



September 23, 2022

To: Pacific Gas and Electric (PG&E)
Vincent Tanguay
Senior Director, Enterprise Compliance

SUBJECT: Office of Energy Infrastructure Safety's Report on PG&E's 2020 Substantial Vegetation Management Audit

Pursuant to the requirements of California Public Utilities Code Section 8386.3(c)(5)(C), the Office of Energy Infrastructure Safety (Energy Safety) has completed its final report on PG&E's 2020 Substantial Vegetation Management (SVM) audit.

The attached report follows Energy Safety's publication of the SVM audit on June 14, 2022, and PG&E's subsequent response on August 15, 2022. Pursuant to statutory requirements, a copy of this report is issued to PG&E, published on Energy Safety's website,¹ and provided to the California Public Utilities Commission (CPUC).

Sincerely,

A handwritten signature in black ink, appearing to read "Koko Tomassian". The signature is fluid and cursive.

Koko Tomassian
Program Manager, Compliance Assurance Division
Office of Energy Infrastructure Safety

Cc:

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Attachment: PG&E 2020 SVM Audit Report

¹ All documents related to PG&E's 2020 SVM audit are available on Energy Safety's e-filing system under the "[2020-SVM](#)" docket number.



**OFFICE OF ENERGY INFRASTRUCTURE SAFETY'S
REPORT ON 2020 SUBSTANTIAL
VEGETATION MANAGEMENT AUDIT
PACIFIC GAS AND ELECTRIC COMPANY**

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1. BACKGROUND

Pursuant to Public Utilities Code section 8386.3(c)(5), Energy Safety must audit the vegetation management work performed by, or on behalf of, the electrical corporation. The audit shall specify any failure of the electrical corporation to fully comply with the vegetation management requirements in the wildfire mitigation plan. Energy Safety then grants the electrical corporation a reasonable time to correct and eliminate any deficiency specified in the audit. After evaluation of the electrical corporations response correcting or eliminating the deficiencies, Energy Safety must issue a report specifically describing any failure of the electrical corporation to substantially comply with the substantial portion of the vegetation management requirements in the electrical corporation's wildfire mitigation plan. This document is Energy Safety's final vegetation management report.

To conduct the 2020 Substantial Vegetation Management (SVM) audit, Energy Safety reviewed the vegetation management section and initiatives in Pacific Gas and Electric Company's (PG&E) 2020 Wildfire Mitigation Plan (WMP). For each of the 20 vegetation management WMP initiatives, Energy Safety evaluated PG&E's quantitative commitments¹ and verifiable statements.² For most initiatives, PG&E made multiple quantitative commitments and verifiable statements. Energy Safety then reviewed available information and requested additional documentation to support the assessment of whether PG&E fully met its quantitative commitments and executed its verifiable statements.

Out of approximately 60 commitments and verifiable statements evaluated, Energy Safety found PG&E noncompliant with 11 commitments and verifiable statements, representing seven of the 20 vegetation management initiatives in its 2020 WMP.

On June 14, 2022, Energy Safety published its 2020 SVM Audit³ identifying PG&E's vegetation management failures, specified Corrective Actions required to resolve or explain the failures, and required PG&E to provide a Corrective Action response. On August 15, 2022, PG&E timely

¹ E.g., miles of lines to inspect, minimum work quality thresholds, etc.

² E.g., holding public meetings with communities regarding future vegetation management activities, training personnel on utilities protocols, etc.

³ PG&E 2020 SVM Audit is published on Energy Safety's e-filing system in the 2020 WMP Substantial Vegetation Management Audits docket and available here: <https://efiling.energysafety.ca.gov/EFiling/DocketInformation.aspx?docketnumber=2020-SVM> (accessed on September 22, 2022).

provided its Corrective Action response and included supporting documentation.⁴ Additionally, PG&E provided a “General Response” to the Corrective Actions detailing steps it is currently taking and will take in the future to ensure its vegetation management operations align with statements made in its WMPs.

2. 2020 SVM AUDIT FINDINGS

Table 1 below summarizes Energy Safety’s findings from PG&E’s 2020 SVM Audit.

Table 1: Noncompliant 2020 WMP Vegetation Management Initiatives and Corresponding Findings

Noncompliant Initiative Number	Finding
5.3.5.1	1. PG&E failed to provide the number of times contractors were trained in Best Management Practices in 2020.
5.3.5.5	2. PG&E failed to implement a fuel reduction program as described in its 2020 WMP.
5.3.5.7	3a. PG&E failed to provide a sample dataset of its LiDAR data quality control program that was field reviewed in 2020. PG&E did not generate quality control reports until 2021.
5.3.5.7	3b. PG&E failed to provide a pattern identified by LiDAR from 2020.
5.3.5.13	4a. PG&E failed to provide the 2020 QA protocol, instead providing the 2021 QA protocol. Due to this inability to provide documentation, Energy Safety’s assessment is PG&E did not have a formal QA protocol in 2020.
5.3.5.13	4b. PG&E failed to conduct Work Verification (WV) on 100% of the EVM miles in 2020.
5.3.5.13	4c. PG&E failed to provide a sample of a QA assessment for the EVM program in 2020.

⁴ PG&E 2020 SVM Audit Corrective Action Plan is published on Energy Safety’s e-filing system in the 2020 WMP Substantial Vegetation Management Audits docket and available here: <https://efiling.energysafety.ca.gov/EFiling/DocketInformation.aspx?docketnumber=2020-SVM> (accessed on September 22, 2022).

Noncompliant Initiative Number	Finding
5.3.5.14	5. PG&E failed to provide Energy Safety with documentation supporting EVM pre-inspectors showing competency in the EVM program requirements through the skills assessment test.
5.3.5.15	6a. The language in the 2020 WMP conflicts with the EVM scope as described in PG&E’s procedural document.
5.3.5.15	6b. PG&E failed to provide sample documentation consistent with its WMP statement indicating it would begin the process to study and assess the need for, and scope of, the targeted species program with other California utilities in 2020. Due to this inability to provide documentation consistent with its WMP statement, Energy Safety concludes PG&E did not start the process with other California utilities to develop a targeted species program in 2020.
5.3.5.19	7. PG&E failed to utilize a central database for vegetation, as stated in its 2020 WMP, and instead has at least six databases for tracking vegetation data.
Multiple	8. PG&E is inconsistent in its naming of various vegetation management programs.

3. ANALYSIS OF PG&E’S RESPONSE

In its General Response, PG&E described three improvements it has made, and continues to make, on its implementation of 2020 WMP initiatives and fulfillment of commitments. The improvements identified in PG&E’s General Response include:

- conducting additional internal reviews of records,
- identifying its own commitments made in the WMP to ensure consistency in the execution, and
- implementing its “Lean Operating System” to improve visibility and standardization within the company.

In addition to the General Response, Energy Safety also reviewed PG&E’s Corrective Action response and determined that PG&E sufficiently addressed nine of twelve Corrective Actions. Table 2 sets forth Energy Safety’s analysis and determination.

Table 2: Summary of Energy Safety's Analysis of PG&E's Response and Corrective Action

Corrective Action	Energy Safety’s Analysis of Response
<p>1. PG&E shall a) provide a reason why it failed to provide the number of times contractors were trained in Best Management Practices, as requested in DR086-SVM-20220429, and b) detail the steps it is taking to ensure vegetation management operations are consistent with statements made in this initiative of the WMP.</p>	<p>Sufficient- PG&E stated that it misunderstood an Energy Safety data request⁵ and reiterated that the Best Management Practices courses did not allow tracking of individual attempts.⁶ Instead, PG&E provided Energy Safety with the number of individuals that passed the courses in 2020, and PG&E reiterated its “General Response.”⁷ Energy Safety finds this response sufficiently addressed the Corrective Action.</p>
<p>2. PG&E shall provide the steps it is taking to ensure statements made in this initiative of the WMP are consistent with vegetation management operations.</p>	<p>Sufficient- PG&E provided the “General Response” for its plan to ensure consistency between its WMP and vegetation management operations.⁸ Energy Safety finds this response sufficiently addressed the Corrective Action.</p>
<p>3a. PG&E shall a) provide a reason why it failed to generate quality control reports until 2021, and b) detail the steps it is taking to ensure appropriate quality control reporting occurs.</p>	<p>Sufficient- PG&E explained that it misunderstood an Energy Safety data request.⁹ In its Corrective Action response, PG&E provided LiDAR quality control reports from 2020.¹⁰ Additionally, PG&E explained its quality control process via contracts with LiDAR vendors.¹¹ Energy Safety finds this response sufficiently addressed the Corrective Action.</p>

⁵ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 6

⁶ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 7

⁷ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 7

⁸ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 8

⁹ PGE 2020 SVM Audit Corrective Action Plan.pdf, pages 8 and 9

¹⁰ PGE 2020 SVM Audit Corrective Action Plan.pdf, pages 8 and 9

¹¹ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 9

Corrective Action	Energy Safety’s Analysis of Response
<p>3b. PG&E shall a) explain what pattern(s) it is trying to assess with LiDAR data under this WMP initiative, b) provide an explanation of why it failed to provide a pattern identified by LiDAR from 2020, as requested in DR-063-SVM-20220119, and c) detail the steps it is taking to ensure LiDAR use is consistent with statements made in this initiative of the WMP.</p>	<p>Insufficient- In its response, PG&E identifies LiDAR patterns as “detections.”¹² PG&E defines detections as an encroachment of vegetation potentially within four feet of a distribution primary lines in the High Fire Threat District (HFTD).¹³ Along with a reference to its “General Response,” PG&E stated it misunderstood an Energy Safety data request and explained how it uses LiDAR consistent with the 2020 WMP.¹⁴ PG&E further stated that it provided one example of a “LiDAR Detection pattern” as part of its response to DR-063-SVM-20220119.¹⁵ However, Energy Safety finds that PG&E has failed to identify a pattern identified by LiDAR.¹⁶ Providing examples of individual vegetation encroachments does not constitute a pattern. Energy Safety finds this response did not sufficiently address the Corrective Action.</p>
<p>4a. PG&E shall a) state whether the 2021 QA protocol, that was published in January 2021, was in place in 2020 b) if it did have the QA protocol in place in 2020, explain why it did not provide the 2020 QA protocol as requested in DR-063-SVM-20220119, and c) detail the steps it is taking to ensure QA protocols are consistent with statements made in this initiative of the WMP.</p>	<p>Sufficient- PG&E provided Energy Safety with the QA protocol from 2015 (the latest protocol before the 2021 protocol was published) as an attachment.¹⁷ Energy Safety’s review of the 2015 protocol showed a corrective action component that is consistent with the WMP statement.¹⁸ PG&E also referenced its “General Response.”¹⁹ Energy Safety finds this response sufficiently addressed the Corrective Action.</p>

¹² PGE 2020 SVM Audit Corrective Action Plan.pdf, page 9

¹³ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 9

¹⁴ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 10

¹⁵ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 10

¹⁶ While it is possible that analysis of LiDAR data may not always reveal a pattern, PG&E asserts that a pattern is present based on a single incidence of a “detection.”

¹⁷ Attachment 07_5.3.5.13_4a_TD 7104P-1 VM QA Distribution Audit Procedure_CONF.pdf

¹⁸ Attachment 07_5.3.5.13_4a_TD 7104P-1 VM QA Distribution Audit Procedure_CONF.pdf, page 19

¹⁹ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 11

Corrective Action	Energy Safety’s Analysis of Response
<p>4b. PG&E shall a) explain why there is a discrepancy between PG&E-submitted documents for total miles completed under the EVM scope in 2020, b) confirm whether it conducted WV on 100% of the EVM miles in 2020, and if PG&E did not conduct WV on 100% of the EVM miles in 2020, explain why not, and c) explain the steps it takes to ensure 100% of the EVM miles are Work Verified.</p>	<p>Sufficient- PG&E explained that the miles it did not include in the data request response were miles carried over from the 2019 EVM plan.²⁰ This accounted for Energy Safety’s analysis of miles that lacked Work Verification (WV). Additionally, PG&E confirmed it did conduct WV on 100% of the EVM miles.²¹ Finally, PG&E stated that, “EVM miles are not recorded as complete until they are work verified.”²² Energy Safety finds this response sufficiently addressed the Corrective Action.</p>
<p>4c. PG&E shall a) provide the reason why QA is not applied to the EVM program, b) explain why PG&E’s responses to DR034-SVM-20211008 and DR-063-SVM-20220119 directly contradict statements made in the 2020 WMP, c) detail the steps it is taking to assure the EVM program is executed in accordance with expected quality standards, and d) detail the steps it is taking to ensure the implementation of quality assurance programs for EVM are consistent with statements made in this initiative of the WMP.</p>	<p>Sufficient- PG&E stated that it made an error in its 2020 WMP and that Quality Verification ensures the WMP program is “properly executed.”²³ Additionally, PG&E committed to conduct QA on the EVM program in the third quarter of 2022 in its response.²⁴ Energy Safety finds this response sufficiently addressed the Corrective Action.</p>
<p>5. PG&E shall a) state whether it tracked pass rates of the skills assessment test performed in 2020, b) if not, provide an explanation of why, c) explain how it tracked the “checks” performed in 2020 to ensure EVM pre-inspectors are competent in the EVM program requirements, and d) if PG&E did not track these “checks,” explain why.</p>	<p>Sufficient- PG&E explained its testing program tracked contractors that passed the skills assessment test, and only granted access to the EVM tools once contractors passed the test.²⁵ Based on PG&E’s response, Energy Safety understands that only contractors who passed the skills assessment test were granted access to the tools required for executing the EVM program.</p>

²⁰ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 11

²¹ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 12

²² PGE 2020 SVM Audit Corrective Action Plan.pdf, page 12

²³ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 12

²⁴ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 13

²⁵ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 13

Corrective Action	Energy Safety’s Analysis of Response
	Energy Safety finds this response sufficiently addressed the Corrective Action.
<p>6a. PG&E shall a) explain why the WMP statement regarding the EVM scope contradicts TD-7106P-01 “Enhanced Vegetation Management Pre-Inspection Procedure” as described in Section 5.15.1 of [the SVM] audit and b) detail the steps it is taking to ensure vegetation management operations are consistent with statements made in this initiative of the WMP as described in Section 5.15.1 of [the SVM] audit.</p>	<p>Insufficient- PG&E’s response admits the WMP does not describe the caveat in the procedural document regarding the EVM scope.²⁶ However, PG&E states that, “at the time of trim’ refers to the pre-inspector’s evaluation of whether the tree requires trimming to maintain compliance, per procedural guidance.”²⁷ Energy Safety disagrees with PG&E’s interpretation that clearance “at the time of trim” means at the time of pre-inspection. “At the time of trim” means the time at which trimming occurs (i.e., EVM scope is for 12-foot clearances from the conductors when tree crews perform trimming work). Energy Safety finds PG&E’s response did not sufficiently address the Corrective Action.</p>
<p>6b. PG&E shall a) state whether it started this process with other California utilities in 2020, b) if not, provide an explanation of why, c) if it did start this process, explain why it did not provide the documentation as requested in DR-063-SVM-20220119, and d) detail the steps it is taking to ensure that it is studying and assessing the need for and scope of the targeted species program with other California utilities consistent with statements made in this initiative of the WMP.</p>	<p>Insufficient- PG&E confirmed it did not start the process with other California utilities in 2020.²⁸ PG&E explained that this was because Southern California Edison Company (SCE) started the study before PG&E began the process. PG&E internally initiated the study and finished the study in 2022.²⁹ Energy Safety finds this reason for not beginning the study to be insufficient. Energy Safety finds that PG&E’s response did not sufficiently address the Corrective Action.</p>
<p>7. PG&E shall provide: a) a draft of the project plan and documented processes to support the development of central vegetation</p>	<p>Sufficient- PG&E provided Energy Safety with a project plan for a centralized vegetation inventory</p>

²⁶ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 14

²⁷ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 14

²⁸ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 15

²⁹ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 15

Corrective Action	Energy Safety’s Analysis of Response
<p>inventory system, b) documentation to outline the proof-of-concepts with vendors in 2021, c) an explanation of how it is implementing controls to ensure consistency across programs while it builds the central vegetation inventory system, d) a description of controls in place to migrate data from legacy databases, e) a list and description of supportive tools to help PG&E and contract vegetation management staff successfully transition to using the centralized vegetation inventory system, f) a timeline for completion, and g) the steps it is taking to ensure vegetation data is tracked in a manner consistent with statements made in this initiative of the WMP.</p>	<p>system,³⁰ the process it takes to ensure consistency across programs,³¹ and the controls in place to migrate the data.³² Additionally, PG&E provided the training courses and other supportive tools used by internal and external staff in preparation for using the centralized system.³³ Energy Safety finds this response sufficiently addressed the Corrective Action.</p>
<p>8. PG&E shall a) state whether it has a process, protocol or procedure to ensure consistent use of vegetation management program names across its various documents (i.e., vegetation management procedural documents, WMP, etc.), b) if such processes, protocols, or procedures exist, provide Energy Safety with a copy of all such documents, or c) if such processes, protocols, or procedures do not exist, produce such documentation to ensure consistent naming convention in all documents (i.e. vegetation management procedural documents, WMP, etc.) moving forward.</p>	<p>Sufficient- PG&E explained how it implemented controls to changes in terminology for vegetation management in July 2022.³⁴ Energy Safety finds this response sufficiently addressed the Corrective Action.</p>

³⁰ Attachment 12_5.3.5.19_7a_One Veg High Level Project Plan.xlsx

³¹ PGE 2020 SVM Audit Corrective Action Plan.pdf, pages 16 and 17

³² PGE 2020 SVM Audit Corrective Action Plan.pdf, page 17

³³ PGE 2020 SVM Audit Corrective Action Plan.pdf, pages 18 and 19

³⁴ PGE 2020 SVM Audit Corrective Action Plan.pdf, page 20

4. CONCLUSION

After reviewing PG&E's response to the Corrective Actions, Energy Safety finds that PG&E sufficiently addressed nine of the 12 Corrective Actions. Despite having remaining insufficient Corrective Action responses, Energy Safety finds that PG&E substantially complied with the substantial portion of the vegetation management requirements in its 2020 WMP.³⁵ However, Energy Safety expects PG&E to continue to improve in the insufficient areas.

³⁵ Pub. Util. Code, § 8386.3(c)(5)(C).

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