

**PACIFIC GAS AND ELECTRIC COMPANY
Wildfire Mitigation Plans Discovery 2022
Data Response**

PG&E Data Request No.:	CalAdvocates_008-Q05		
PG&E File Name:	WMP-Discovery2022_DR_CalAdvocates_008-Q05Supp03		
Request Date:	January 28, 2022	Requester DR No.:	CalAdvocates-PGE-2022WMP-08
Date Sent:	February 25, 2022 Supp03: April 8, 2022	Requesting Party:	Public Advocates Office
PG&E Witness:		Requester:	Alan Wehrman

The following questions relate to the PG&E Independent Monitor Report of November 19, 2021, Kirkland & Ellis LLP, filed on November 23, 2021 (the Monitor's 2021 report),¹ and PG&E's responses to Data Request CalAdvocates-PGE-2022WMP-06, dated January 10 and 14, 2022.

QUESTION 05

The Monitor's 2021 report states, "For example, PG&E's recently established Asset Failure Analysis Team causally connected a June 2021 ignition to a broken cross arm."²

- a) When was PG&E's Asset Failure Analysis Team established?
- b) Please provide a brief description of the purpose and activities of the Asset Failure Analysis Team.
- c) Please describe what, if any, work product is produced by the Asset Failure Analysis Team (for example, written reports or presentations).
- d) Please describe any changes or improvements to WMP initiatives that have resulted from activities performed by the Asset Failure Analysis Team.
- e) Is the Asset Failure Analysis Team discussed in PG&E's 2022 WMP Update? Please provide a reference to the appropriate section, if yes.
- f) Please describe how the Asset Failure Analysis Team causally connected the June 2021 ignition to the broken crossarm.
- g) Has the Asset Failure Analysis Team causally connected other ignitions that occurred in 2021 to failed assets with existing corrective notifications?
- h) If the answer to part (g) is yes, please list such ignitions, their cause, and provide copies of associated reports or investigations performed by the Asset Failure Analysis Team.

¹ Kirkland & Ellis LLP, PG&E Independent Monitor Report of November 19, 2021 (Case No. 14-CR-00175- WHA Doc. No. 1524-1), November 23, 2021.

² Monitor's 2021 Report, p. 36.

ANSWER 05 SUPPLEMENTAL 03

- h) Attached please find two of the remaining five Apparent Cause Evaluation (ACE) reports. The remaining three will be provided as soon as they are complete.

ANSWER 05 SUPPLEMENTAL 02

- h) Attached please find the first six of the 11 Apparent Cause Evaluation (ACE) reports. The remaining five will be provided as soon as they are complete.

ANSWER 05 SUPPLEMENTAL 01

- a) Our Asset Failure Analysis (AFA) Team was established in March of 2020.
- b) The AFA Team investigates equipment-caused outage events by evaluating data and failed equipment to determine apparent cause conditions. AFA investigations evaluate opportunities to improve reliability and resiliency on the electric system.
- c) The work products currently produced by the AFA Team include:
 - 1. Apparent Cause Evaluation (ACE) reports (peer reviewed, formal documents); and
 - 2. Extent of condition presentations on ignition events (non-peer reviewed, informal documents).
- d) As discussed in Section 7.3.7.4 of our 2022 WMP (pages 765-766), to increase the accuracy and comprehensiveness of data captured for risk events, “the AFA team developed a semi-automated Foundry tool to capture critical attributes related to failed conductors (e.g., location, age, material type, wind condition).” The AFA team also “developed and piloted a dynamic asset failure data collection form that allows Trouble-persons to capture key attributes of the failed equipment in less than five minutes. This form also provides an opportunity for Trouble-persons to provide pictures and additional feedback (using open text field) to help engineers understand the cause of failure.”
- e) Yes, the AFA Team is discussed in Section 7.3.7 (pages 746, 748, and 765-766) of our 2022 WMP update.
- f) The causal connection of the June 2021 ignition to the broken crossarm is documented in PG&E’s Preliminary Ignition Investigation Report of the incident, which we previously provided to you as “WMP-Discovery2022_DR_CalAdvocates_006-Q01Atch01CONF.pdf” in our response to Data Request CalAdvocates-PGE-2022WMP-06, dated January 10, 2022.
- g) Yes, the AFA Team has identified or affirmed apparent causes for other ignitions that occurred in 2021 to failed assets with existing corrective notifications.
- h) In 2021, the AFA Team identified or affirmed the Apparent Causes of 11 equipment-caused CPUC reportable ignitions with pre-existing work tags on the asset which were determined to be relevant to the ignition. Each ignition Date and its preliminary

Failure Driver, and Failure Sub-Driver category is listed in the table below. The final Apparent Cause determinations and investigation materials are still in process and will be made available as soon as they are completed.

Outage Date	Failure Driver	Failure Sub-Driver
10/24/2021	Weather	Wire-to-wire contact
9/30/2021	All types of equipment / facility failure	Crossarm failure
9/19/2021	Contamination	Tracking
7/8/2021	All types of equipment / facility failure	Pole failure
7/8/2021	Contamination	Tracking
7/8/2021	All types of equipment / facility failure	Switch failure
6/16/2021	All types of equipment / facility failure	Crossarm failure
4/28/2021	All types of equipment / facility failure	Pole failure
4/21/2021	All types of equipment / facility failure	Conductor failure-all
4/15/2021	All types of equipment / facility failure	Equipment failure - Other
3/27/2021	All types of equipment / facility failure	Insulator failure

ANSWER 05

- a) Our Asset Failure Analysis (AFA) Team was established in March of 2020.
- b) The AFA Team investigates equipment-caused ignition events by evaluating data and failed equipment to determine apparent causes. AFA investigations establish the extent to which the cause conditions exist elsewhere in the system and propose implementation of corrective actions to mitigate risk of future unplanned equipment failure events.