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COMPANY

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

UNITED STATES OF AMERICA,

Plaintiff,

v.

PACIFIC GAS AND ELECTRIC COMPANY,

Defendant.

Case No. 14-CR-00175-WHA

**RESPONSE TO QUESTIONS FOR
FOLLOW-UP**

Judge: Hon. William Alsup

1 Defendant Pacific Gas and Electric Company (“PG&E”) respectfully submits this
2 response to Questions 7 through 25 contained in the Court’s February 18 and 22, 2021 orders.
3 (Dkts. 1307, 1318.)

4 **Question 7:**

5 Regarding the four gray pines at the area of interest (see page 24 of the PG&E
6 response dated December 16, 2020, to federal monitor), produce the following for the
7 period September 2017 to the end of 2020:

- 8 a) All work orders and/or pre-inspection orders for the four gray pine trees
9 marked for removal and one tree marked for trimming;
- 10 b) Pictures/videos from the same four gray pines and the immediate surrounding
11 area;
- 12 c) Name of the person who marked trees and his/her employer;
- 13 d) LiDAR and photosynthesis data for all trees in area of interest, including
14 subject tree; LiDAR data to include software model and system used; and
- 15 e) Any numbers assigned to the four gray pine trees in area of interest.

16 **PG&E Response:**

17 PG&E understands this Question as requesting information for all vegetation
18 management work done on the above-mentioned trees between September 2017 and the start of the
19 Zogg Fire on September 27, 2020.

20 On page 24 of PG&E’s December 16, 2020 Response, PG&E referenced four trees
21 marked for removal and one tree marked for trimming in the area of interest by Declarant A from
22 CN Utility Consulting (“CNUC”) during his routine vegetation management patrol in October 2018.
23 (See Dkt. 1271 at 24 (“Specifically in the area of interest, during the routine patrol that occurred
24 after the Carr Fire in October 2018, the arborist marked four trees for removal and one tree for
25 trimming. PG&E records indicate that this work was subsequently performed.”); *see also*
26 Dkt. 1300-1.) Based on the records, two of those trees were Gray Pines, another was a Knobcone
27 Pine and two others were Live Oaks. PG&E is producing as Exhibit A the inspection records for
28 those five trees as generated from PG&E’s Vegetation Management Database (“VMD”), as well as
the work requests subsequently issued to tree crew contractors. As explained in its response to
Question 25 below, PG&E does not believe that the Gray Pine identified for trimming in October
2018, but not removal, is the Gray Pine of interest.

1 The numerical identifiers assigned to these trees through the VMD as of
 2 Declarant A's 2018 routine vegetation management inspection are below¹:

Tree	Tree Record ID	External Tree ID
Gray Pine (trimmed)	-1082388642	W122562360N40538678
Gray Pine (removed)	-1082323527	W122562035N40538680
Knobcone Pine	-1082323526	W122563538N40539350
Live Oak	-1082323528	W122562037N40538677
Live Oak	-1082388158	W122563670N40539322

7 PG&E has previously provided to the Court aerial photographs of the area of interest from
 8 July 2019, taken after the removal and trimming work was completed on the trees identified for
 9 work during the October 2018 routine patrol. (*See* Dkt. 1250 at 7.) PG&E has not identified other
 10 photographs or videos of the trees that were removed or trimmed in the area of interest as a result of
 11 the 2018 routine patrol.

12 In 2019, as part of a program to conduct aerial-based light detection and ranging
 13 (“LiDAR”) surveys of vegetation near distribution circuits in high-fire threat areas, PG&E
 14 conducted LiDAR surveys of the area of interest through a vendor. PG&E understands that, to
 15 collect the LiDAR data, the vendor used helicopter-mounted sensor systems called Heliscope 2.5
 16 and, to collect the data, the vendor used proprietary software to attempt to detect what data
 17 represents trees and parts thereof, as opposed to PG&E facilities or other objects, and to estimate tree
 18 location, height, canopy size and other information. In certain situations, such as when vegetation is
 19 dense, the software does not necessarily make accurate estimates, including identifying all
 20 vegetation, distinguishing between different tree canopies or accurately estimating where a tree trunk
 21 is relative to its top.

22
 23
 24 ¹ PG&E notes that Tree Record ID -1082388158, identified as a Live Oak, is identified near
 25 where a Valley Oak was identified during the post-Carr Fire restoration work. (*See* Dkt. 1323-8,
 26 Exhibit H-7, “Tree Data” tab, row 3101.) The 2018 routine patrol inspection record states: “TREE
 27 WAS WORKED FOR FIRE BUT STILL POSSES [sic] A THREAT T [sic] LINES”. Although the
 28 records identify different species of Oak, it appears possible that these records may refer to the same
 tree. PG&E's records indicate that the Live Oak identified on the routine patrol was subsequently
 worked as part of the tree work for the routine patrol. (*See* Exhibits A-1, A-5.)

1 PG&E uses the vendor's Sharper CORE software to review the LiDAR data, as well
 2 as to visualize the data points that the software identifies as trees. PG&E is providing to the Court as
 3 Exhibit B a ".kmz" file with data associated with the area of interest and certain other portions of the
 4 Girvan 1101 12 kV Distribution Circuit ("Girvan Circuit"), extracted from the PG&E ArcGIS
 5 database, where LiDAR data is compiled from the vendor's GeoDatabase.² Files in the ".kmz"
 6 format should be readily viewable in common mapping software such as Google Earth, but PG&E
 7 notes that, by exporting the data into a non-proprietary format, certain aspects of data analyzed by
 8 Sharper CORE are not available. The extract portrays geographic representations of data that
 9 Sharper CORE views as trees, as well as additional data associated with each tree point. For
 10 example, each tree point includes estimates of latitude and longitude, tree height, the horizontal
 11 offset of a tree point from the nearest line span, the shortest distance from a point on the tree canopy
 12 to the nearest wire and whether the tree is tall enough to strike the line if it were to fall.³

13 **Question 8:**

14 Produce an organizational chart for persons having authority over vegetation
 15 management of the Girvan Circuit as of the date of the period 2017 to and including
 2020:

- 16 a) Organization chart identifying the names, titles, duties and periods when the
 17 positions were held for those responsible for vegetation management
 18 decisions related to the Girvan Circuit for the period 2017 to 2020; and
 19 b) Name, duties, and periods when the position was held for the position of
 Director of Vegetation Management Execution during the post-Carr Fire
 restoration effort in 2018.

20 **PG&E Response:**

21 PG&E is producing at Exhibit C organizational charts that capture the Company's
 22 organization for the regional vegetation management office that covers the Girvan Circuit and that
 23

24 ² Because certain .kmz and Excel files referenced in this filing are not formatted for printing on
 25 regular-sized paper, PG&E filed slipsheets in lieu of such files and has provided such files on a
 thumb drive that PG&E has delivered to the Court.

26 ³ It is not clear to PG&E what the Court is referring to in terms of "photosynthesis data" to the
 27 extent that it is different from LiDAR data.

1 office's reporting structure within PG&E's vegetation management division as of December 31 of
2 the years 2017, 2018, 2019 and 2020. These organizational charts are produced by PG&E's Human
3 Resources Department in the ordinary course of business and are made available company-wide
4 through PG&E's SharePoint. PG&E has not endeavored to produce other organizational charts that
5 may show, for example, mid-year personnel changes.

6 PG&E is additionally producing organizational charts identified in emails that were
7 sent to PG&E by Mountain G Enterprises, Inc. ("Mountain G"), a contractor involved in managing
8 post-Carr Fire restoration work, at the outset of the post-Carr Fire restoration effort in late July 2018
9 as Exhibit C-5.1. These organizational charts appear to identify contractors and PG&E employees
10 involved in the post-Carr Fire restoration effort as of late July 2018.

11 The position of Director of Vegetation Management Execution was created in July
12 2019. As a result, there was no Director of Vegetation Management Execution during the post-Carr
13 Fire restoration effort. The vegetation management leadership positions that existed as of year-end
14 2018, and the persons who held them, are shown in the organizational chart for 2018 produced as
15 Exhibit C-2. At that time, the duties of the Director of Vegetation Management Execution, as the
16 position exists today, were principally the duties of the Director of Compliance Vegetation
17 Management.

18 **Question 9:**

19 Produce all communications involved in the decisions to reschedule and cancel the
20 2019 CEMA patrol for the Girvan Circuit.

21 **PG&E Response:**

22 Attached to this submission as Exhibit D and Exhibit E are communications PG&E
23 has identified as involving the decisions to reschedule and close the 2019 CEMA patrol for the
24 portion of the Girvan Circuit that includes the Zogg Mine Road area (the "Zogg Mine Road route")⁴
25

26 ⁴ The Zogg Mine Road route refers to the patrol route that includes the portion of the Girvan
27 Circuit that extends north from the intersection of South Fork Road and Archer Road and runs along
28 Zogg Mine Road, as well as branches such as Jenny Bird Lane, Horse Canyon Way and Larry Horse

1 without a separate CEMA patrol having occurred. PG&E conducted a search for responsive,
2 nonprivileged documents by identifying eight custodians likely to have potentially responsive
3 documents. These custodians were individuals who were involved in the review of PG&E's Project
4 Management Database ("PMD") that resulted in the 2019 CEMA patrol along the Zogg Mine Road
5 route being rescheduled on April 4, 2019, as previously described to the Court (*see* Dkt. 1265 at 30-
6 32), and PG&E employees and contractors who were responsible for conducting and overseeing the
7 routine and CEMA patrols along the Zogg Mine Road route in 2019. PG&E ran the following
8 search terms against these custodians' documents: Zogg, Girvan and 173686.⁵ Each of the
9 custodians' documents dated between November 16, 2018 and May 31, 2019 that contained one or
10 more of these search terms was reviewed for responsiveness.

11 After the Court issued its order, PG&E also contacted counsel for CNUC and ACRT
12 Pacific ("ACRT"), the employers of certain of the eight custodians identified above during the
13 relevant time period. Records identified as responsive to this request by counsel for CNUC are
14 attached to this submission as Exhibit F. Counsel for ACRT informed PG&E that they had not
15 located any materials responsive to this Question that were not already in PG&E's possession, but
16 that their search for responsive records was ongoing.

17 In its prior submissions, PG&E described for the Court the circumstances as PG&E
18 understood them surrounding the rescheduling and closure of the 2019 CEMA patrol for the Zogg
19 Mine Road route. (*See* Dkt. 1250 at 9; Dkt. 1260 at 5-9; Dkt. 1265 at 30-32.) In collecting and
20 reviewing documents following the Court's February 18, 2021 Order in order to respond to this
21 Question, PG&E identified additional communications in which the PG&E Vegetation Management
22 Program Manager ("VPM") responsible for the portion of PG&E's service territory that includes the
23

24 _____
25 Lane. The Zogg Mine Road route is depicted in index maps being submitted to the Court with this
26 filing and submitted to the Court on November 3, 2020 as Exhibit A-1 to its Supplemental Response
27 to Orders Regarding Zogg Fire. (*See* Dkt. 1260-1.)

28 ⁵ 173686 is the unique project ID in PG&E's PMD associated with the 2019 CEMA patrol along
the Zogg Mine Road route.

1 Zogg Mine Road route was asked by CNUC personnel whether it was permissible for the pre-
 2 inspector, who was already scheduled to perform the routine patrol along the Zogg Mine Road route,
 3 to sign the index map for the CEMA patrol along the same route, and that the PG&E VPM
 4 responded that it was permissible to do so. This correspondence is attached to this submission as
 5 Exhibit E.

6 **Question 10:**

7
 8 Provide current contact information for Declarants A, B, and C and any other
 9 declarants supplied in response to these questions such that probation or other law
 enforcement officers may contact and interview them.

10 **PG&E Response:**

11 Contact information for the declarants who PG&E understands are not represented by
 12 counsel is attached as Exhibit G, which PG&E is filing under seal.⁶ PG&E is providing below
 13 contact information for counsel who PG&E understands represents certain declarants.

Declarant	Contact Information
Declarant D	Law Office of Nick Zinkin Nick Zinkin, nzinkin@nz-law.com 5 E River Park Place West, Suite 204 Fresno, CA 93720 Telephone: (559) 225-2200 x 109
Declarant E	Ramsey & Ehrlich LLP Miles Ehrlich, miles@ramsey-ehrich.com 803 Hearst Avenue Berkeley, CA 94710 Telephone: (510) 548-3600 Fax: (510) 291-3060
Declarants G and H	The Sherron Law Firm, PC Claudine Sherron, claudine@sherron-law.com 1101 Standiford Avenue, Suite B1

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 24 ⁶ Declarants A, B and C submitted declarations in connection with PG&E's February 12, 2021
 25 Response to Request for Further Responses. (Dkt. 1300.) In addition to counsel for PG&E, the
 26 declarants who submitted declarations in response to the Court's February 18, 2021 Questions for
 27 Follow-Up include the CFVM QC inspector who marked the two Identified Gray Pines in August
 28 2018 (Declarant D); the PG&E VM Manager (Declarant E); the PG&E Director of Vegetation
 Management Execution (Declarant F); and the two pre-inspectors who conducted a second patrol of
 the area of interest in September 2018 (Declarants G and H).

1 Modesto, CA 95350
 2 Telephone: (209) 427-2200
 3 Fax: (209) 250-0377

4 Bonnie J. Anderson, Inc.
 5 Bonnie J. Anderson, bonnie@bjalaw.com
 6 909 15th Street, Suite 7
 7 Modesto, CA 95354
 8 Telephone: (209) 509-4640
 9 Fax: (209) 846-9394

10 **Question 11:**

11 Provide copies of *all* guidelines and instructions given by PG&E or its contractors to
 12 crews prior to the Zogg Fire regarding the factors to consider in marking trees for
 13 removal, including factors regarding species, height, lean, damage to tree, and
 14 proximity to powerlines, and including any guidance concerning that part of
 15 Section 4293 that states “and trees or portions thereof that are leaning toward the line
 16 which may contact the line from the side or may fall on the line shall be felled, cut or
 17 trimmed to remove such hazard.” Please include whatever guidance Declarants A
 18 and B had on this subject.

19 **PG&E Response:**

20 Question 11, and numerous questions that follow below, reference PG&E
 21 “powerlines”. PG&E understands the Court to be asking in these questions, based on the context of
 22 the Court’s questions, about PG&E’s distribution powerlines, which are managed separately from its
 23 transmission lines, and has answered accordingly.

24 PG&E is producing at Exhibit H copies of formal Electric Operations Vegetation
 25 Management (“VM”) guidance documents related to patrols of PG&E’s distribution facilities in
 26 effect as of the five years preceding September 27, 2020 and through September 27, 2020, as
 27 published in PG&E’s Technical Information Library (“TIL”) and Electric Document Management
 28 Archive (“EDMA”). This document set also includes related procedures, bulletins, and standards, in
 effect as of the five years preceding September 27, 2020 and through September 27, 2020. These
 policies were accessible to PG&E contractors performing vegetation management patrols. PG&E is
 also producing at Exhibit I a current example of what CNUC foresters keep in their trucks while

1 doing patrols, which was provided by counsel for CNUC to PG&E.⁷ It is not a copy of what
2 Declarant A or B would have had with them while performing the patrols described in their
3 declarations. As explained by counsel for CNUC to PG&E, the binders are regularly updated as new
4 guidance issues from PG&E and it is not possible to recreate with certainty the binders as they
5 existed during those patrols.

6 PG&E has also endeavored to identify other responsive documents concerning post-
7 wildfire response work by inquiring with PG&E personnel responsible for vegetation management
8 whether they are aware of any procedures relating to the post-wildfire response work and by running
9 searches on documents collected regarding the post-Carr Fire response work. Documents relating to
10 post-wildfire response work identified as part of these inquiries are being produced at Exhibit J.

11 PG&E expects that additional records responsive to the Court's request exist,
12 including in informal communications, guidance or other training materials. PG&E has not been
13 able to collect, review and produce all such documents in the time available to respond to the Court's
14 questions. Prior to the Zogg Fire, the area of interest was not subject to Enhanced Vegetation
15 Management ("EVM"), and PG&E's response does not include guidelines and instructions relating
16 to PG&E's EVM program.

17 **Question 12:**

18 At Docket No. 1012 (filed Feb. 6, 2019), Cal FIRE stated herein that Section 4293
19 (emphasis added):

20 means that a tree, or portion thereof, that is leaning toward the line,
21 must be "felled, cut or trimmed," regardless of its health, if it "may
22 contact the line from the side or may fall on the line." *Id.*

23 Section 4293 requires utilities to identify and remove such hazards.

24 Cal FIRE went on to say that whether a tree or limb is a hazard "depends on the
25 factual circumstances specific to that tree or limb." State under oath the full extent to

26 ⁷ PG&E has included in Exhibit I the binder provided by CNUC counsel. PG&E noticed that
27 there was a scanning error, requested a corrected copy of Exhibit I and will file a corrected copy of
28 Exhibit I after PG&E receives such copy.

1 which PG&E has, since the Cal FIRE filing, disagreed with Cal FIRE's statement that
2 this must be done "regardless of its health."

3 **PG&E Response:**

4 In response to the Court's Question, a declaration is attached as Exhibit K.

5 **Question 13:**

6 In the summer of 2019, the Monitor observed that PG&E's pre-inspectors were not
7 fully assessing the trunks of trees (page 20 of letter dated July 26, 2019, filed at
8 Docket No. 1089, Aug. 14, 2019). Provide declarations identifying all PG&E
9 personnel who attended the Monitor's presentation on July 17, 2019, and stating
10 what, if any, PG&E did in response to the Monitor's criticism. Please attach all
relevant documents. Provide declarations identifying all PG&E personnel who were
aware that some pre-inspectors did not walk around the base of leaning trees to
inspect them for defects or damage.

11 **PG&E Response:**

12 In response to the Court's Question, a declaration is attached as Exhibit L.

13 **Question 14:**

14 Name any and all PG&E personnel or contractor personnel who walked around the
15 Gray Pine in question to inspect it between the Carr and Zogg Fires and provide their
declarations as to what they did and saw. Please append all relevant documents.

16 **PG&E Response:**

17 PG&E refers the Court to its February 12, 2021 submission (Dkt. 1300) and its
18 responses to Questions 2, 3 and 4 in its March 3, 2021 submission (Dkt. 1323 at 2-5, 8-10; *see also*
19 Dkt. 1323-2; Dkt. 1323-5; Dkt. 1323-6; Dkt. 1323-7).

20 **Question 15:**

21 Provide all communications from July 23, 2018, to October 13, 2020, regarding
22 vegetation management along the Girvan Line to or from Michael Lewis, Sumeet
23 Singh, Deborah Powell, Ahmad Ababneh, Patrick Hogan, Kevin Dasso, or Barry
Anderson.

24 **PG&E Response:**

25 Attached to this submission as Exhibit M are communications PG&E has identified as
26 being responsive to this Question. PG&E conducted a search for responsive, nonprivileged
27
28

1 documents by running the following search terms against the documents of the custodians identified
2 by the Court: “Zogg” and “Girvan”. Each of the custodians’ documents dated between July 23,
3 2018 and October 13, 2020 that contained one or both of these search terms was reviewed for
4 responsiveness.

5 **Question 16:**

6 PG&E has stated (on November 18) that the Gray Pine of interest may have been
7 identified for removal (but not removed) during restoration efforts following the Carr
8 Fire in 2018, based “on certain records” recently reviewed by PG&E concerning that
9 restoration work. Please provide copies of those “certain records” and summarize
10 them in a cover sheet.

11 **PG&E Response:**

12 PG&E refers to its March 3, 2021 submission (Dkt. 1323), including Exhibit H of that
13 submission, which attaches records responsive to the Court’s request. Exhibit H of the March 3
14 submission includes records generated by the CFVM QC inspector regarding his determination to
15 identify the two Gray Pines, including emails about his inspection results, a work order dated August
16 25, 2018 that lists the two Identified Gray Pines, and versions of a document titled “Carr Fire Daily
17 Report”, which PG&E understands to contain data from Mountain G’s ArcGIS database, including
18 data concerning the two Identified Gray Pines. (*See, e.g.*, Dkt. 1323-8, Exhibit H-7, “Tree Data” tab,
19 rows 12158, 12159.)

20 **Question 17:**

21 PG&E’s counsel, at the February 3, 2021, hearing, responded to the issue raised by
22 *Amici* about backdating the inspection. Counsel stated “there was an error” that was
23 “sort of [an] illogical application of logic by a data entry analyst, who fully expected
24 that . . . what that would do is trigger an alert that said you have to go out now and do
25 an inspection. And, in fact, that’s what happened, an inspection was done. Now,
26 ultimately, they didn’t do a second one six months later . . .” (Document No. 1292,
27 56:19–57:10). Please provide the *names* of the data entry analyst and the information
28 PG&E counsel relied upon when he made that representation to the Court.

29 **PG&E Response:**

30 PG&E counsel’s comments during the February 3, 2021 hearing quoted by the Court
31 were referring to the April 4, 2019 scheduling change made to the 2019 CEMA patrol along the
32

1 Zogg Mine Road route (the “April 4 Scheduling Change”). PG&E detailed its understanding of the
2 April 4 Scheduling Change and the subsequent patrol history along the Zogg Mine Road route in
3 submissions to the Court that were submitted prior to the hearing. (*See* Dkt. 1250 at 9; Dkt. 1260
4 at 3; Dkt. 1265 at 27, 29; Dkt. 1300 at 3.)

5 The name of the database management specialist who PG&E understands coordinated
6 the PMD Review and the name of the database management specialist who made the April 4
7 Scheduling Change are being filed under seal as Exhibit N to this submission.

8 In addition to interviews of those database management specialists conducted by
9 PG&E’s counsel team, PG&E’s understanding of the April 4 Scheduling Change as set forth in
10 Dkt. 1265 at 30-32 was informed by the documents and records that are attached to this submission
11 at Exhibit D and Exhibit O. Among those documents, PG&E highlights Exhibit D-19 through
12 Exhibit D-29, which are weekly reports generated after the April 4 Scheduling Change from PMD,
13 the database used to track completion of patrols and tree-trimming work for PG&E’s routine and
14 CEMA vegetation management programs. These reports show that the April 4 Scheduling Change
15 made the 2019 CEMA patrol along the Zogg Mine Road route appear as “overdue”, but PMD
16 showed that this patrol had not yet occurred. As also shown in these reports, PMD has data fields
17 for the “planned” dates of a patrol, the “forecasted” dates of a patrol, and the “actual” dates of a
18 patrol, which are populated once the patrol begins and ends. The April 4 Scheduling Change
19 resulted in the “planned” and “forecasted” dates for the 2019 CEMA patrol along the Zogg Mine
20 Road route being set to dates that had already passed, but the fields for the “actual” dates of the
21 project were not affected by the April 4 Scheduling Change.

22 **Question 18:**

23 Has PG&E created and now implemented a system which flags, prevents, or creates
24 an alarm when a person schedules or reschedules an event in the past? Does the
25 alarm flag the change of the record as opposed to flagging that the event (such as an
26 inspection) is overdue?
27
28

1 **PG&E Response:**

2 As discussed above, as a result of the April 4 Scheduling Change made in PMD, the
3 2019 CEMA patrol along the Zogg Mine Road route appeared in PMD as overdue and not yet
4 completed.

5 PG&E's PMD did not at that time, nor does it now, flag, prevent or create an alarm
6 when a person updates or attempts to update one of its data fields that relates to a specific date with a
7 date that is in the past. PMD does generate change logs that track when changes to data fields are
8 made and by whom they are made. PG&E notes that certain fields that refer to dates are intended to
9 be populated with dates in the past. In particular, the data fields reflecting the dates when
10 inspections begin and end are designed to be updated with dates in the past because those dates are
11 put into PMD by database management specialists only after inspectors or tree crews confirm work
12 has begun and/or been completed.

13 As stated in its prior submission to the Court in response to Amici's proposed
14 modified conditions of probation, PG&E has taken steps to increase the level of controls in PMD by,
15 among other things, limiting the number of individuals with access to alter the "planned" completion
16 date of a patrol. (Dkt. 1322 at 9.) PG&E's vegetation management team has also recently begun
17 conducting a number of monthly audits of PMD to identify potential discrepancies, including
18 identifying "forecasted" patrol dates that are inconsistent with "actual" patrol dates, identifying any
19 routine and CEMA projects where the "forecasted" or "actual" patrol dates are within four months or
20 greater than eight months apart from one another, and identifying any CEMA patrols with no tree-
21 trimming work prescribed where the comments fail to affirmatively indicate that the patrol was
22 performed.

23 **Question 19:**

24 Do PG&E or contractor records indicate the Gray Pine of interest was spray painted
25 to mark it for removal or work? Was any other record or signal created to indicate
26 Gray Pine of interest required subsequent work?
27
28

1 **PG&E Response:**

2 For the reasons stated in PG&E’s prior submissions, PG&E does not know for a fact
3 whether the Gray Pine of interest was marked for removal. PG&E refers to its response to
4 Question 6 in its December 16, 2020 submission to the Court regarding whether PG&E or
5 CAL FIRE have observed any spray paint on the Gray Pine of interest following the Zogg Fire.
6 (Dkt. 1271 at 19.)

7 The two Identified Gray Pines with locations near the Gray Pine of interest were
8 identified by Declarant B, whose declaration is attached to PG&E’s March 3, 2021 Response to
9 Questions for Follow-Up. (Dkt. 1323-2 ¶¶ 8-9.) In his declaration, Declarant B explained that his
10 practice for identifying a tree was to place a flag around the tree and spray paint on the tree.
11 (*Id.* ¶ 6.)

12 **Question 20:**

13 According to PG&E’s 2021 wildfire mitigation plan, PG&E began using its tree
14 assessment tool (“TAT”) in March 2020 as part of its Enhanced Vegetation
15 Management patrols to assess all trees that have the potential to strike its power lines.
16 Are all trees assessed with the TAT documented regardless of the outcome (*i.e.*, is a
17 record of the result of the TAT created even if no work was needed)? Does PG&E
18 currently use (or plan in the near future to use) its TAT during routine vegetation
management patrols or CEMA patrols? If the Gray Pine that is suspected to have
caused the Zogg Fire still stood, would it have been assessed with the TAT in 2021?
If not, can PG&E estimate when it would have been assessed with the TAT?

19 **PG&E Response:**

20 PG&E began using the TAT in March 2020 as part of its EVM program to assess all
21 trees with the potential to strike in-scope distribution lines. A pre-inspector conducting EVM work
22 is required to use the TAT for all trees that could strike the relevant distribution line, and the result
23 of the assessment is documented regardless of whether the conclusion is that the tree should be
24 abated. Part of the purpose of the TAT is to identify trees that present elevated risk, regardless of
25 whether state law requires PG&E to remove the tree.
26
27
28

1 Pre-inspectors conducting routine vegetation management and CEMA patrols are not
2 required to use the TAT during such patrols, and PG&E does not currently have plans to require
3 such use in the near future.

4 If the Gray Pine that is suspected to have caused the Zogg Fire still stood, PG&E does
5 not expect an assessment of it using TAT would be required in 2021 because that portion of the
6 Girvan Circuit is not expected to be in EVM scope in 2021. Because the eligibility of a given line
7 segment for EVM is determined on a year-by-year basis based on the most up-to-date risk model,
8 PG&E does not currently have a reliable estimate for when PG&E would subject the Zogg Mine
9 Road area to EVM. PG&E notes that it recently made a proposal to the Court regarding PSPS that,
10 if adopted, PG&E anticipates would lead to the de-energization of the Girvan Circuit if the fire
11 conditions that prevailed in the run-up to the Zogg Fire were to occur in 2021. (Dkt. 1310.)

12 **Question 21:**

13 For the 2021 fire season, has PG&E made any changes to the processes it uses to
14 identify dead, diseased, or dying trees with the potential to strike power lines during
15 *routine* vegetation management patrols? For the 2021 fire season, has PG&E made
16 any changes to the substantive standards it uses to determine whether a tree should be
worked or removed because it is a dead, diseased, or dying tree, with the potential to
strike a power line? If so, identify the changes.

17 **PG&E Response:**

18 PG&E has made several changes to the processes it uses to identify dead, dying or
19 diseased trees with the potential to strike distribution lines during routine vegetation management
20 patrols for the 2021 fire season. As detailed in PG&E's prior filings, PG&E is hiring approximately
21 200 additional work verification personnel to subject routine VM patrols in HFTD areas to 100%
22 work verification. (Dkt. 1322 at 9.) Work verification will, among other things, help identify
23 needed work not recorded by the primary inspector, such as the removal of hazard trees. (*Id.*) This
24 year, PG&E has also stood up its Vegetation Management Inspector ("VMI") Program, as it has
25 previously committed to the Court. In addition to PG&E-employed supervisors and management,
26 PG&E intends to have 95 VMIs (including 30 employed by PG&E) in the field by the end of 2021.

1 (Dkt. 1310 at 3.) A maigotn area of focus for the VMIs will include spending time accompanying
2 routine vegetation management inspectors in the field during their patrols, providing in-the-field
3 coaching and oversight of their work. Over time, PG&E expects that this significant investment in
4 coaching routine inspectors will result in higher-quality, more consistent routine vegetation
5 management patrols.

6 In addition, PG&E will roll out during the course of 2021 the use of vehicle-based
7 LiDAR technology as yet a further check on the quality of its routine vegetation management
8 patrols. (Dkt. 1310 at 4.) Specifically, vehicle-based LiDAR scans following a routine inspection
9 and its associated tree work will help objectively confirm in areas accessible by road that the
10 required clearance around the conductors has been achieved. Following pilot testing in 2019 and
11 2020, PG&E is in the process of hiring a contractor to use this technology more broadly in 2021
12 across HFTD areas that are accessible by road.

13 These recent improvements—200 additional work verification inspectors to provide
14 100% work verification; 95 new VMI program inspectors that will provide in-field coaching of
15 inspectors; and ground-based LiDAR scanning—represent the focus on continual improvement
16 designed to increase the quality of PG&E’s routine vegetation management patrols. (Dkt. 1310 at
17 4.)

18 For the 2021 fire season, PG&E has not made any changes to the substantive
19 standards it uses to determine whether a tree should be worked or removed because it is a dead,
20 diseased or dying tree, with the potential to strike a power line.⁸ PG&E notes that in its March 4,
21 2021 submission, PG&E stated that it has no objection to the Court’s proposed condition requiring
22 PG&E to confirm to its vegetation management personnel that healthy trees may be hazard trees and
23 to ensure that its vegetation management personnel are provided with and instructed to follow the
24 guidance available from CAL FIRE for applying section 4293. (Dkt. 1330 at 2.)

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26 ⁸ PG&E notes that in August 2020, PG&E created a reference document relating to assessing
27 Redwood, Live Oak, Tanoak and Douglas Fir trees with wildfire damage, which is attached as
28 Exhibit J-7.

1 **Question 22:**

2 Has PG&E analyzed whether there are circumstances in which trees that have the
3 potential to strike power lines should be worked or removed, even though they are
4 healthy and not in violation of minimum clearances required by California Public
5 Resources Code Section 4293, California Public Utilities Commission General Order
6 95, and Federal Energy Regulatory Commission FAC-003-4? If so, what conclusions
7 did PG&E reach? Has this issue been the subject of any regulatory process or
8 analysis?

7 **PG&E Response:**

8 Yes, PG&E has analyzed whether there are circumstances in which trees that have the
9 potential to strike its distribution lines should be worked or removed, even though they are healthy
10 and not in violation of minimum clearances required by California Public Resources Code Section
11 4293, California Public Utilities Commission General Order 95, and Federal Energy Regulatory
12 Commission FAC-003-4.

13 As noted above, the EVM program was originally designed to identify for removal all
14 potential strike trees from the top 10 risk species, as determined by PG&E analyses of the tree
15 species that were responsible for causing vegetation-related ignitions. In reviewing five years of
16 data, PG&E identified 10 species of trees—Black Oak, Gray Pine, Tanoak, Coast Live Oak, Live
17 Oak, Ponderosa Pine, Eucalyptus/Blue Gum, Douglas Fir, Valley Oak and Monterey Pine—that
18 were responsible for nearly 75 percent of incidents in Tier 2 and Tier 3 HFTDs. As part of the
19 original EVM scope, PG&E intended to go beyond what is required by state law to abate trees from
20 these 10 species that were tall enough to strike distribution lines, had a clear path to strike, and
21 exhibited leaning or weighting toward the line.

22 As the Court is aware, the EVM program is analyzed as part of the regulatory
23 processes surrounding PG&E’s annual Wildfire Mitigation Plans. During the review process for
24 PG&E’s 2019 Wildfire Mitigation Plan (“WMP”), “some parties asserted that PG&E’s EVM may
25 target significantly more trees than necessary, given the consequences of widespread tree removal.
26 For example, trees provide support for other trees, reduce carbon, and provide other important
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1 ecological benefits which may be lost due to aggressive tree removal.” See CPUC’s May 30, 2019
2 Decision on PG&E’s 2019 WMP Pursuant to Senate Bill 901 (“2019 WMP Decision”). The 2019
3 WMP Decision stated “PG&E should only remove healthy trees if the utility has evidence that those
4 trees pose a risk to utility electric facilities under wildfire ignition conditions, based on the opinion
5 of a certified arborist.” (*Id.* at 24.)

6 In response to the CPUC’s direction in the 2019 WMP Decision, PG&E developed its
7 TAT. The tool was developed by a team of ISA Certified Utility Arborists and is informed by
8 PG&E data regarding regional vegetation-caused contact with PG&E’s overhead electric distribution
9 lines. As described above, that tool is now used by pre-inspectors on every tree within the scope of
10 EVM that has the potential to strike PG&E’s distribution lines if it were to fall. Among other things,
11 any tree with strike potential that is determined to lean more than 25 degrees is designated for
12 abatement, regardless of the health or tree species. This risk-mitigation measure goes well beyond
13 the requirements of, *inter alia*, section 4293.

14 Based on PG&E data regarding regional vegetation-caused outages and ignitions,
15 PG&E also recently evaluated whether certain species should be targeted on an accelerated basis
16 around distribution lines in high-fire threat areas on a “bright-line” basis, regardless of their health,
17 as an additional step. That resulted in the new proposal set forth in PG&E’s March 4, 2021
18 submission to the Court regarding Gray Pines and Tanoaks in particular regions. (Dkt. 1330.) This
19 proposal was based on PG&E data that showed that these particular species may present higher risk
20 of falling into the line in these particular regions. This proposal has not yet been subject to any
21 regulatory process, but CAL FIRE and the CPUC have stated to the Court that their position is that it
22 should not be implemented as a probation condition at this time. (*See* Dkt. 1335.)

23 Previous PG&E vegetation management programs have sought to abate vegetation
24 beyond what is required by state law, including the Fuel Reduction program, the Accelerated
25 Wildfire Risk Reduction Program, and the Public Safety & Reliability program, and would have
26 been underpinned by analyses, including analyses of ignition or outage data. Other analyses may
27 have also been conducted in the past that would be responsive to the Court’s Question. To provide
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1 more information on such potential analyses, PG&E would need additional time to investigate and
2 respond.

3 **Question 23:**

4 Does PG&E, in its view, have the authority to remove potential strike trees other than
5 those that are dead, diseased, dying, or identified by PG&E's TAT as "abate"?

6 **PG&E Response:**

7 In PG&E's view, it is required to remove a potential strike tree that it concludes is a
8 hazard under state law even if that tree is not dead, diseased, dying or identified by PG&E's TAT as
9 "abate".

10 **Question 24:**

11 Has PG&E analyzed whether all trees that have the potential to strike its power lines
12 should be documented for PSPS purposes (or other purposes) regardless of their
13 health and/or whether they need to be worked? If so, what conclusions did PG&E
reach? Has this been the subject of any regulatory process or analysis?

14 **PG&E Response:**

15 Yes, PG&E has analyzed whether all trees that have the potential to strike its
16 distribution lines should be documented for PSPS purposes (or other purposes) regardless of their
17 health and/or whether they need to be worked. PG&E has been recently working on implementing
18 the Court's Proposed Conditions 11 and 12 to more expressly account in PSPS scoping for "the
19 approximate number of trees tall enough to fall on the line irrespective of the health of the tree and
20 irrespective of whether the tree stands outside or inside prescribed clearances". To do so, one of the
21 things PG&E intends to leverage is remote sensing capabilities, including LiDAR technology, which
22 uses pulsed laser light to generate digital 3-D object maps. PG&E's current intent is to use the tree
23 detection algorithm described above to provide estimates of the number of trees with the potential to
24 strike PG&E's lines, without regard to the health characteristics of the tree or whether it needs to be
25 worked. As discussed above, the detections are not necessarily accurate at the individual tree level,
26 and trees are living, dynamic organisms. But the algorithm can be used to generate relative
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1 estimates of the distribution line’s potential tree-strike exposure, which can then in turn be used to
2 scope distribution circuits with high vegetation exposure for potential de-energization. This specific
3 proposal is still being developed and has not yet been the subject of a regulatory process.

4 Further, as discussed elsewhere in this submission, for purposes of EVM, PG&E’s
5 current program scope calls for inspectors to assess every tree with strike potential with the TAT that
6 is on the inspector’s smartphone or tablet, which creates a digital record. The EVM program as a
7 whole has been the subject of the regulatory processes surrounding PG&E’s Wildfire Mitigation
8 Plans.

9 Further, one PG&E employee queried about the Court’s Question recalled informal
10 consideration in or around 2018 of whether to document trees that were not identified for abatement
11 during PG&E’s annual routine vegetation management patrols. The employee also recalled that
12 PG&E inquired with two other major California utility companies as to whether they documented
13 trees during routine patrols that did not require abatement. The employee recalled that PG&E
14 learned through this “benchmarking” that those utilities did not document such trees. The employee
15 recalled that the employees considering this proposal did not conclude that the proposal merited
16 more formal analysis.

17 To identify other potential examples of when PG&E employees may have performed
18 analysis responsive to the Court’s Question in the past, PG&E would need additional time to
19 investigate and respond.

20 **Question 25:**

21 In PG&E’s response at Dkt. No. 1300-1, Exhibit 1, the forester attaches a report from
22 the October 2018 routine inspection of the “area of interest.” PG&E shall please
23 translate the meaning of the codes used in the fields of this report (including the
24 contents of Comments, Notification, Work Request, and Trim Type fields, *e.g.* “.3 &
25 .4S/W/O P59”). It shall also state if, when the “WC Date” field is updated, that entry
26 causes a change to the “Last Edit” field. Is Tree Number 5 the Gray Pine of interest?
27 Is Tree Number 4? Was Tree 5 inspected on June 25, 2012? If so, provide all
28 information and records of that inspection.

1 **PG&E Response:**

2 PG&E does not believe that either Tree Number 4 or Tree Number 5 refers to the
3 Gray Pine of interest because, based on the tree location comments provided at Dkt. 1300-1,
4 Exhibit 1, Tree Numbers 4 and 5 are identified as being approximately one-half span to the east of
5 the location of the Gray Pine of interest.

6 Based on a review of its records, PG&E understands that Tree Number 5 was
7 inspected on June 25, 2012, but was not listed for work. The 2012 VMD inspection record
8 containing Tree Number 5, attached as Exhibit P-1, shows the “Priority” field for Tree Number 5 as
9 “No Trim” and the “Notification” field as “Inventory”, indicating that no tree work was prescribed
10 by the pre-inspector.⁹ Further, the 2012 work request for Tree Number 5, attached as Exhibit P-2,
11 shows Tree Number 5 listed as a “Reference Tree” and does not show it invoiced for work.¹⁰

12 PG&E is providing below its understanding of the descriptions of the fields and codes
13 used in the inspection record extracted from PG&E’s VMD and appended by Declarant A as
14 Exhibit 1 to his declaration submitted with PG&E’s February 12 filing. (Dkt. 1300-1.) These
15 descriptions are derived based on input from a subject matter expert at PG&E. The changes to the
16 “WC Date” do not cause the “Last Edit” field to change, as “WC Date” information is populated
17 from a separate repository and does not reflect an “edit” to the inspection record.

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25 ⁹ Tree Number 5 is listed as Tree Number 4 in the 2012 inspection record. PG&E understands
26 that the sort order of a tree within a VMD inspection record can change over time based on the
addition or subtraction of new trees.

27 ¹⁰ Tree Number 5 is listed on row 189 of the work request.

Inspection Record Fields	
Field	Description
Address	Address where inspection occurred.
City	City where inspection occurred.
County	County where inspection occurred.
Directions	Directions to address.
Division	Name of PG&E VM division.
Circuit	Name of circuit.
SSD #	Number of the nearest source side device.
SSD Rte #	Source side device inspection route number.
Routing #	Routing number.
Area	Area number.
SRA	Indicates whether the inspection occurred in a State Responsibility Area.
Alerts	Safety and customer-related notifications for work crew: <ul style="list-style-type: none"> • AX: Access; • NF: Notify first; and • PI: Pre-inspector notify first.
Insp Date/Time	Date and time of inspection of location.
Quad Map	Quad Map (Plat Map) number.
Removal #	Removal form number (form documents customer's permission for tree crew to perform tree work).
Comment	Comments left by pre-inspector.
Customer Name/Phone	The name and/or phone number of the customer.
Audit	Hyperlink to log showing history of data changes to location record.
Last Edit	Last time location record edited.

Tree Record Fields	
Field	Description
Tree Species	Species of the tree.
Crew	Type of crew recommended by pre-inspector. <ul style="list-style-type: none"> • CA: Climb crew, dump truck with tools, tree chipper.
Priority	Indicates priority of assigned tree work. <ul style="list-style-type: none"> • Routine: Can be completed during routine cycle. • No Trim: No work required.
TGR	Whether Tree Growth Regulator used.
Owned By	Owner of land where tree is located. <ul style="list-style-type: none"> • Private: Tree is on private land.
Height	Height of the tree, in feet.
DBH	Diameter of tree trunk at breast height, in inches.
Clearance	Clearance between tree and conductor required at time of trim, in feet.
Prox	Proximity, <i>i.e.</i> , whether tree work is inside or outside 10 feet from the conductors:

Tree Record Fields	
Field	Description
	<ul style="list-style-type: none"> • Inside: Tree work is within 10 feet of conductors; and • Outside: Tree work is more than 10 feet from conductors.
Cycle	Work cycle for the tree: <ul style="list-style-type: none"> • Rtn (Routine): Inspection was conducted for routine vegetation management program (annual cycle).
Qty	Quantity of trees for tree record.
Trim Type	Type of tree work prescribed by pre-inspector: <ul style="list-style-type: none"> • FS-R1A+Trt: Facility Protect Removal R1 (Class A) – Treat; • FP-Rmv1 A: Facility Protect Removal R1 (Class A) – No Treat; • Slope: Prune in a slope pattern; • FP-Ov. A: Facility Protect Overhang (prune overhanging branches) (Class A); and • Side: Prune side branches.
Account	Account or activity type: <ul style="list-style-type: none"> • M: Maintenance (<i>i.e.</i>, routine annual maintenance).
Insp Date	Records last time pre-inspector manually saved results of inspection. Field includes inspector LAN ID.
Comment	Comments on location or condition of tree or work required: <ul style="list-style-type: none"> • S: Spans, measured in tenths of a span (<i>e.g.</i>, .3S is “three-tenths of a span”); • W/O: “West of”; and • P: Pole number (<i>e.g.</i>, P59 is “Pole 59”).
Notification	Indicates whether prescribed tree work can proceed: <ul style="list-style-type: none"> • OK: Indicates no issues interfering with completion of work.
Work Request	Work request ID number.
WC Date	Date when work crew worked the tree.
WC Qty	Number of trees worked by work crew.
WC Trim	Trim code for work done by work crew: <ul style="list-style-type: none"> • F1D: Facility Protect Removal R1 (Class B) – Treat; • F1B: Facility Protect Removal R1 (Class B) – No Treat; • SL: Prune in a slope pattern; • FOA: Facility Protect Overhang (prune overhanging branches) (Class A); and • SD: Prune side branches.
Completed By	Name of crew foreman or tree crew company who completed tree work.
Invoice	Status of invoice: <ul style="list-style-type: none"> • XX (104): Nonbillable through PG&E’s automated billing system; Invoiced successfully; and • TR (104): Tree trim work invoiced successfully.
Lat/Long	Latitude and longitude coordinates of tree.
External Tree ID	Additional location ID.

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Tree Record Fields	
Field	Description
Audit	Hyperlink to log showing history of data changes to tree record.
Last Edit	Last time tree record edited.

1 Dated: March 12, 2021

Respectfully Submitted,

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3
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