rates of high-priority cold-end hardware tags relative to other comparison lines. Factors such as design (link connectors and a relatively large number of non-tensioned insulated conductors), long-duration exposure to higher winds, age, and historical inspection methodologies likely all contributed to these cold-end hardware wear issues.[183]

Prior to the Camp Fire

135. According to PG&E's records, every year from 2001 to 2018, PG&E performed either a ground patrol, air patrol, or detailed inspection of the Caribou-Palermo 115 kV Transmission Line.[184] PG&E's ETPM Manual was first published in August 2005. Under the ETPM Manual Rev: 03, aerial patrols are required annually, detailed inspections by ground are required every 5 years, and climbing or aerial inspections are prescribed as triggered by specific conditions.[185] Prior to the Camp Fire, PG&E's ETPM Manual did not call for routine climbing inspections for non-500 kV towers.[186]

136. Consistent with minimum required time intervals in the PG&E ETPM Manual in effect at the time, PG&E's records indicate that detailed ground inspections of the Caribou-Palermo 115 kV Transmission Line were performed in 2009 and 2014. Consistent with the then-applicable guideline, Utilities Operation ("UO") Guideline G0066, which came into effect in November 1996, PG&E's records indicate that PG&E also performed ground patrols of the Caribou-Palermo line in January 2001, August 2003, and August 2005.[187]

[183] SED Camp Report, CAMP-0626.
[184] Attachment 11, (PGE-CPUC_12062018-DR_002_Q20).
[185] SED Camp Report, CAMP-0491 and CAMP-0501.
[186] SED Camp Report, CAMP-0491.
[187] SED Camp Report, CAMP-0014; Attachment 11 (PGE-CPUC_12062018-DR_002_Q20).

137. PG&E inspection records for the period of January 2001 to November 8, 2018, indicate that PG&E performed detailed climbing inspections on approximately 80 towers along the Caribou-Palermo 115 kV Transmission Line between September 19 and November 5, 2018.[188] Notification 114730861 was created following PG&E's decision earlier in 2018 to perform climbing inspections of the Caribou-Palermo 115 kV Transmission Line and multiple other transmission lines as part of an effort to assess the condition of its transmission lines and help inform its broader asset management strategy.[189] Tower :27/221 and Tower :27/222 were not climbed during this period but were subject to ground inspections in 2001, 2003, 2005, 2009 and 2014.[190]

138. The inspectors who conducted detailed climbing inspections between September 29 and November 5, 2018 used a Steel Structure Detailed Climbing Inspection form that was dated 03/16.[191] A newer version of the form, PG&E's Steel Structure Detailed Climbing Inspection Form TD-1001M-F04 (dated 09/18) was published on PG&E's Technical Information Library ("TIL") on September 1, 2018.[192] PG&E contends that the inspection form dated 09/18 became effective on November 30, 2018 and went into effective status on the TIL on December 7, 2018, at which point the form dated 03/16 was archived and was no longer accessible through the TIL. SED contends that the form dated 03/16 became outdated when the new form was published on the TIL on September 1, 2018. Form TD-1001M-F04 dated 09/18, is shown in Figures 11 and 13 of SED's Camp Report.[193]

139. PG&E's records indicate that a work order was placed in 2009 for Tower :27/222 under Notification #103995542, which called for replacement of a connector.[194] Connectors and C-hooks are different types of equipment. The required end date for that notification was reassessed in 2011 under Notification #105375996, which referred back to Notification #103995542.[195]

[188] SED Camp Report, CAMP-0014, CAMP-0675-676; *see also* Attachment 11.
[189] SED Camp Report, CAMP-0675-676; *see also* Attachment 12 (PGE-CAMP-CF-0000023311) (Notification 114730861 states "… CIRCUIT REQUIRES A DETAILED INSPECTION ON ALL STEEL STRUCTURES BY THE TOWER DEPARTMENT NORTH"); Attachment 13 (PGE-CAMP-CF-0000006474) (these were climbing inspections, as evidenced by the inspection form provided ("Steel Structure Detailed Climbing Inspection (Non-500 kV Structures)")).
[190] SED Camp Report, CAMP-0014.
[191] SED Camp Report, CAMP-0026 and CAMP-0028, Figures 10 and 12, CAMP-0673-674.
[192] SED Camp Report, CAMP-0029, Figures 11 and 13.
[193] SED Camp Report, CAMP-0027 and CAMP-0029, Figures 11 and 13.
[194] SED Camp Report, CAMP-0651-653.
[195] SED Camp Report, CAMP-0651-655.

140. Replacement hanger plates had been added to the left and right runner arms on Tower :27/222, possibly before 2000.[196] PG&E has been unable to locate records that identify when the attached hanger plates were installed.[197] However, the original plates that were replaced showed signs of wear on the working eye. See Figure 6 and Figure 7 in SED's Camp Report.[198] Figure 8 in SED's Camp Report shows a typical location of runner arms on transmission towers that have them.[199]

141. PG&E's records indicate that PG&E replaced the connector identified in Notification #103995542[200] on June 18, 2016. The work was originally scheduled to be completed by November 30, 2015.[201] PG&E's records do not indicate the reason why the connector replacement work identified in LC Notification #103995542 was completed later than the originally scheduled completion date. PG&E procedures state that notifications that go beyond the due date should document the factor(s) that led to the delayed completion of the notification.[202]

[196] SED Camp Report, CAMP-0011, footnote 29.
[197] SED Camp Report, CAMP-011.
[198] SED Camp Report, CAMP-0024, Figures 6 and 7.
[199] SED Camp Report, CAMP-0025, Figure 8.
[200] SED Camp Report, CAMP-0651-653.
[201] SED Camp Report, CAMP-0651-653.
[202] SED Camp Report, CAMP-0468-469.

Attachment 1

PACIFIC GAS AND ELECTRIC COMPANY
October 2017 Wildfires
CPUC Data Request – Common

Requesters: Leslie L. Palmer and Nicholas Sher
Request Date: July 19, 2018
Response Date: August 3, 2018

Question 4:
Provide PG&E's contracted fire investigator's report for each incident. If an investigation was not performed, explain why.

Response to Question 4:
No such reports exist for any of the incident locations, as defined by the CPUC's July 19, 2018, Data Request (the "incident locations"). PG&E is investigating the incident locations, including retaining experts, in preparation for litigation. At this time, this investigation, including the work performed by those experts, is privileged. PG&E previously provided Incident Description and Factual Summaries for each incident location, as defined by the CPUC's December 7, 2017, letter, in response to Question 62 of the CPUC's November 21, 2017, Data Request. Factual analysis and review of documents is ongoing.

Response provided by:

Jadwindar Singh, Director, Compliance & Vegetation Management, [redacted]

Attachment 2

PACIFIC GAS AND ELECTRIC COMPANY
October 2017 Wildfires
CPUC Data Request – Common

Requesters: Leslie L. Palmer and Nicholas Sher
Request Date: November 21, 2017

Question 11:
Please provide all Vegetation Management records (Records for request 7 & 8) for subject tree(s) for the past five (5) years.

Response to Question 11:
In response to Question 10, PG&E produced Vegetation Management records for the incident locations, as defined by the CPUC's December 7, 2017, letter for the last five years.

Based on a reasonable search, PG&E records indicate that, while each incident location was inspected numerous times in the last five years, tree work was prescribed and completed for the subject tree at three incident locations: Cherokee (Incident No. 171010-8557), Potter Valley (Incident No. 171009-8553), and Pocket (Incident No. 171021-8592). The table below identifies the subject tree records (Inspection Records and Work Requests) for these sites, which are contained within the records provided in response to Question 10.

VM Subject Tree Records for October 8, 2012 – October 8, 2017						
Incident #	Incident Name	Inspection Records			Work Requests	
		Bates Number	Tree #	Work Prescribed	Bates Number	Tree #
171010-8557	Cherokee	PGE-CPUC_00010014	3	Routine Side Trim	PGE-CPUC_00010276	66
		PGE-CPUC_00010015	3	None	N/A	N/A
		PGE-CPUC_00010017[1]	3	Routine Side Trim	PGE-CPUC_00010257	86
		PGE-CPUC_00010018	4	None	N/A	N/A
171021-8592	Pocket	PGE-CPUC_00010138	2	Accelerate Side Trim	PGE-CPUC_00010331	13
		PGE-CPUC_00010140	2	None	N/A	N/A
		PGE-CPUC_00010142	2	Routine Side Trim	PGE-CPUC_00010329	2
		PGE-CPUC_00010144	2	None	N/A	N/A
		PGE-CPUC_00010146	2	None	N/A	N/A
171009-8553	Potter Valley	PGE-CPUC_00010177	4	None	N/A	N/A
		PGE-CPUC_00010178	2	Routine Side Trim	PGE-CPUC_00010351	142
		PGE-CPUC_00010179	2	None	N/A	N/A
		PGE-CPUC_00010180	2	None	N/A	N/A
		PGE-CPUC_00010182	2	None	N/A	N/A

Response provided by:

[redacted] Principal, Vegetation Management, [redacted]

[1] Please note that the field indicating tree species was inadvertently modified during this inspection activity.

Attachment 3

Pacific Gas & Electric
Vegetation Management
Work Request SRNB1036983
Oct 23, 2012

0009-9636
CLOVERDALE 1102-1

Division: North Bay
Circuit: CLOVERDALE 1102 #0042821102

SSD Routing #: 8200
Contractor: Davey
Contract: ZS4335009C
Work Type: Distribution
Acct Type: Maintenance
Total Loc # 19

General Comments:
Work Request= SRNB1036983 and TL.sAcctType= 'M'

Location Num: 3

Address			City	Quad Map	Thomas Guide	Area	Inspection Date / Time
[redacted]			CLOVERDALE	H541	T-262-D2	CLOV 1102	10/10/12 11:34 AM
XStreet	**Group**		**County**	**Loc Rt:**	**U-Bld**	**Insp**	**Inspection Company**
			SONOMA	80600	No	[redacted]	WECI
Location Directions				**Loc Lat/Lon**		**Customer Name #1**	**Customer Phone #1**
2.7MI N/O RIDGE OAK RD				[redacted]		[redacted]	[redacted]
Alerts				**Struct1**	**Struct2**	**Customer Name #2**	**Customer Phone #2**
Locked Gate							
SRA	**Tag Number**	**Tag Type**	**Packet Project #**	**SSD #:**			**NTW Number**
Yes			0009-9636	1381			

Loc Comments: P5-P6;4TH SPAN SE/O P2 (SSD#1381).SPAN FROM P5 BELOW RD TO P6. AXS 22000 GATE (COMBO=[redacted] .SEE MAP

Location Summary: ***Units: 1*** ***Notification:*** *Phone*

<---------- Completed ---------->

Crew	Tree - Species	Trim Type	Priority	Est Ht	dbh	HV Clr	Est Qty	Date	Qty	T&M	OT	Hrs	By	Tree #

Notes:

Location Num: 4

Address			City	Quad Map	Thomas Guide	Area	Inspection Date / Time
[redacted]			CLOVERDALE	H541	T-262-D2	CLOV 1102	10/10/12 11:50 AM
XStreet	**Group**		**County**	**Loc Rt:**	**U-Bld**	**Insp**	**Inspection Company**
			SONOMA	80610	No	[redacted]	WECI
Location Directions				**Loc Lat/Lon**		**Customer Name #1**	**Customer Phone #1**
2.6MI N/O RIDGE OAK RD				[redacted]		[redacted]	[redacted]
Alerts				**Struct1**	**Struct2**	**Customer Name #2**	**Customer Phone #2**
Locked Gate							
SRA	**Tag Number**	**Tag Type**	**Packet Project #**	**SSD #:**			**NTW Number**
Yes			0009-9636	1381			

Loc Comments: P6-P7;5TH SPAN SE/O P2 (SSD#1381).SPAN FROM P6 UPHILL TO XFR P7. END OF SPAN XS RD TWICE.AXS 22000 GATE (COMBO=[redacted] .SEE MAP

Location Summary: ***Units: 2*** ***Notification:***

<---------- Completed ---------->

Crew	Tree - Species	Trim Type	Priority	Est Ht	dbh	HV Clr	Est Qty	Date	Qty	T&M	OT	Hrs	By	Tree #
CA	Valley Oak	Side	Accelerat	42	40	12	1	12/4/12	1	TR	0		JP	13

Com:
Tline: **Owner: Private** **Clearance: 12**
Wire Type: None **VELB Area: No** **Tree Lat/Lon:** **Worked Reason:**

Tree Com: .25S;E/O LINES.SPROUTS,TTT.TRIM OV TOO **Worked Comments:**
Psc Com:
Alerts:

Crew	Tree - Species	Trim Type	Priority	Est Ht	dbh	HV Clr	Est Qty	Date	Qty	T&M	OT	Hrs	By	Tree #
CA	Valley Oak	Side	Routine	30	48	10	1	12/4/12	1	TR	0		JP	14

Com:
Tline: **Owner: Private** **Clearance: 10**
Wire Type: None **VELB Area: No** **Tree Lat/Lon:** **Worked Reason:**

Tree Com: .3S;E/O LNS.TTT.TOP B-LO LN HT TOO-ROT @ BASE **Worked Comments:**
Psc Com:
Alerts:

Exhibit A
Attachment 3

Attachment 4

Pacific Gas & Electric
Vegetation Management
Work Request SRNC1005214
Feb 3, 2015

Division: North Coast
Circuit: CLOVERDALE 1102 #0042821102

SSD Routing #: 8200
Contractor: Davey Tree
Contract:
Work Type: Distribution
Acct Type: Maintenance
Total Loc # 15

0012-0127
CLOVERDALE 1102-1

General Comments:
Work Request= SRNC1005214 and TL.sAcctType= 'M'

Location Num: 1

Address			City	Quad Map	Thomas Guide	Area	Inspection Date / Time
[redacted]			CLOVERDALE	H541	T-262-D2	CLOV 1102	1/20/15 4:37 PM
XStreet	**Group**		**County**	**Loc Rt:**	**U-Bld**	**Insp**	**Inspection Company**
			SONOMA	80610	No	[redacted]	WECI
Location Directions				**Loc Lat/Lon**		**Customer Name #1**	**Customer Phone #1**
2.6MI N/O RIDGE OAK RD				[redacted]		[redacted]	[redacted]
Alerts				**Struct1**	**Struct2**	**Customer Name #2**	**Customer Phone #2**
Locked Gate							
SRA	**Tag Number**	**Tag Type**	**Packet Project #**	[redacted]			**NTW Number**
Yes			0012-0127				

Loc Comments: P6-P7;5TH SPAN SE/O P2 (SSD#1381).SPAN FROM P6 UPHILL TO XFR P7. END OF SPAN XS RD TWICE.AXS 22000 GATE (COMBO=[redacted] .SEE MAP

Location Summary: ***Units: 2*** ***Notification:*** *Door Hanger* *Phone*

									<-- Completed -->							
Crew	**Tree - Species**	**Trim Type**	**Priority**	**Est Ht**	**dbh**	**HV Clr**	**Est Qty**	**Date**	**Qty**	**T&M**	**OT**	**Hrs**	**By**	**Tree#**
CA	Valley Oak	Side	Routine	42	40	12	1	3/5/15	1	TR	0		LE	2

Com:
Tline: **Owner: Private** **Clearance: 12**
Wire Type: None **VELB Area: No** **Tree Lat/Lon:** **Worked Reason:**

Tree Com: .25S;E/O LINES.SPROUTS,TTT.TRIM OV TOO **Worked Comments:**
Psc Com:
Alerts:

LA	Bay, Calif.	Side	Routine	45	60	18	1	3/5/15	1	TR	0		LE	4

Com:
Tline: **Owner: Private** **Clearance: 18**
Wire Type: None **VELB Area: No** **Tree Lat/Lon:** **Worked Reason:**

Tree Com: .4S; XSTM; SAG/SWY/WND; TTT/L **Worked Comments:**
Psc Com:
Alerts:
Notes:

Location Num: 2

Address			City	Quad Map	Thomas Guide	Area	Inspection Date / Time
[redacted]			CLOVERDALE	H541	T-262-D2	CLOV 1102	1/20/15 5:13 PM
XStreet	**Group**		**County**	**Loc Rt:**	**U-Bld**	**Insp**	**Inspection Company**
			SONOMA	80690	No	[redacted]	WECI
Location Directions				**Loc Lat/Lon**		**Customer Name #1**	**Customer Phone #1**
2.1MI N/O RIDGE OAK RD				[redacted]		[redacted]	[redacted]
Alerts				**Struct1**	**Struct2**	**Customer Name #2**	**Customer Phone #2**
Access							
SRA	**Tag Number**	**Tag Type**	**Packet Project #**	**SSD #:**			**NTW Number**
Yes			0012-0127	17547			

Attachment 5

PACIFIC GAS AND ELECTRIC COMPANY
Camp Wildfire
CPUC Data Request: SED-001

Requesters: Banu Acimis
Request Date: December 6, 2018
Response Sent: February 1, 2019

Question 37:
When was the subject conductor(s) installed?

Response to Question 37:

Incident Location 1 (as defined by the SED's Data Request IV):

PG&E's present understanding based upon its records is that the conductor at Incident Location 1 and the associated equipment were initially installed between 1919 and 1921. PG&E understands towers on the Caribou-Palermo 115 kV Transmission Line first went into service on May 6, 1921. Portions of this line have been replaced over time as a result of routine maintenance and emergency work. PG&E is not presently aware of any records showing if or when the conductor between Towers :27/221 and :27/222 was replaced.

Incident Location 2 (as defined by the SED's Data Request IV):

PG&E's present understanding based upon its records is that the conductor at Incident Location 2 was installed on July 13, 2018.

Response provided by:

[redacted] Supervising Engineer, Transmission Line Engineering-North [redacted]

[redacted] Manager Electric Asset Strategy, [redacted]

Attachment 6

PACIFIC GAS AND ELECTRIC COMPANY
Camp Wildfire
CPUC Data Request: SED-002

Requesters: Banu Acimis
Request Date: December 6, 2018
Response Date: April 2, 2019

Question 11:
For incident location 1, provide all documents, including but limited to construction drawings and blueprints, showing or pertaining to Caribou-Palermo design, excavation and clearing, installation of towers, wires, all other components on the line, and the beginning of service.

Response to Question 11:
Based on clarification received by the SED, PG&E understands "incident location 1", as defined by the SED's Data Request IV, to refer to Towers :27/221 and :27/222 on the Caribou-Palermo 115 kV Transmission Line and the span of conductors in between. Consistent with the SED's Data Request 002, Question 10, PG&E understands this question to be seeking information regarding the original design and construction of the line associated with Incident Location 1.

PG&E is producing original design drawings, bills of materials and other documents identified to date related to the construction of the section of Great Western Power Line Number Three that corresponds to what is now a section of the Caribou-Palermo 115 kV Transmission line and includes what are now referred to as Towers :27/221 and :27/222 on that line, at Bates range PGE-CAMP-CPUC-0000031176 – PGE-CAMP-CPUC-0000031180, PGE-CAMP-CPUC-0000031189 – PGE-CAMP-CPUC-0000031198, PGE-CAMP-CPUC-0000031623 – PGE-CAMP-CPUC-0000031715.

PG&E notes that some of these documents were included in a recent production to CAL FIRE, which PG&E in turn provided to the CPUC.

Response provided by:

[redacted] Manager, Transmission Portfolio Management, [redacted]

Attachment 7

PACIFIC GAS AND ELECTRIC COMPANY
Camp Wildfire
CPUC Data Request: SED-002

Requesters: Banu Acimis
Request Date: December 6, 2018
Response Date: April 2, 2019

Question 12:
For incident location 1, provide all manuals, specifications, and manufacturer instructions for installation, maintenance, weight limits, operation, and specifications of each component of the Caribou-Palermo line.

Response to Question 12:
PG&E understands this question as requesting documents provided by component manufacturers, including manuals, and other documents related to specifications and manufacturer instructions for installation, maintenance, weight limits, and operations of components associated with transmission facilities at Incident Location 1, as defined by the SED's Data Request IV. PG&E is producing the documents identified to date that are responsive to this request.

PG&E is producing a series of drawings related to the original construction of Great Western Power Line Number Three, a portion of which is now part of the Caribou-Palermo 115 kV Transmission Line that encompasses Incident Location 1. These documents set forth, among other things, the specifications for certain components on the line. Those drawings are being produced at Bates range PGE-CAMP-CPUC-0000031179 – PGE-CAMP-CPUC-0000031180, PGE-CAMP-CPUC-0000031198 – PGE-CAMP-CPUC-0000031199, PGE-CAMP-CPUC-0000031700 – PGE-CAMP-CPUC-0000031709, PGE-CAMP-CPUC-0000031768 and PGE-CAMP-CPUC-0000032034.

PG&E is also producing at Bates number PGE-CAMP-CPUC-0000031200 a set of drawings for the connectors that replaced the existing connectors on Tower :27/222 in 2016. This work was described in PG&E's response to the SED's Data Request 001, Question 6.

PG&E is also producing at Bates number PGE-CAMP-CPUC-0000031711, a document showing test loads for type "SA" towers and type "SB" towers, which were originally installed on the Great Western Power Line Number Three and remain on the Caribou-Palermo 115 kV Transmission Line. Tower :27/222 is a type "SB" tower while Tower :27/221 is a type "SA" tower.

At Bates number PGE-CAMP-CPUC-0000031712, PG&E is producing a document showing heights and clearances for type "SB" towers. PG&E is also producing at Bates number PGE-CAMP-CPUC-0000032035 a drawing showing the deflection curve for the conductor on Great Western Power Line Number Three. At Bates number PGE-CAMP-CPUC-0000031710,

PG&E is producing a stress deflection chart for the cable on a section of the Caribou-Golden Gate line, a predecessor name for the Caribou-Palermo 115 kV Transmission Line.

PG&E is also producing two Ohio Brass Catalogs that contain specifications for certain components on the line. The documents at Bates numbers PGE-CAMP-CPUC-0000031769 and PGE-CAMP-CPUC-0000031911 are Ohio Brass catalogs from 1919 and 1921, respectively. PG&E is also producing at Bates number PGE-CAMP-CPUC-0000031716 an Ohio Brass document that addresses the history of certain suspension insulators that it manufactured, including suspension insulators on the Caribou-Palermo 115 kV Transmission Line.

PG&E notes that some of these documents were included in a recent production to CAL FIRE, which PG&E in turn provided to the CPUC.

Response provided by:

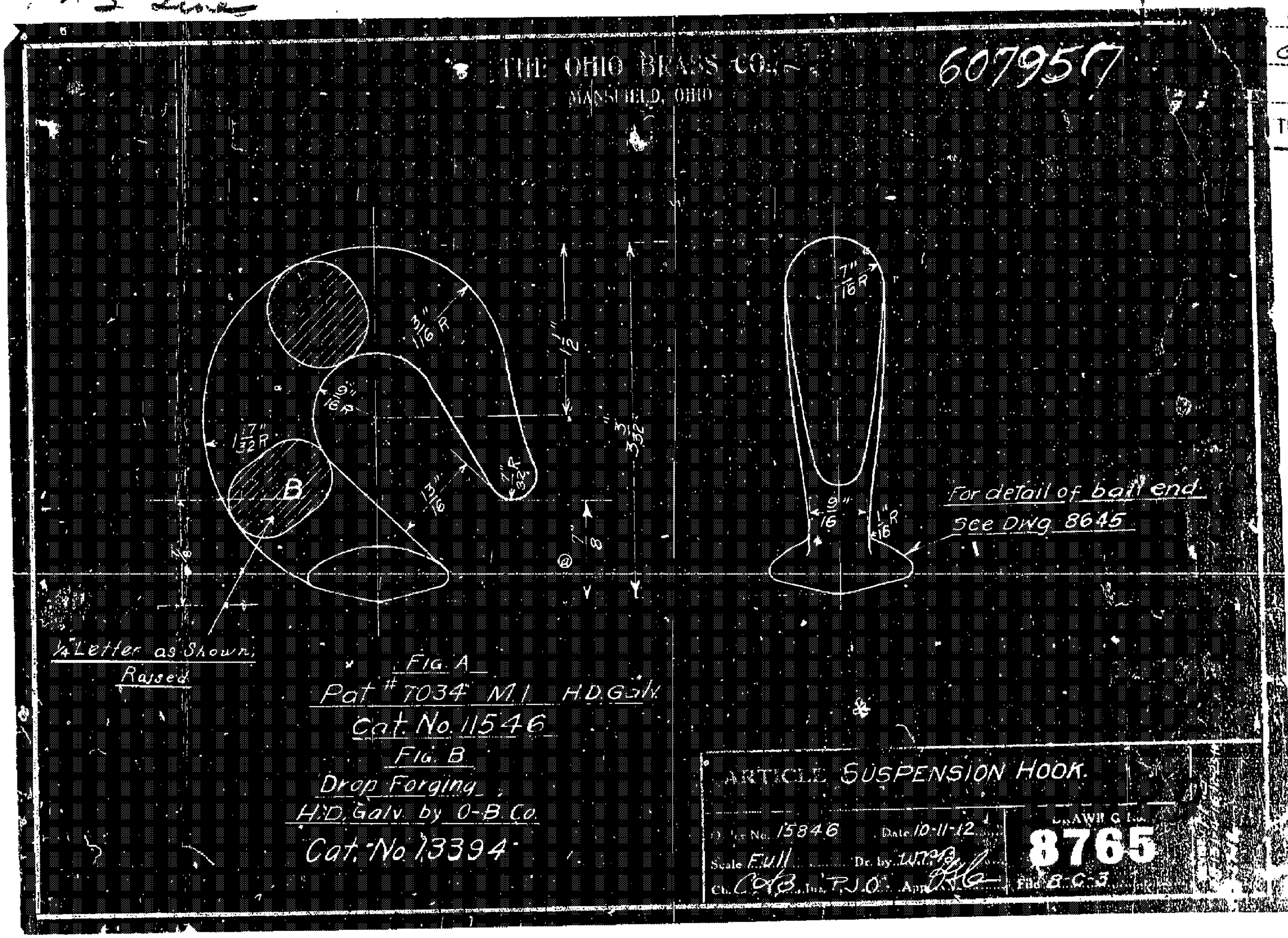
[redacted] Manager, Transmission Portfolio Management, [redacted]

Attachment 8

Ohio Brass Co — 8765
Suspension Hook #11546
#3 Line

3

RECORD PRINT No. 607957
PROPERTY OF PACIFIC GAS & ELECTRIC CO.
CARIBOU-GOLDEN
GATE 165KV
LINE Nº 603
TURN TO DRAFTING DEPT.



Attachment 9

PACIFIC GAS AND ELECTRIC COMPANY
Camp Wildfire
CPUC Data Request: SED-002

Requesters: Banu Acimis
Request Date: December 6, 2018
Response Date: April 2, 2019

Question 2:
Have PG&E employees or agents noted any other damage to any of the towers or attached equipment, or noted parts missing from any towers, in addition to the tower damage noted in the aerial survey? If so, provide:
a. The date and circumstances in which such damage was found, or part missing was noted.
b. The nature and location of the damage and the components damaged, and the identity and function of the part or parts missing.
c. PG&E's assessment of how the damage occurred, and whether PG&E understands that CalFire had taken custody of the missing parts.
d. PG&E's assessment of whether the damage occurred independently of the first damaged tower or whether the condition of either tower damaged the other tower or increased damaged to the other tower.

Response to Question 2:
PG&E understands this question as requesting information about damage to Towers :27/221 and :27/222 on the Caribou-Palermo 115 kV Transmission Line.

Damage Noted During Evidence Collection with CAL FIRE
PG&E has provided an Incident Description and Factual Summary (the "Report") for the Incident Locations, as defined by the SED's Data Request IV. This Report was emailed to the CPUC contemporaneously with PG&E's December 31, 2018 filing as Exhibit A (titled "Camp Fire Incident Description & Factual Summary") to PG&E's response to the Northern District of California District Court's November 27, 2018 Notice re California Wildfires in the matter captioned *United States of America v. Pacific Gas and Electric Company*, Case No. 3:14-cr-00175-WHA. PG&E provided the Report with its response to the SED's Data Request 001, Question 56.

As noted in the Report, on November 14, 2018, PG&E assisted CAL FIRE's collection of assets from Towers :27/222 and :27/221. At the time of the collection, PG&E observed a broken C-hook that had attached the suspension insulator to a tower arm, along with wear at the connection point. In addition, PG&E observed a flash mark on Tower :27/222 near where the jumper was suspended and damage to the transposition jumper and suspension insulator. At Tower :27/221, there was an insulator hold down anchor (a non-energized piece of equipment) that had become disconnected. To date, PG&E has not located the remainder of the broken C-hook from Tower :27/222.

It is possible that CAL FIRE collected evidence, including the remainder of the broken C-hook that PG&E has been unable to locate, either before November 14, 2018, or between November 14, 2018 and the release of Incident Location 1 by CAL FIRE on November 17, 2018. PG&E is not aware of what evidence, if any, CAL FIRE may have collected from Incident Location 1 prior to November 14, 2018. The evidence collected by CAL FIRE of which PG&E is presently aware is set forth in the evidence log PG&E produced in its response to the SED's Data Request 002, Question 8.

Damage Noted After CAL FIRE Released Incident Location 1

CAL FIRE released Incident Location 1 on November 17, 2018. After the release of Incident Location 1, PG&E observed remains of broken insulators in the area surrounding Towers :27/222 and :27/221. PG&E, assisted by Fire Cause Analysis ("FCA"), a third party vendor, collected and logged these insulator fragments. PG&E produced FCA's evidence catalog in response to the SED's Data Request 001, Questions 41 and 42. FCA is continuing to catalog the evidence that it collected, and additional evidence may be added to the log.

Issues Noted During Enhanced Inspections

On January 22, 2019, as part of PG&E's Wildfire Safety Inspection Program ("WSIP"), PG&E conducted climbing inspections of Towers :27/222 and :27/221. On Tower :27/222, six findings, not all of which relate to "damage" to the tower, were identified: (1) "No high [voltage] signs"; (2) "Dead end arm is bent"; (3) "Top peak has not been painted"; (4) "A lot of rust and corrosion on top of structure"; (5) "C hook is rusty and corrosion is set on"; and (6) "Frog plates are corroded and rusty".

On Tower :27/221, four findings, not all of which relate to "damage" to the tower, were identified: (1) "Dirt/soil has deposited on both sides of structure and a big rock"; (2) "Has old high [voltage] sign and only on one side"; (3) "Five cross members are bent[,] three in lower positions[,] two in the air"; and (4) "Frog plates are oblong and showing signs of corrosion". These findings were recorded on inspection forms that set out an electronic checklist for assessing conditions identified during the WSIP inspections.

PG&E is producing the inspection forms for the January 22, 2019 WSIP inspections of Towers :27/222 and :27/221 at Bates range PGE-CAMP-CPUC-0000016745 to PGE-CAMP-CPUC-0000016769 and PGE-CAMP-CPUC-0000031216 to PGE-CAMP-CPUC-0000031234.[1]

In addition, on January 29, 2019, also as part of the WSIP, PG&E conducted drone inspections of Towers :27/222 and :27/221. On Tower :27/222, the following findings, not all of which

[1] The findings identified on these forms may, but do not always, result in the generation of a preliminary ("S5") notification. A preliminary S5 notification is generated when the field inspector or drone reviewer identifies a condition that they believe is in need of repair. These preliminary notifications are subject to review by a Centralized Inspection Review Team ("CIRT"), which determines whether the findings warrant generation of a Line Corrective ("LC") Notification in accordance with PG&E's Electric Transmission Preventive Maintenance ("ETPM") Manual.

relate to "damage" to the tower, were identified: (1) "Danger sign is missing"; (2) "Paint is not complete"; (3) "Buried footing"; (4) "Corrosion on insulator caps"; (5) "Moderate to severe corrosion on hardware"; (6) "Ha[n]ger is heavily corroded"; and (7) "Corona plates have moderate rust". On Tower :27/221, the following findings, not all of which relate to "damage" to the tower, were identified: (1) "Danger sign is missing"; (2) "Buried footing"; (3) "Insulators are dirty"; and (4) "Corona plates have moderate rust". PG&E is producing the Drone Inspection Forms for the January 29, 2019 drone inspections of Towers :27/222 and :27/221 at Bates range PGE-CAMP-CPUC-0000016717 to PGE-CAMP-CPUC-0000016744.

How the Damage Occurred and the Relationship Between Damage to the Towers

As to all of the damage and conditions noted above, PG&E has not reached a conclusion as to how the damage or conditions occurred.

As to all of the damage noted above, PG&E has not reached a conclusion as to "whether the damage occurred independently of the first damaged tower or whether the condition of either tower damaged the other tower or increased damage to the other tower." PG&E is not presently aware of any facts that suggest damage on either tower caused or increased damage to the other tower.

As stated in PG&E's Specific Objection to this Question, set forth in PG&E's Specific Objections to Data Request Number SED-001-Camp Wildfire, PG&E is preparing for litigation, including retaining experts and collecting evidence. At this time, this work for purposes of litigation preparation, including the work performed by those experts, is protected by the attorney-client privilege and protections of the attorney work product doctrine. As such, PG&E must assert its right to withhold documents subject to the attorney-client privilege or the work product doctrine and, on that basis, objects to this data request to the extent it calls for such information.

PG&E will provide non-privileged information, to the extent any exists, in response to this request should it later become available. Other privileged information protected by the attorney-client privilege or as attorney work product will not be produced as part of this response.

Response provided by:

[redacted] Manager, Transmission Portfolio Management & Change Control, [redacted]

Attachment 10

PACIFIC GAS AND ELECTRIC COMPANY
Camp Wildfire
CPUC Data Request: SED-007

Requesters: Banu Acimis
Request Date: June 25, 2019
Response Date: August 23, 2019

Question 6:
WSIP revealed a large number of tags on the CP 115kV line. Which of these should have been identified during the previous regular inspections and patrols? Has PG&E conducted a study on how these tags were not detected during regular inspections/patrols? What is the difference between regular inspection and enhanced inspection?

Response to Question 6:
Since the November 8, 2018 Camp Fire, PG&E has significantly enhanced its inspection efforts in Tier 2 and Tier 3 High Fire-Threat District ("HFTD") areas. PG&E's WSIP inspections differ from its prior routine inspections in various ways. For example:

- Under WSIP, every transmission asset in Tier 2 or Tier 3 HFTD areas is subject to both a climbing inspection and a drone inspection. In contrast, under PG&E's routine inspection program, only towers operating at 500 kV are climbed on a routine basis, and towers operating at less than 500 kV are climbed only as triggered by specific events specified in PG&E's Electric Transmission Preventive Maintenance ("ETPM") Manual. In addition, under WSIP, a Drone Inspection Review Team ("DIRT") reviews drone photographs of transmission assets to identify potential conditions requiring repair. PG&E's routine inspection program did not use drone technology.

- A Centralized Inspection Review Team ("CIRT") comprising individuals with relevant engineering and field expertise reviews inspection findings to determine the final priority of identified conditions. PG&E's routine inspection program did not utilize CIRT teams.

- WSIP inspections are based on a Failure Modes and Effects Analysis ("FMEA") that PG&E conducted shortly after the Camp Fire in November 2018. The FMEA identifies potential points of failure on transmission assets that could cause a fire ignition. In contrast, inspections conducted pursuant to PG&E's routine inspection program were not informed by the findings of a FMEA.

- WSIP inspections differ from prior routine inspections in that WSIP inspectors use mobile technology and electronic checklists (known as "Pronto Forms") to document inspection findings electronically. In contrast with previous routine inspections, the WSIP inspection process requires inspectors to document and record findings for every component on an inspected structure, regardless of whether the components are

determined to require repair, which provides additional information on asset condition and increases the verifiability of inspections.

As PG&E has publicly disclosed, those efforts have identified thousands of conditions requiring repairs on PG&E's system that had not been previously identified.

As the description above makes clear, there are numerous possible reasons why conditions would be identified for the first time during an enhanced inspection. By way of example, the condition may have arisen or become more visible since the last inspection or patrol, or the enhanced inspection methods may have provided a better vantage point for detecting the condition. PG&E has not conducted a study to determine how many of the thousands of conditions identified during WSIP inspections should or should not have been detected during a prior inspection or patrol.

Response provided by:

Tom Wright Jr., Director, T&S Risk Analytics, [redacted]

Attachment 11

PACIFIC GAS AND ELECTRIC COMPANY
Camp Wildfire
CPUC Data Request: SED-002

Requesters: Banu Acimis
Request Date: December 6, 2018
Response Date: April 2, 2019

Question 20:
With respect to the Caribou-Palermo line, identify by date and characteristic each inspection done from January 1, 2000 until November 8, 2018, and provide the reasons why the inspection was conducted.

Response to Question 20:
PG&E understands this question to refer to patrols and inspections of transmission lines performed in accordance with the standards outlined in PGE's Electric Transmission Preventive Maintenance ("ETPM") Manual. PG&E's ETPM Manual supports PG&E's compliance with the CPUC's General Order ("GO") 165 Inspection Requirements for Electric Distribution and Transmission Facilities.

PG&E's understanding based upon records it has identified to date is that the Caribou-Palermo 115 kV Transmission Line was subject to the patrols and inspections identified in the table below for the period January 1, 2000 through November 8, 2018. The below table also identifies the dates on which each such patrol or inspection was performed, as well as the Bates numbers corresponding to the relevant records for each such patrol or inspection.

The reasons for and characteristics of PG&E's inspections and patrols of transmission lines, including the Caribou-Palermo 115 kV Transmission Line, are set forth in detail in the ETPM Manual, and are summarized below.

In accordance with the ETPM Manual, PG&E conducts routine patrols and inspections of transmission lines according to the schedules outlined in the ETPM Manual at Tables 10 and 11. During a routine patrol, PG&E personnel are instructed to visually observe transmission assets to identify abnormalities (*i.e.*, obvious structural problems or hazards) or circumstances that will negatively impact safety. Routine patrols are typically done by air. During a detailed inspection, PG&E personnel are instructed to visually examine transmission assets and look for and document abnormalities or circumstances they observe that will negatively impact safety, reliability, or asset life. Detailed inspections are typically done by ground with binoculars.

In accordance with the ETPM Manual, PG&E also conducts three primary types of non-annual patrols of transmission lines: non-routine, infrared, and emergency.

PG&E conducts non-routine patrols of transmission lines in the event of specific conditions that require follow up, including, for example, third-party observations and complaints, component

defects identified from a less-than-ideal vantage point, and concerns about the fast growth of vegetation. Non-routine patrols can be done by air (typically helicopter) or by ground. Non-routine patrols occur independent of and in addition to the routine schedule for patrols and inspections.

PG&E conducts infrared patrols using thermographic technology to identify abnormal conditions on electrical equipment. These patrols are typically done by air. Pursuant to the ETPM Manual, infrared patrols are conducted when required by Utility Procedure TD-1004P-04, which is being produced at Bates number PGE-CAMP-CPUC-0000020050-0060, or as triggered by specific conditions, such as component failure or a high fire hazard. In addition, PG&E conducts infrared patrols for lines that have exceeded their emergency ratings for 30 minutes or more to inspect for possible component damage.

In addition, PG&E conducts emergency patrols in response to momentary or sustained outages caused by unknown conditions on overhead or underground transmission lines. An emergency patrol is a visual check made either by ground or by air to look for the specific condition that caused the outage.

Inspections Performed from January 1, 2000 through November 8, 2018 on the Caribou-Palermo 115 kV Transmission Line			
Notification or Order Number	**Description**	**Date Completed**	**Bates Number**
114730861	Caribou-Palermo Non-Routine Ground Patrol	In-Progress	PGE-CAMP-CPUC-0000017231
115332698	Caribou-Palermo Emrg Air Patrol	12/12/2018	PGE-CAMP-CPUC-0000012110-2113
115095827	Caribou-Palermo Line Inspection Ground Patrol	10/28/2018	PGE-CAMP-CPUC-0000018118-8121
43219839	2018 Aerial Patrol	9/19/2018	PGE-CAMP-CPUC-0000000516-520
114624783	Caribou-Palermo Line Inspection Infrared	5/31/2018	PGE-CAMP-CPUC-0000004115-4116
114354005	Caribou-Palermo Line Inspection Ground Patrol	3/2/2018	PGE-CAMP-CPUC-0000018108-8110
114122605	Caribou-Palermo Line Inspection Ground Patrol	12/21/2017	PGE-CAMP-CPUC-0000018091
42889355	2017 Aerial Patrol	9/13/2017	PGE-CAMP-CPUC-0000000510-515
113164291	Caribou-Palermo Line Inspection Airp	8/16/2017	PGE-CAMP-CPUC-0000004110-4114
112791582	Caribou-Palermo Infrared Patrol	5/23/2017	PGE-CAMP-CPUC-0000004109
112828418	Caribou-Palermo Non-Routine Ground Patrol	5/17/2017	PGE-CAMP-CPUC-0000018117
112616464	Colgate-Palermo Non-Routine Air Patrol	2/21/2017	PGE-CAMP-CPUC-0000004106-4108

Inspections Performed from January 1, 2000 through November 8, 2018 on the Caribou-Palermo 115 kV Transmission Line			
Notification or Order Number	**Description**	**Date Completed**	**Bates Number**
112549499	Caribou-Palermo Non Routine Air	1/24/2017	PGE-CAMP-CPUC-0000004100-4105
112475924	Table Mtn Jan 2017 Wind/Rain Event	1/11/2017	PGE-CAMP-CPUC-0000004098-4099
112533961	Caribou-Palermo 24/200 Conductor	1/10/2017	PGE-CAMP-CPUC-0000018079-8085
112475652	Caribou - Palermo Non Routine Air Patrol	1/9/2017	PGE-CAMP-CPUC-0000004095-4097
112390933	Caribou-Palermo Non-Routine Ground	12/6/2016	PGE-CAMP-CPUC-0000018096-8101
112010351	Caribou-Palermo Non-Routine Air	10/3/2016	PGE-CAMP-CPUC-0000004093-4094
42583149	2016 Aerial Patrol	8/5/2016	PGE-CAMP-CPUC-0000000443-447
111643890	Caribou Palermo 2016 Infrared Patrol Fire Area	5/26/2016	PGE-CAMP-CPUC-0000004090-4092
111071959	Caribou-Palermo Non-Routine Air Patrol	12/10/2015	PGE-CAMP-CPUC-0000004088-4089
111072159	Caribou-Palermo Non-Routine Ground Patrol	12/10/2015	PGE-CAMP-CPUC-0000018107
110529506	Caribou Palermo Non-Routine Ground Patrol	7/22/2015	PGE-CAMP-CPUC-0000018102-8103
42292776	2015 Aerial Patrol	7/20/2015	PGE-CAMP-CPUC-0000000448-509
110403178	Caribou Palermo 2015 Infrared Fire Area	6/3/2015	PGE-CAMP-CPUC-0000004087
110370832	Caribou Palermo Non-Routine Air Patrol	5/5/2015	PGE-CAMP-CPUC-0000004086
110177818	Caribou-Palermo Non-Routine Air Patrol	4/14/2015	PGE-CAMP-CPUC-0000004085
110030646	Caribou Palermo Non-Routine Air Patrol	2/7/2015	PGE-CAMP-CPUC-0000004084
41980167	2014 Detailed Inspection	8/28/2014	PGE-CAMP-CPUC-0000003997-4056
107938102	Caribou-Palermo 2014 Infrared Patrol (Wildfire	5/22/2014	PGE-CAMP-CPUC-0000004076-4082
107981920	Caribou-Palermo Non-Routine Air Patrol	5/5/2014	PGE-CAMP-CPUC-0000004083
107597189	Caribou-Palermo Non-Routine Ground Patrol	1/13/2014	PGE-CAMP-CPUC-0000018087
107477009	Caribou-Palermo Non-Routine Air Patrol	11/23/2013	PGE-CAMP-CPUC-0000004075

Inspections Performed from January 1, 2000 through November 8, 2018 on the Caribou-Palermo 115 kV Transmission Line			
Notification or Order Number	**Description**	**Date Completed**	**Bates Number**
41815952	2013 Aerial Patrol	8/15/2013	PGE-CAMP-CPUC-0000003866-3927
107061440	Caribou-Palermo Non-Routine Ground Patrol	8/1/2013	PGE-CAMP-CPUC-0000018127
106634988	Caribou Palermo Non-Routine Grd Patrol	1/9/2013	PGE-CAMP-CPUC-0000018114
106600637	Caribou-Palermo Non-Routine Ground Patrol	12/24/2012	PGE-CAMP-CPUC-0000018104
106572605	Caribou-Palermo Non-Routine Air Patrol	12/3/2012	PGE-CAMP-CPUC-0000018113
106156838	Caribou Palermo NR Air Patrol	8/8/2012	PGE-CAMP-CPUC-0000018128
41619753	2012 Aerial Patrol	8/6/2012	PGE-CAMP-CPUC-0000003803-3865
106000207	Caribou Palermo Infrared Air Patrol	5/31/2012	PGE-CAMP-CPUC-0000004074
105898520	Caribou Palermo Non-Routine Air Patrol	1/23/2012	PGE-CAMP-CPUC-0000018105
105822882	Caribou Palermo Non-Routine Air Patrol/Storm	12/8/2011	PGE-CAMP-CPUC-0000018078
41440593	2011 Aerial Patrol	7/27/2011	PGE-CAMP-CPUC-0000003740-3802
105341808	Caribou-Palermo Non Routine Air Patrol	6/17/2011	PGE-CAMP-CPUC-0000018122-8125
41504355	Caribou-Palermo Non Routine Patrol	6/15/2011	PGE-CAMP-CPUC-0000016973
105223329	Caribou Palermo Non - Routine Air Patrol	2/25/2011	PGE-CAMP-CPUC-0000018106
105180842	Caribou Palermo Non - Routine Grd Patrol	1/6/2011	PGE-CAMP-CPUC-0000018126
104890485	Caribou Palermo Non - Routine Grd Patrol	10/15/2010	PGE-CAMP-CPUC-0000018092
104884393	Caribou Palermo Non - Routine Air Patrol	10/12/2010	PGE-CAMP-CPUC-0000018076
41233615	2010 Aerial Patrol	8/6/2010	PGE-CAMP-CPUC-0000003678-3739
104687592	Caribou Palermo Infrared Air Patrol	5/4/2010	PGE-CAMP-CPUC-0000004073
104436864	Caribou Palermo Non - Routine Air Patrol	2/5/2010	PGE-CAMP-CPUC-0000018090
41011565	2009 Detailed Inspection	8/31/2009	PGE-CAMP-CPUC-0000003928-3996

Inspections Performed from January 1, 2000 through November 8, 2018 on the Caribou-Palermo 115 kV Transmission Line			
Notification or Order Number	**Description**	**Date Completed**	**Bates Number**
103949626	Caribou Palermo Non - Routine Grd Patrol/Fire	8/16/2009	PGE-CAMP-CPUC-0000018095
103655045	Caribou Palermo Non - Routine Air Patrol	1/14/2009	PGE-CAMP-CPUC-0000018093
103307720	Caribou Palermo Infrared Non -Routine Ptrl	10/17/2008	PGE-CAMP-CPUC-0000004072
40898009	2008 Aerial Patrol	8/22/2008	PGE-CAMP-CPUC-0000016924-6972
103165797	Caribou Palermo Non - Routine Grd Patrol/Fire	7/19/2008	PGE-CAMP-CPUC-0000018116
103161265	Caribou Palermonon Rnt Grd Patrol/Fires	7/14/2008	PGE-CAMP-CPUC-0000018094
103155367	Caribou Palermo Non Rnd Grd Patrol	7/8/2008	PGE-CAMP-CPUC-0000018077
103129923	Caribou Palermo Non - Routine Grd Patrol/Fire	7/7/2008	PGE-CAMP-CPUC-0000018088
103117780	Caribou -Palermo Non Routine Patrol	6/22/2008	PGE-CAMP-CPUC-0000018112
102876082	Caribou Palermo Non - Routine Patrol	2/12/2008	PGE-CAMP-CPUC-0000018089
102835999	Caribou Palermo N - Routine Air Patrol	1/11/2008	PGE-CAMP-CPUC-0000018111
40700549	2007 Aerial Patrol	6/7/2007	PGE-CAMP-CPUC-0000016876-6923
102315958	Caribou-Palermo Non-Routine Air Patrol	3/28/2007	PGE-CAMP-CPUC-0000018164
102290387	Caribou-Palermo Non-Routine Air Patrol	2/23/2007	PGE-CAMP-CPUC-0000018171
102290384	Caribou-Palermo Non-Routine Ground Patrol	2/22/2007	PGE-CAMP-CPUC-0000018165
102287591	Caribou-Palermo Non-Routine Air Patrol	2/20/2007	PGE-CAMP-CPUC-0000018163
102263830	Caribou-Palermo Non-Routine Air Patrol	1/22/2007	PGE-CAMP-CPUC-0000018172
102216467	Caribou-Palermo Non-Routine Ground Patrol	11/16/2006	PGE-CAMP-CPUC-0000018167
40597326	2006 Aerial Patrol	8/22/2006	PGE-CAMP-CPUC-0000016974-7065
102072527	Caribou-Palermo Non-Routine Ground Patrol	7/13/2006	PGE-CAMP-CPUC-0000018160
40432681	2005 Ground Patrol	8/15/2005	PGE-CAMP-CPUC-0000016774-6820

Inspections Performed from January 1, 2000 through November 8, 2018 on the Caribou-Palermo 115 kV Transmission Line			
Notification or Order Number	**Description**	**Date Completed**	**Bates Number**
101791317	Caribou Palermo Emergency A-Patrol	6/29/2005	PGE-CAMP-CPUC-0000018170
40377249	2004 Aerial Patrol	9/1/2004	PGE-CAMP-CPUC-0000017066-7113
101316411	Caribou-Palermo Emergency Ground Patrol	3/18/2004	PGE-CAMP-CPUC-0000018166
101280778	Caribou-Palermo Emergency Ground Patrol	2/4/2004	PGE-CAMP-CPUC-0000018161
40255152	2003 Ground Patrol	8/11/2003	PGE-CAMP-CPUC-0000017114-7148
101028212	Caribou-Palermo Emergency Air Patrol On Relay	6/24/2003	PGE-CAMP-CPUC-0000018162
40124199	2002 Aerial Patrol	8/20/2002	PGE-CAMP-CPUC-0000017149-7188
100703476	Caribou-Palermo Emergency Air Patrol	4/25/2002	PGE-CAMP-CPUC-0000018169
N/A	Emergency Patrol Inspection Datasheet	10/22/2001	PGE-CAMP-CPUC-0000016872-6873
100546280	Caribou-Palermo Emergency Air Patrol	9/27/2001	PGE-CAMP-CPUC-0000018168
40083387	Caribou-Palermo Emergency Air Patrol	9/24/2001	PGE-CAMP-CPUC-0000016874-6875
40112802	2001 Infrared Patrol	7/31/2001	PGE-CAMP-CPUC-0000016870-6871
40105141	2001 Aerial Patrol	7/10/2001	PGE-CAMP-CPUC-0000033029-3072
100487040	Caribou-Palermo :18/157 Emergency Patrol	7/4/2001	PGE-CAMP-CPUC-0000018173
40035884	2001 Ground Patrol	1/25/2001	PGE-CAMP-CPUC-0000016821-6869

Response provided by:

[redacted] Manager, Transmission Portfolio Management, [redacted]

Attachment 12

Corrective Work Form
Electric Transmission Line

CARIBOU-PALERMO NON RTN GROUND PATROL

LC # 114730861
Priority E - Schd Compl Yr 0
Work Type 539 - BFY-PatrolGround-Emergency

Line Name	10391 CARIBOU-PALERMO		
Functional Location	ETL.3190 - 10391 CARIBOU-PALERMO		
Equipment			
Structure ID			
Main Work Center	TABLEMTN - Table Mountain	**Required End Date**	6/12/2019
Planner Group	TLM - GC Tower -TABLEMTN	**Order #**	43382525
Voltage		**Wood** ☐ **Steel** ☐	
Latitude	0	**Longitude**	0
Bird report event log		**Bird Incident #**	

Facility		**Damage**		**Activity**	
LINE	Non-Routine Patrol	**INVG**	Investigate	**GRPT**	Ground Patrol

Status - Cond/Oper Info	**Status** - Field Ident	**Status** - Field Cond (Expo)	**Status** - Field Cond (Access)	**Status** - Other
NONR Non-Routine				

Street
Cross Street
Division NV
City Zip 00000
County 004 - Butte County

Crew Size
Estimated Labor Hours

Reported by [redacted] **Date Found** 6/12/2018

Completed By **Date** **Actual Labor Hours**
Reviewed By **Date**

Signature
I verify that all maintenance on this notification is completed

Field Notes

Long Text

06/26/2018 14:54:17 [redacted]
PER ([redacted])CIRCUIT REQUIRES A DETAILED INSPECTION ON ALL STEEL
STRUCTURES BY TOWER DEPARTMENT NORTH

Attachment 13

Pacific Gas and Electric Company

Steel Structure Detailed Climbing Inspection (Non-500 kV Structures)

Elec. Trans.
ETPM Form
TD-1001M-FXX
03/16

The 500 kV Tower Line Climbing Inspection Form provides a ready reference to ensure a thorough inspection.

- It is intended that the items on Page 2 of the form will be inspected during the climbing inspection.
- Refer to the ETPM Manual for guidance regarding the Facility, Damage, and Action

Structure #: 10/86	Line Name: CARIBOU-PALERMO	Voltage: 115	SAP Structure ID #: 40816572
Date Inspected: 10/30/18	Inspected By: [redacted]		[redacted] #: [redacted]
Order #: 43382525	Notification Required: No ☑	Yes ☐	Notification #:
Comments:	[redacted]		
Inspector Review:	[redacted] (Signature)	LAN ID [redacted]	Date: 10/30/18
Supervisor Review:	(Signature)	LAN ID:	Date:

PRIORITY CODES

N/A	Does not apply to this location
NP	No problem found
	Using Priority Code requires a Condition and Action to be documented
PC	Problem corrected at the time of inspection
A	Perform work immediately
B	Perform work within 3 months
E	Perform work within 12 months
F	Perform work within 24 months

INSTRUCTIONS.

1. The Facility, Damage, and Action Codes (FDA), are to be in accordance with the Electric Transmission Preventive Maintenance Manual.

2. Send completed forms to:
   Tower Dept. Davis
   500Kv Inspection file
   316 "L" Street,
   Davis, CA 95616

Pacific Gas and Electric Company

Steel Structure Detailed Climbing Inspection (Non-500 kV Structures)

Elec. Trans.
ETPM Form
TD-1001M-FXX
03/16

CHECK THIS ITEM	Condition Found							Damage	Action	COMMENTS
	N/A	NP	PC	A	B	E	F			
ANCHOR FOUNDATION										
Concrete is at least 6" above ground line	☑	☐	☐	☐	☐	☐	☐			
Concrete is not cracked or deteriorated	☑	☐	☐	☐	☐	☐	☐			
Concrete is sealed and water proofed	☑	☐	☐	☐	☐	☐	☐			
Earth around anchors is not eroded	☑	☐	☐	☐	☐	☐	☐			
Anchors have no evidence of pull out?	☑	☐	☐	☐	☐	☐	☐			
Do anchors consist of loops or rods?	☑	☐ Loops		☐ Rods						
GUY WIRE										
Guys are properly tensioned	☑	☐	☐	☐	☐	☐	☐			
Turnbuckle punched	☑	☐	☐	☐	☐	☐	☐			
Proper guy cable and hardware used	☑	☐	☐	☐	☐	☐	☐			
6" of travel left in turnbuckle	☑	☐	☐	☐	☐	☐	☐			
Preform cross ties properly installed	☑	☐	☐	☐	☐	☐	☐			
Guy tails clipped properly	☑	☐	☐	☐	☐	☐	☐			
Preform grips in thimbles	☑	☐	☐	☐	☐	☐	☐			
Correct number of guys	☑	☐	☐	☐	☐	☐	☐			
Automatic Guy Splice Present		☑ No			☐ Yes					
STRUCTURE FOUNDATIONS										
Concrete is at least 6" above ground line	☐	☑	☐	☐	☐	☐	☐			
Concrete is not cracked or deteriorated	☐	☑	☐	☐	☐	☐	☐			
Rebar Exposed	☐	☑	☐	☐	☐	☐	☐			
Concrete is sealed and water proofed	☐	☐	☑	☐	☐	☐	☐			
Earth around structure is not eroded	☐	☑	☐	☐	☐	☐	☐			
Direct buried steel grillage	☑	☐	☐	☐	☐	☐	☐			
Piles exposed	☑	☐	☐	☐	☐	☐	☐			
Piles rotted/deteriorated	☑	☐	☐	☐	☐	☐	☐			
STRUCTURE/STEEL										
Tower is plumb and not leaning	☐	☑	☐	☐	☐	☐	☐			
Tower legs straight, not bowed or twisted	☐	☑	☐	☐	☐	☐	☐			
High voltage signs per E.D. 022168	☐	☐	☑	☐	☐	☐	☐			
Tower no. & line name per E.D. 022168	☐	☑	☐	☐	☐	☐	☐			
Anti-climbing guard per E.D. 022168	☑	☐	☐	☐	☐	☐	☐			
Climbing steps installed correctly & are in good condition	☑	☐	☐	☐	☐	☐	☐			
Broken or bent members	☐	☑	☐	☐	☐	☐	☐			
Loose or missing steel members	☐	☑	☐	☐	☐	☐	☐			
Loose bolts	☐	☑	☐	☐	☐	☐	☐			
Missing bolts	☐	☑	☐	☐	☐	☐	☐			
All bolt threads are double punched	☐	☑	☐	☐	☐	☐	☐			
Galvanized finish is OK	☐	☑	☐	☐	☐	☐	☐			
Galvanox applied to unfinished areas	☐	☑	☐	☐	☐	☐	☐			
Working eyes and shackles free of wear	☐	☑	☐	☐	☐	☐	☐			
Bird nests present		☑ No			☐ Yes					
Cell antenna attachments		☑ No			☐ Yes					
Unauthorized attachments		☑ No			☐ Yes					
Bird Mitigation installed		☑ No			☐ Yes					
Bird Mitigation recommended		☑ No			☐ Yes					

Pacific Gas and Electric Company

Steel Structure Detailed Climbing Inspection (Non-500 kV Structures)

Elec. Trans.
ETPM Form
TD-1001M-FXX
03/16

CHECK THIS ITEM	Condition Found							Damage	Action	Comments
	N/A	NP	PC	A	B	E	F			
CONDUCTOR										
Conductor is in good condition, no broken strands or birdcaging at the connectors or in the span	□	☑	□	□	□	□	□			
All dampers are present?	☑	□	□	□	□	□	□			
All dampers are in good condition, not fatigued with drooping messenger or missing weight	☑	□	□	□	□	□	□			
OVERHEAD GROUND WIRE										
Shield wire or OPGW is grounded properly	□	☑	□	□	□	□	□			
Shield wire is in good condition, no broken strands at the connectors or in the span	□	☑	□	□	□	□	□			
All dampers are in present?	☑	□	□	□	□	□	□			
All dampers are in good condition?	☑	□	□	□	□	□	□			
HARDWARE & INSULATORS										
Insulator cap(s) are free of corrosion	□	☑	□	□	□	□	□			
All insulators are intact and in good condition, not chipped or broken?	□	☑	□	□	□	□	□			
VEGETATION										
Vegetation impact foundation	□	☑	□	□	□	□	□			
Vegetation impact structure	□	☑	□	□	□	□	□			

Comments and Overall Condition of Foundations, Guys, Structure, & Conductor:

Tower is in great condition

Exhibit B

Violations Alleged by SED
and PG&E's Positions as Part of Settlement

The below tables list all violations alleged by SED in this proceeding. For purposes of this settlement agreement, PG&E does not contest the violations that are identified as "Not contested" in the PG&E Position column. The fact that PG&E is not contesting these violations is not a concession that the violations occurred, is inadmissible in evidence in court or in any other legal proceeding, and cannot and should not be used for any purpose in any litigation or any other legal proceeding.

A. Violations related to 2017 Wildfires

No.	Fire Name	Alleged Violation	PG&E Position
1.	Adobe	GO 95, Rule 31.1 – Hazardous tree not identified and abated	Disputed
2.	Adobe	GO 95, Rule 31.1 – Records of 2015 CEMA inspection not retained	Not contested
3.	Adobe	GO 95, Rule 31.1 – Work order completed late	Not contested
4.	Atlas	GO 95, Rule 31.1 – Failure to identify and abate hazardous Black Oak tree at Atlas 1 site	Disputed
5.	Atlas	GO 95, Rule 31.1 – Failure to identify and perform correctional prune of hazardous Valley Oak codominant branch at Atlas 2 site	Disputed
6.	Atlas	GO 95, Rule 35 – Vegetation clearance not maintained at Atlas 1 site	Disputed
7.	Atlas	GO 95, Rule 35 – Vegetation clearance not maintained at Atlas 2 site	Disputed
8.	Atlas	GO 95, Rule 31.1 – Work order completed late	Not contested
9.	Cascade	GO 95, Rule 38 – Conductor clearance not maintained	Disputed
10.	Cherokee	No violations identified	N/A
11.	La Porte	No violations identified	N/A
12.	Lobo	GO 95, Rule 31.1 – Hazardous tree with open cavity not identified and abated	Disputed
13.	Lobo	GO 95, Rule 31.1 – Failure to identify unsafe condition that left the subject tree exposed to high winds	Disputed
14.	Lobo	GO 95, Rule 31.1—Records of 2014 CEMA inspection not maintained	Not contested

15.	Lobo	GO 95, Rule 35 – Vegetation clearance not maintained	Disputed
16.	McCourtney	GO 95, Rule 31.1 – Failure to identify and remove a hazard tree	Disputed
17.	McCourtney	GO 95, Rule 35 – Vegetation clearance not maintained	Disputed
18.	Norrbom	GO 95, Rule 31.1 – Hazardous tree not identified and abated	Disputed
19.	Norrbom	GO 95, Rule 35 – Vegetation clearance not maintained	Disputed
20.	Nuns	GO 95, Rule 35 - Improper prioritization and delay in abating vegetation strain on secondary conductor	Disputed
21.	Oakmont/Pythian	GO 95, Rule 31.1 – Incomplete patrol prior to re-energizing circuit	Not contested
22.	Oakmont/Pythian	GO 95, Rule 31.1 – Failed to complete work order and reinforce a pole	Disputed
23.	Oakmont/Pythian	GO 95, Rule 31.1 – Completed a work order late	Not contested
24.	Partrick	GO 95, Rule 31.1 – Hazardous tree not identified and abated	Disputed
25.	Partrick	GO 95, Rule 35 – Vegetation clearance not maintained	Disputed
26.	Pocket	GO 95, Rule 31.1 – Hazardous tree not identified and abated	Disputed
27.	Pocket	GO 95, Rule 35 – Vegetation clearance not maintained	Disputed
28.	Point	GO 95, Rule 19 – Evidence disposal	Not contested
29.	Potter/ Redwood	Resolution E-4184 – Second fire located at 9100 Main St., Potter Valley not reported	Disputed
30.	Potter/Redwood	GO 95, Rule 31.1 – Repair records not maintained	Not contested
31.	Potter/Redwood	GO 95, Rule 31.1 – Records of 2016 CEMA inspection not maintained	Not contested
32.	Sulphur	GO 95, Rule 19 – Evidence disposal	Not contested
33.	Sulphur	GO 95, Rule 31.1 – Records of 2016 CEMA inspection not maintained	Not contested
34.	Tubbs	No violations identified	N/A
35.	Youngs/ Maacama	GO 95, Rule 31.1 – Hazardous tree not identified and abated	Disputed
36.	Youngs/ Maacama	GO 95, Rule 35 – Vegetation clearance not maintained	Disputed
37.	37	N/A, not a reportable incident	N/A

B. Violations related to 2018 Wildfires

No.	Fire Name	Alleged Violation	PG&E Position
1.	Camp	GO 95, Rule 44.3 - PG&E failed to replace or reinforce the C-hook on Tower :27/222 (Incident Tower) before its safety factor was reduced to less than two-thirds of the safety factor specified in Rule 44.1, Table 4, which is a violation of Rule 44.3.	Disputed
2.	Camp	GO 95, Rule 31.1 - PG&E failed to maintain the C-hook supporting the transposition jumper on the Incident Tower :27/222 for its intended use and regard being given to the conditions under which it was to be operated.	Disputed
3.	Camp	GO 95, Rule 31.2 - PG&E failed to inspect Incident Tower thoroughly and failed to detect an immediate Safety Hazard or Priority A condition on the incident C-hook.	Disputed
4.	Camp	GO 165, § IV - PG&E failed to follow its procedures by failing to document the factors and reasons that led to the delay in the repair work on the Incident Tower.	Not contested
5.	Camp	GO 165, § IV - PG&E failed to conduct detailed climbing inspections when conditions to trigger climbing inspections were evident as specified in PG&E's procedures. Wear on the original working eyes that remained on the Incident Tower is an indication of a known condition with potential to recur on the added hanger plates with working eyes, which should have triggered detailed climbing inspection to examine the added hanger plates.	Disputed
6.	Camp	GO 95, Rule 31.1 - The condition of the C-hook (material loss > 50%) supporting the transposition jumper on Tower :24/199 demonstrates that PG&E did not maintain the tower for its intended use.	Disputed
7.	Camp	GO 95, Rule 31.2 - PG&E failed to inspect	Disputed

		Tower :24/199 thoroughly and failed to detect an immediate Safety Hazard or Priority A Condition on the C-hook.	
8.	Camp	GO 165, § IV - C-hook on Tower :24/199 had material loss of over 50%. PG&E failed to detect and correct the Priority A condition as specified in PG&E's procedures.	Disputed
9.	Camp	GO 95, Rule 18 - PG&E assigned an incorrect priority for an immediate Safety Hazard (disconnected insulator hold-down anchor on Tower :27/221).	Disputed
10.	Camp	GO 165, § IV - PG&E failed to follow its procedures by using an outdated inspection form during the detailed climbing inspections that PG&E conducted from September 19 to November 5, 2018.	Not contested
11.	Camp	Res. E-4184 - PG&E failed to report the reportable incident on the Big Bend 1101 12kV Distribution Circuit in a timely manner.	Not contested
12.	Camp	CA Public Utilities Code, § 451 - PG&E failed to maintain an effective inspection and maintenance program to identify and correct hazardous conditions on its transmission lines in order to furnish and maintain service and facilities, as are necessary to promote the safety and health of its patrons and the public.	Disputed

Exhibit C

Description of PG&E Shareholder-Funded System Enhancement Initiatives

A. Funding and Duration of PG&E Shareholder-Funded System Enhancement Initiatives. $50 million in shareholder-provided settlement funds shall be spent on the System Enhancement Initiatives identified in Part B below, which will be undertaken to enhance, among other things, PG&E's Vegetation Management and Electric Operations compliance and capabilities and the safety and reliability of PG&E's electrical system.

The Settling Parties agree on the following estimates of duration and funding requirements for each of the System Enhancement Initiatives identified in Section B. The actual duration and funding level for each of the System Enhancement Initiatives may be modified upon agreement by PG&E and SED, as long as shareholder-provided settlement funds for the System Enhancement Initiatives total $50 million.

SED understands that the estimates provided by PG&E for each of the initiatives are high-level estimates only, subject to revision and do not constitute a promise by PG&E to complete any System Enhancement Initiative within the estimate provided. If PG&E becomes aware that it will not fully expend the shareholder settlement funds estimated for a System Enhancement Initiative, it shall inform SED as part of its semi-annual report as described in Section III.B of the Settlement Agreement, and PG&E and SED shall make a good faith effort to reach agreement on the method of expending any remaining funds.

Duration and Funding Estimates for PG&E Shareholder-Funded System Enhancement Initiatives

Shareholder-Funded System Enhancement Initiatives	Estimated Duration (Years)[1]	Estimated Shareholder Funding (Millions)
Tree Crew Training and Certificate Program	3	$6.25
Pre-Inspector Training and Certificate Program	3	$3.5
Vegetation Management Oversight Pilot	1	$10.0
Development of Recommendations for General Order 165 Revisions	1	—[2]
Accelerating Commercialization of Non-Diesel Temporary Generation	3	$10.0

[1] The estimated duration runs from the Effective Date.

[2] For any System Enhancement Initiative listed with "—" in the Estimated Shareholder Funding column, the Settling Parties expect any costs to be de minimis or full time employee time only. The Settling Parties have not allocated any shareholder funding to these System Enhancement Initiatives because they expect that the costs of tracking the expenditure of such funds would outweigh the benefits.

Shareholder-Funded System Enhancement Initiatives	Estimated Duration (Years)[3]	Estimated Shareholder Funding (Millions)
LiDAR Asset Analysis	1[4]	$0.5
Independent Root Cause Analysis	1	$3.0
Fuel Reduction Funding	1[5]	$2.0
Resilience Centers Grant Program	5[6]	$2.0
Funding to California Foundation for Independent Living Centers	1[7]	$5.0
Officer Safety Town Halls	5	—
Semi-Annual Wildfire Mitigation Meetings	3	—
ISO 55000 Certification	Make good faith effort to initiate final ISO 55000 certification assessment by end of 2020	$1.0
Independent Wildfire Safety Audits	3	$6.0
Verification of Safety-Related Filings	3	—
Quarterly Reporting on Electric Maintenance Work	3	—
Local Government Vegetation Management Data Sharing	3	—
Local Government System Hardening Data Sharing	3	—
Documentation of "Near Hit" Potential Fire Incidents	3[8]	—
Study of Distribution and Transmission System	Not specified	$0.75
TOTAL		$50.0

[3] The estimated duration runs from the Effective Date.
[4] Within one year of the Effective Date, PG&E will implement the pilot program.
[5] Funds shall be disbursed or committed for future disbursement by one year from the Effective Date.
[6] Funds shall be disbursed within five years of the Effective Date.
[7] Funds shall be disbursed, or committed for future disbursement, within one year of the Effective Date.
[8] PG&E will review with OSA and SED annually to assess the utility of the data being provided and confirm that the parties wish to continue receiving the data. PG&E will continue this sharing for up to three years following the Effective Date as long as annual reviews determine an ongoing interest or unless the Wildfire Mitigation Plan Proceeding (Rulemaking 18-10-007) determines a scope for utility reporting of "near hit" data that in substance supersedes this System Enhancement Initiative.

B. System Enhancement Initiatives. PG&E shall undertake the following System Enhancement Initiatives:

Vegetation Management-Focused Initiatives

1. Tree Crew Training and Certificate Program. PG&E, in partnership with International Brotherhood of Electrical Workers ("IBEW") and educational institutions in Northern California, will establish a multi-week training program designed to provide the skills and knowledge necessary to perform tree crew work safely and competently. The Tree Crew Training Program will provide both classroom and in-the-field instruction, which will focus on safety, climbing, and line clearance qualifications. Those who successfully complete the program will receive a certificate. Certificate holders will meet the minimum requirements to be hired as entry-level tree workers by PG&E and its contractors; and receive support in obtaining certification as International Society of Arboriculture ("ISA") Certified Tree Worker Climber Specialists. PG&E estimates that completion of the course work required to obtain ISA Certified Tree Worker Climber Specialist certification would take up to three years. PG&E will adopt a continuous improvement element to the Training Program and, therefore, may also adjust training elements based on user feedback and performance after initial implementation. The Settling Parties estimate that the Tree Crew Training Program will be shareholder-funded for a three-year period from the Effective Date and not exceed $6.25 million of shareholder funding.

2. Pre-Inspector Training and Certificate Program. PG&E, in partnership with educational institutions in Northern California, will establish a multi-week training program designed to provide the skills and knowledge necessary to perform pre-inspector work safely and competently. Pre-Inspectors are the vegetation management personnel that are responsible for identifying hazardous and diseased trees for trimming. The Pre-Inspector Training Program will provide both classroom and in-the-field instruction. Those who successfully complete the program will receive a certificate and support in obtaining ISA certification. PG&E will adopt a continuous improvement element to the Training Program and therefore also may adjust training elements based on user feedback and performance after initial implementation. The Settling Parties estimate that the Pre-Inspector Training Program shall be shareholder-funded for a three-year period from the Effective Date and not exceed $3.5 million of shareholder funding.

3. Vegetation Management Oversight Pilot. PG&E will implement a Vegetation Management Oversight ("VMO") pilot program designed to provide enhanced oversight of pre-inspection and tree work performed on behalf of PG&E. The VMO pilot program will consist of two main initiatives. First, PG&E will add additional in-field workers directly responsible for real-time observation of and direct feedback to pre-inspectors and tree workers regarding safety, productivity, and quality. These field observers will also assess workers' adherence to PG&E procedures. Consistent with PG&E procedures, field observers will be subject to PG&E's universal "Stop the Job" policy. Under the "Stop the Job" policy, field observers who identify a safety risk or compliance issue will intervene in order to address and correct the identified safety risk or compliance issue. Second, PG&E will bolster its Quality Control team, which helps to ensure that pre-inspectors and tree crews meet PG&E's vegetation management goals. PG&E expects these efforts to include trend analysis, additional internal reporting, and a "work verification team" that provides verification on all Enhanced Vegetation Management work. The

Settling Parties estimate that the VMO pilot program shall be shareholder-funded for a one-year period from the Effective Date and shall not exceed $10 million of shareholder funding.

Electric Operations-Focused Initiatives

4. Development of Recommendations for General Order 165 Revisions. During a one-year period following the Effective Date, PG&E will collaborate with SED and other interested Settling Parties to develop recommendations for revisions to GO 165, which could include revisions to its provisions regarding both transmission facilities and distribution facilities. Recommendations may include the incorporation of components of PG&E's enhanced electric transmission inspection program, scheduled to launch in 2020.

5. Accelerating Commercialization of Non-Diesel Temporary Generation. PG&E will issue a Request for Information ("RFI") intended to identify non-diesel generators capable of meeting a range of use cases including (but not limited to) planned outages, unplanned outages, and temporary micro-grids for Public Safety Power Shutoff ("PSPS") events, including Resilience Zones.[9] If the RFI identifies a solution that is ready for deployment, PG&E will commit commercialization funds of up to $10 million to acquire the product(s) for use. If a ready-for-deployment solution is not identified, PG&E will augment the RFI with funding up to $10 million in order to incentivize market competition for the development of workable, cost-effective solutions. The Settling Parties estimate that this initiative will be shareholder-funded for a three-year period from the Effective Date and not exceed $10 million of shareholder funding.

System-Wide Analyses

6. LiDAR Asset Analysis. Within one year of the Effective Date, PG&E will implement a pilot program for the purpose of: (1) designing and testing a Light Detection and Ranging ("LiDAR") data-based methodology capable of estimating the probability of contact between overhead distribution conductors that are exposed to high wind in Tier 3 HFTD[10] areas; and (2) creating modeling and analytical tools designed to supplement the evaluation of overhead distribution conductors during inspections. The pilot program will include the following phases: (a) categorization of the data collected for the purpose of converting the data into inputs for the computer system; (b) building the model using the collected, categorized data; (c) training and testing the model using the collected, categorized data; and (d) utilization of the model in order to answer questions about the data. The data collected for use in the pilot program will be either data that is in PG&E's possession or data that PG&E is in the process of collecting for other purposes. PG&E will adopt a continuous improvement element to the pilot program and will

[9] As used in the Settlement Agreement, "Resilience Zones" refers to designated areas for which PG&E provides electricity to central community resources during a PSPS.

[10] As used in Exhibit C, Tier 2 and Tier 3 High Fire-Threat District ("HFTD") areas mean those areas that the Commission has designated as Tier 2 – Elevated or Tier 3 – Extreme Fire-Threat Areas. The areas designated as such may be found at cpuc.ca.gov/FireThreatMaps.

consider whether to include load data, temperature data, or other data inputs in the pilot program. PG&E will commit $500,000 of shareholder funds to this initiative.

7. Independent Root Cause Analysis. PG&E shareholders shall pay for an independent root cause analysis company to conduct a Root Cause Analysis (RCA) for each of the wildfires included in this OII that were reportable incidents to the CPUC and for which CAL FIRE determined that the ignition involved PG&E facilities.[11] The RCA for the applicable 2017 wildfires will be started within three months of bankruptcy court approval of this OII Settlement and completed no later than one year after the date on which the RCA commences. Due to the inaccessibility of evidence related to the Camp Fire and to ensure that a thorough RCA is conducted, the RCA for the 2018 Camp Fire will be started upon conclusion of the Butte County District Attorney's investigation related to the Camp Fire and after CAL FIRE provides access to the evidence. The Settling Parties estimate that the cost of this study will not exceed $3 million of shareholder funding.

PG&E will select three consultants qualified to perform an RCA, from which SED and OSA will select one consultant to perform the RCA. PG&E shall enter into a contract with the RCA consultant selected by SED and OSA. The RCA consultant shall confer with and work under the direction of SED and OSA. SED and OSA shall review and approve the terms and scope of work prior to PG&E entering into the contract with the RCA consultant.

The purpose of the RCA will be to analyze the factors that contributed to the ignition of the fires and make recommendations as appropriate so that the learnings can be implemented on a go-forward basis to mitigate the risk of similarly caused fires in the future. Analyzing all of these fires will maximize lessons learned not only for PG&E, but also for the Commission. The information revealed may show that areas of GO 95 should be modified. The RCA shall consider all potential root causes, and shall not be restricted to violations of GO 95. The RCA may identify systemic, programmatic, management, and structural matters that may need to be addressed to reduce such incidents in the future.

The RCA final report(s) shall be provided to the Director of SED and served on the service list for I.19-06-015. A separate RCA final report will be issued for the Camp Fire if needed to avoid delay in the RCA final report for the 2017 wildfires. PG&E will submit a response to the Director of SED and the service list for I.19-06-015 within 30 days after each RCA final report is submitted to address whether and how it will work to incorporate lessons learned based on the RCA report and its recommendations into its operations, to the extent not already reflected therein based on other corrective actions and system improvements. If PG&E declines to incorporate any lessons learned into its operations, PG&E will explain its reasoning in its response. PG&E will make a good faith effort to initiate incorporation of the lessons learned within 12 months after the RCA final report is delivered to PG&E. The non-PG&E parties to this proceeding shall not use the results of the RCA to assert that the Commission should impose any additional financial penalties upon PG&E nor to argue for any additional disallowance.

[11] For the avoidance of doubt, the fires to be included are the Adobe, Atlas, Camp, Cascade, Cherokee, La Porte, Lobo, McCourtney, Norrbom, Nuns, Oakmont/Pythian, Partrick, Pocket, Point, Potter/Redwood, Sulphur, and Youngs Fires.

Community Engagement-Focused Initiatives

8. Fuel Reduction Funding. Within one year of the Effective Date, PG&E shall disburse or commit for future disbursement $2 million total in additional funding to the California Fire Safe Council. This additional disbursement will be funded by PG&E shareholders. PG&E intends that the California Fire Safe Council will, in turn, distribute these funds to local Fire Safe Councils within PG&E's service territory and/or other nonprofit Council partner organizations. Local Fire Safe Councils are community-led organizations that focus on wildfire prevention and mitigation efforts. These organizations implement projects (e.g., hazardous-fuel-reduction projects) and educational programming regarding wildfire safety, preparedness, and planning. PG&E will collaborate with SED and other interested Settling Parties regarding the parameters of this funding to determine the most effective and mutually agreeable earmarks for these funds.

9. Resilience Centers Grant Program. Within five years of the Effective Date, PG&E will disburse a total of $2 million in funding to support the development of local "resilience centers" aimed at PSPS events, wildfire risks, and other climate-driven extreme weather events. This disbursement will be funded by PG&E shareholders. Resilience centers are designated areas designed to provide residents and customers with a safe, energized location to receive basic power needs (e.g., to charge mobile phones and laptops; to access Wi-Fi connection, where possible), and to provide residents and customers up-to-date information about PSPS events. This funding will be distributed through a competitive solicitation and bid process to eligible nonprofit or governmental organizations (including tribal governments) within PG&E's service territory.

10. Funding to California Foundation for Independent Living Centers. Within one year of the Effective Date, PG&E shall disburse or commit for future disbursement up to $5 million total in shareholder funds to the California Foundation for Independent Living Centers ("CFILC"), for a pilot program currently in development. This funding will be used to help alleviate some disruptive impacts for, and support the safety and welfare of, vulnerable customers before, during, and after disasters and PSPS events. The funding is expected to fund activities such as disaster relief events, activities, and trainings for community members; coordination of housing for vulnerable individuals during disasters and PSPS events; and provision of access to backup batteries during disasters and PSPS events.

11. Officer Safety Town Halls. During the two years following the Effective Date, PG&E will hold a total of 24 "Town Hall" meetings (12 annually) at various locations across its service territory. PG&E intends that the "Town Hall" meetings will take place one to two times per month during most of the year, and will not be held during the highest fire threat months (September, October, and November). PG&E expects that Town Halls will be held at locations across PG&E's service territory, including urban population centers and more rural locales, and that the event locations will prioritize areas that are at a higher risk of wildfire or have seen higher impacts from PG&E activities such as vegetation work and PSPS.

During the Town Halls, PG&E will share safety and utility service-related information with attendees and gather feedback from members of the community. At least one PG&E officer

(Vice President level or higher) will attend each event. PG&E will prepare a summary report following each event, which will be submitted to the Commission and posted to the PG&E website within 30 days of the Town Hall which the report summarizes.

Ahead of the end of the two-year period following the Effective Date, PG&E and SED will discuss and agree upon any desired changes to the schedule, format, and locations of Town Halls or similar community events to be held monthly during the following three years, with the exception of September through November, for a total of nine events annually. These potential changes for Town Halls or similar community events are intended to allow the events to be tailored to emerging community concerns, priorities, and program updates that may arise in intervening years. PG&E will continue to meet in communities throughout the PG&E service territory with a focus on those communities at the highest risk of wildfire.

During the five years following the Effective Date, with the exception of September through November, PG&E will also hold monthly webinars. Like the Town Halls, during each webinar PG&E will share safety and utility service-related information. At least one PG&E officer (Vice President level or higher) will attend each webinar. PG&E will prepare a summary report following each webinar, which will be submitted to the Commission and posted to the PG&E website within 30 days of the webinar which the report summarizes.

12. Semi-Annual Wildfire Mitigation Meetings. At least once every six months for three years after the Effective Date, leadership from the PG&E electric operations wildfire team will hold a meeting with local government planning, public works, emergency services, and fire leadership to exchange feedback and information regarding ongoing wildfire safety activities. In any given semi-annual period, PG&E will hold multiple region-specific meetings to cover its entire service territory (with PG&E to determine what constitutes each "region" for these purposes). PG&E may, at its discretion, hold the meetings in person or via teleconference. Following the conclusion of each set of semi-annual meetings, PG&E will prepare a single report for the meetings held during the preceding semi-annual period that identifies: (1) issues raised by the local governments; (2) action items to address identified issues; and (3) a progress report for previously-identified action items. PG&E will submit this report to SED or its designee, and will serve the report on the service list for the Wildfire Mitigation Plan Rulemaking[12] or its successor docket. Local governments will have the opportunity to submit a written response to PG&E's report within 20 days.

Transparency and Accountability-Focused Initiatives

13. ISO 55000 Certification. PG&E shall make a good faith effort to initiate the final International Organization for Standardization ("ISO") 55000 certification assessment required to obtain ISO 55000 certification from an accredited organization for its Electric Operations by the end of 2020.[13] Within three months of the Effective Date of this settlement agreement, PG&E shall provide OSA and SED with a report on the status of its ISO 55000 certification

[12] R.18-10-007.

[13] ISO 55000 is an international standard for asset management. ISO 55000 certification means that an accredited organization has determined that the company meets the standards set forth in ISO 55000.

implementation, including any remaining non-conformances to be addressed prior to applying for certification. PG&E shall inform OSA and SED in advance of scheduled gap-assessment closeout meetings. OSA and SED shall be allowed to participate in gap-assessment closeout meetings and PG&E will share assessment reports with OSA and SED, including the final assessment report. PG&E shareholders shall pay the costs to address any gaps up to a total of $1 million over the certification period. PG&E shall notify OSA and SED when it applies for certification and when it receives certification. Once certification is received, PG&E shall make a good faith effort to maintain certification status during the three-year certification period. After certification is received, PG&E will invite its third-party ISO 55000 auditor to conduct a surveillance audit of its ISO 55000 program every six months. After each six-month audit, PG&E will report to OSA and SED on the status of its ISO 55000 certification. These reports will include the third-party ISO 55000 auditor's audit report.

Before the initial three-year certification period ends, PG&E shall re-apply for certification and shall again make a good faith effort to obtain and maintain certification for an additional three-year certification period ("Second Certification Period"). If PG&E decides not to re-apply for certification after the Second Certification Period, PG&E shall notify OSA and SED in writing at least six months prior to the end of the Second Certification Period. In this notification, PG&E shall: (1) explain its reasons for declining to seek re-certification, and (2) demonstrate that the safety management system in place at the end of the Second Certification Period will be comparable to or more robust than that required for ISO 55000 certification.

14. Independent Wildfire Safety Audits. PG&E shall retain Safety Evaluator(s), defined as independent consultant(s) who will perform the following Independent Safety Evaluations: (1) audits and reviews of PG&E policies, procedures, and practices surrounding the areas identified in (a) through (d) below ("policy and procedure audits"); (2) audits and reviews of PG&E compliance with the shareholder-funded System Enhancement Initiatives agreed upon as part of this Settlement Agreement ("compliance audits"); and (3) audits and reviews of PG&E financial data related to PG&E's Wildfire Safety Plans ("financial audits"). These compliance audits and financial audits shall be conducted annually for a three-year period after the Effective Date at an estimated cost of $6 million of shareholder funding.

For each audit, PG&E shall provide SED with a list of reasonably qualified Safety Evaluators, with experience in auditing electric utility records and the subject matter of the audit. For each audit, SED shall select qualified Safety Evaluator(s) from the list provided by PG&E. PG&E shall enter into a contract with the Safety Evaluator(s) selected by SED. The Safety Evaluator(s) will consult with and work under the direction of SED. SED shall review and approve the terms and scope of work prior to PG&E entering into the contract(s) with the Safety Evaluator(s). PG&E acknowledges that a single Safety Evaluator may not be able to conduct all the evaluations identified in this System Enhancement Initiative. Safety Evaluators will be separate and distinct from Independent Evaluators contemplated by Senate Bills 247 and 901 and Assembly Bill 1054. To the extent that the Safety Evaluators' evaluations or findings overlap with the Wildfire Mitigation Plan Independent Evaluator, the Safety Evaluators may coordinate with the Wildfire Mitigation Plan Independent Evaluators.

The samples and methodology will be developed in accordance with the Safety Evaluator's professional judgment and standard practices in similar contexts and in consultation

with SED. Prior to the outset of the audits, the Safety Evaluator shall present SED with the methodology and a description of the anticipated final product of the audit based upon the goals and objectives identified in this Settlement Agreement. Within the scope identified here, SED may consult with the Safety Evaluator about the methodology and plans to achieve the goals identified herein. The selected Safety Evaluator will audit PG&E's policies, procedures, and practices regarding each of the following:

a) *Vegetation Management: PG&E's Tree Tracker Application ("Tree Tracker App")*.[14] The Safety Evaluator will: (i) audit samples of records from PG&E's Tree Tracker App, a soon-to-be deployed mobile application intended to improve PG&E's tracking of its vegetation management work, or its successor program; (ii) utilize the Tree Tracker App (or its successor program) to conduct field reviews of samples of pre-inspector and tree work in order to assess adherence to applicable PG&E procedures; (iii) survey vegetation management contractors and employees who utilize the Tree Tracker App (or its successor program) in the field to validate adherence to PG&E's Tree Tracker App (or its successor program) procedures, consistency of use, and overall usability of the tool; and (iv) recommend improvements to PG&E's Tree Tracker App (or its successor program) based on the Safety Evaluator's review. The Safety Evaluator's review of the Tree Tracker App (or its successor program) will commence six months after the Tree Tracker App (or its successor program) is implemented at PG&E.

b) *Overhead Distribution and Transmission Preventive Maintenance Program*. The Safety Evaluator will: (i) field audit samples of work orders generated in connection with patrols and inspections of PG&E overhead distribution and transmission facilities; (ii) review samples of work orders for adherence to PG&E policies and procedures; and (iii) recommend improvements to PG&E's distribution and transmission inspection and maintenance procedures based on the Safety Evaluator's review of PG&E's overhead distribution and transmission preventive maintenance program. The Safety Evaluator's review of PG&E's overhead distribution and transmission preventive maintenance program and procedures shall commence within one year of the Effective Date.

c) *Local Conditions Study of PG&E Territory*. The Safety Evaluator will: (i) assess PG&E's current practices and procedures for identifying and addressing local conditions that may warrant modifications to the design, construction, or maintenance of PG&E's distribution or transmission assets, consistent with GO 95, Rule 31.1; and (ii) recommend improvements to PG&E's practices and procedures related to identifying local conditions in accordance with GO 95, Rule 31.1.

d) *Evidence Collection and Retention*. The Safety Evaluator will: (i) conduct field reviews of reportable incidents and samples of outage events that may be attributable to PG&E facilities for the purpose of identifying errors or areas of improvement in PG&E's

[14] The Tree Tracker App is a software and mobile application system that allows pre-inspectors to enter prescriptions from a mobile device and to mark segments of conductor as "inspected" on a digital map, rather than highlighting a paper map.

evidence collection and retention practices and procedures; and (ii) recommend improvements to PG&E's evidence collection and retention practices and procedures.

The Safety Evaluator audit reports shall be provided to the Director of SED and served on the service list for I.19-06-015. PG&E will submit a response to the Director of SED and the service list for I.19-06-015 within 30 days after each audit report is submitted to address whether and how it will implement the recommendations provided by the Safety Evaluator(s).

15. Verification of Safety-Related Filings. For three years following the Effective Date, PG&E will provide to the Commission verification of safety-related filings by either a Senior Vice President, Vice President, Senior Director, Director, or Manager, as provided below. For each safety-related filing outlined below, the designated officer, director, or manager will be tasked with verifying that the filing is accurate and complete. Verification requirements will be designed to enhance accountability among senior-level personnel at PG&E as well as the public's confidence in PG&E's commitment to safety and reliability. After this three-year period and if desired, PG&E will work with SED to evaluate effectiveness, continued need, and potential expansion of the verifications described in this System Enhancement Initiative.

Electric Safety-Related Communication to the Commission

General Order Reporting

Item	Name	Level of Verification
1	GO 166 Report	Vice President
2	GO 174 Report	Vice President
3	GO 165 Report	Vice President

Compliance and Incident Reporting

Item	Name	Level of Verification
1	Self-Reports	Vice President
2	20-Day Reports	Manager
3	PSPS 10-Day Reports	Vice President
4	Citation Responses	Senior Vice President

NOVs

Item	Name	Level of Verification
1	Notice(s) of Violation Responses	Senior Director

Audits

Item	Name	Level of Verification
1	Audit Report Responses	Senior Director

Gas Safety-Related Communication to the Commission

General Reporting

Item	Name	Level of Verification
1	GO 112F Annual Report	Vice President
2	Gas Pipeline Patrol Report	Director
3	Class Location Report	Director
4	Meter Protection Program	Director
5	Gas Pipeline Replacement Program	Director
6	Gas Safety Report	Vice President

Incident Reporting and Notifications

Item	Name	Level of Verification
1	Self-Reports	Vice President

NOPVs

Item	Name	Level of Verification
1	Notice(s) of Probable Violation Responses	Director
2	Citation Responses	Senior Vice President

Audits

Item	Name	Level of Verification
1	Audit Report Responses	Director

16. Quarterly Reporting on Electric Maintenance Work. For three years following the Effective Date, PG&E will prepare quarterly reports, to be submitted to SED, summarizing the status of maintenance work generated by the Wildfire Safety Inspection Program ("WSIP"). Through WSIP, PG&E performs enhanced inspections on an accelerated schedule for electric facilities in Tier 2 and Tier 3 HFTD areas. These enhanced inspections focus on conditions that could lead to fire ignitions. Each of these reports will include at a minimum: (1) the number, status, and locations of any open maintenance tags and (2) a table summarizing the status of all tags identified in the report.

17. Local Government Vegetation Management Data Sharing. For counties within PG&E's service territory that request in writing to be included in these report distributions, PG&E will provide electronic month-ahead reports of planned vegetation management activity in each county. Nothing in this provision shall prohibit PG&E from undertaking vegetation management activities in each jurisdiction that did not originally appear on a month-ahead report or from accelerating the original timeline for work or from not completing planned activities included in a month-ahead report. Such changes are frequently necessary due to the diverse exigencies of PG&E's wildfire reduction efforts.

Beginning with the first full month after the Effective Date, and for three years following the Effective Date, PG&E will submit the relevant month-ahead reports to designated county recipients on or before the last day of the preceding month (*e.g.*, the report for April 2021 will be provided on or before March 31, 2021). After that three-year period and if desired, PG&E will work with the Commission and the participating local governments to evaluate effectiveness, continued need, and potential expansion to other counties or conclusion of the data sharing.

These reports will include the following data from PG&E's Enhanced Vegetation Management, Catastrophic Event Memorandum Account (CEMA), and routine vegetation management programs for PG&E's distribution and transmission systems:

- Addresses of planned work, scheduled inspection date, and name of third-party contractor performing this work.

- Summaries of any applicable plans or permits required by law for the relevant work scheduled to take place.

- The number of tree-trims or tree-removals scheduled to take place.

- Whether PG&E has contacted the relevant property owner(s) at the location(s) of any planned work.

18. Local Government System Hardening Data Sharing. For counties within PG&E's service territory that request in writing to be included in these report distributions, PG&E will provide electronic month-ahead reports of planned system hardening work in each county. These reports will be based upon a mutually agreed upon data set or template. Nothing in this provision shall prohibit PG&E from undertaking system hardening activities in each jurisdiction that did not originally appear on a month-ahead report or from accelerating the original timeline for work. Such changes are frequently necessary due to the diverse exigencies of PG&E's wildfire reduction efforts.

Beginning with the first full month after the Effective Date, and for three years following the Effective Date, PG&E will submit the relevant month-ahead reports to designated county recipients on or before the last day of the preceding month (*e.g.*, the report for April 2021 will be provided on or before March 31, 2021). After that three-year period and if desired, PG&E will work with the Commission and the participating local governments to evaluate effectiveness, continued need, and potential expansion to other counties or conclusion of the data sharing.

These reports will include, at the local government's request, engineering drawings and plans, work schedules, and re-grade/relocation permits per franchise agreements. The sharing of system hardening data may require non-disclosure agreements with each of the local governments receiving the reports.

19. Documentation of "Near Hit"[15] Potential Fire Incidents. PG&E will document "near hit" potential fire incidents, such as arcing or sparking, that could have resulted in an ignition but did not, as well as fire ignitions that travelled one meter or less from the ignition point. This documentation will include the following categories of data:

> (1) Data from PG&E's Field Automation System ("FAS"), to the extent such data is collected in FAS as of the Effective Date, for events categorized with specific existing FAS codes to be agreed upon among PG&E, OSA, and SED. This data will include information related to "near hit" incidents from customer and service calls (inclusive of incidents detected by Smart meters), as well as "near hit" incidents data concerning secondary facilities and service drops;
>
> (2) All unplanned momentary and sustained outage data associated with PG&E's primary distribution facilities (inclusive of outages detected by Smart meters);
>
> (3) All unplanned outage data and path interruptions associated with PG&E's facilities operating at a transmission voltage level, whether or not customers were affected; and
>
> (4) Any fire ignitions that travelled one meter or less from an ignition point.[16]

All data will be provided on a quarterly basis to SED and other Settling Parties that request in writing to receive this data. Data for each of the four above items shall be provided in a format that is searchable and sortable, for example, by location and cause of the incident described in each entry (e.g., failed transformer, animal, slapping conductors, failed conductor, etc.). Within 30 days of the Effective Date, SED and PG&E will meet and confer regarding the specific data within these four categories to be provided, including the specific existing FAS codes as outlined above, and the sorting of the data. PG&E will begin this "near hit" reporting system within three months of the Effective Date. After this implementation date, PG&E will review with OSA and SED annually to assess the utility of the data being provided and confirm that the parties wish to continue receiving the data. PG&E will continue this sharing for up to three years following the Effective Date as long as annual reviews determine an ongoing interest or unless the Wildfire Mitigation Plan Proceeding (Rulemaking 18-10-007) determines a scope for utility reporting of "near hit" data that in substance supersedes this System Enhancement Initiative.

20. Independent Study of Distribution and Transmission System. PG&E shareholders shall pay for an independent engineering firm to study the grounding methods and circuit and transformer configuration in PG&E's distribution system and transmission system. PG&E will recommend three independent engineering firms qualified to perform this study; SED and OSA may select one of these firms or, in consultation with PG&E, a different firm, to perform this

[15] The term "near miss" is used at times to refer to a similar or identical concept as "near hit" as used in this System Enhancement Initiative.

[16] This reporting requirement goes beyond the reporting currently required for "reportable events" under Decision 14-02-015. Note also that events reported under this provision may be duplicative of other events reported as part of this System Enhancement Initiative.

study. PG&E shall enter into a contract with the firm selected by SED and OSA. This study will consider PG&E's unique territory as well as topics discussed in SED's 2013 Liberty Consulting Report on PG&E and analyze opportunities to reduce wildfire risk and the occurrence of energized wires down including, but not limited to, system configuration. The study should also consider factors such as the costs and benefits of potential mitigations. The final scope of the study will be developed by SED and OSA in consultation with PG&E. The contracted firm shall work at the direction of SED and OSA. PG&E, along with SED and OSA, will have the opportunity to review and comment on drafts of the study prior to it being finalized. PG&E will consider adoption of any recommendations from this report. The final study report shall be provided to the Director of SED and served on the service list for I.19-06-015. PG&E will submit a response to the Director of SED and the service list for I.19-06-015 within 30 days after the final study report is submitted to address whether and how it will implement the recommendations provided by the independent engineering firm. If PG&E declines to incorporate any recommendation, PG&E will explain its reasoning in writing to the Director of SED and the service list for I.19-06-015. The Settling Parties estimate that the cost of this study will not exceed $0.75 million of shareholder funding.