

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



July 6, 2021

GI-2020-06-PGE-29-08

Ms. Christine Cowsert, VP, Gas Asset Management and System Operations  
Pacific Gas and Electric Company  
6121 Bollinger Canyon Road  
San Ramon, CA 94583

SUBJECT: General Order 112-F Inspection of PG&E's Transmission Integrity Management Program – City of Lafayette Closure Letter

Dear Ms. Cowsert:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission (CPUC) reviewed Pacific Gas and Electric Company's (PG&E) response letter dated June 10, 2021, that addressed the findings identified during the General Order (GO) 112-F Transmission Integrity Management Program (TIMP) inspection from June 22-26, 2020, and December 14-18, 2020.

A summary of the inspection findings documented by SED, PG&E's response to our findings, and SED's evaluation of PG&E's response taken for each finding are outlined for the one violation, two concerns and two recommendations in this letter.

This letter serves as the official closure of the 2021 GO 112-F Inspection of PG&E's TIMP – City of Lafayette.

If you have any questions, please contact Paul Penney at (415) 703-1817 or by email at [Paul.Penney@cpuc.ca.gov](mailto:Paul.Penney@cpuc.ca.gov).

Sincerely,

A handwritten signature in blue ink that reads "Dennis Lee".

Dennis Lee, P.E.  
Program and Project Supervisor  
Gas Safety and Reliability Branch  
Safety and Enforcement Division

**Enclosure:** Post-Inspection Written Preliminary Findings

cc: Susie Richmond, PG&E,  
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# Post-Inspection Written Findings

**Dates of Inspection:** 6-22-20→6-26-20 and 12-14-20→12-18-20

**Operator:** PACIFIC GAS & ELECTRIC CO

**Operator ID:** 15007 (primary)

**Inspection Systems:** The City of Lafayette + Two Mile Buffer

**Assets (Unit IDs) with results in this report:** Lafayette TIMP+ Two Mile Buffer

**System Type:** GT

**Inspection Name:** Lafayette TIMP Inspection

**Lead Inspector:** Paul Penney

**Operator Representative:** Glen Allen, et. All

## Unsatisfactory Results

### Integrity Management : High Consequence Areas (IM.HC)

Question 10. Do records indicate identification of identified sites being performed as required?

References 192.947(d) (192.903, 192.905(b))

Assets Covered Lafayette TIMP+ Additional Items (Lafayette TIMP)

Issue Summary **Violation:**

PG&E has a process for finding identified sites as defined in 192.903. However, PG&E failed to find the Girl Scout Camp in Lafayette and identify it as an identified site. PG&E is therefore in violation of Title 49, Code of Federal Regulations, Section 192.905(b)(1). PG&E found process improvements to help locate identified sites in the future (PG&E data request response 13843.01, Rev01). No additional new identified sites have been found within the city of Lafayette plus the two-mile buffer.

As noted by PG&E during the audit, the Girl Scout Camp was found to be an identified site in 2019. However, the Girl Scout Camp should have been identified much sooner than 2019. The transmission pipe associated with the Girl Scout Camp will be integrity assessed in 2022.

#### PG&E's Response:

In order to comply with 49 CFR 192.903, PG&E reviews all areas within the potential impact radius (PIR) of all gas transmission pipelines annually to find structures intended for human occupancy and identified sites. Elements of this process include an annual review of all care facility licensing data, a review of aerial photography for changes to land use or structures, and several other processes defined in TD-4127P-06. This updated data is used each year to analyze the gas transmission system for changes to high consequence area (HCA) designations.

In order to comply with 49 CFR 192.905(b), PG&E manages a dynamic structures and outdoor public assembly spatial dataset (“structures database”). This dataset is updated on an ongoing basis to support the annual HCA Study. In order to ensure compliance with relevant codes and procedures each year, PG&E collects aerial photography and other remote sensing data, aerial and ground Patrol reports and data, California care facility licensing data, parcel land use data, customer connected equipment data, and other data as defined in TD-4127P-06. These data are reviewed, additional manual review and field investigation is conducted as needed, and the structures database is updated. This updated data is used each year to analyze the gas transmission system for changes to HCA designations. In addition to these data inputs and change review processes, PG&E continues an ongoing quality control (QC) review of non-residential structures and outdoor public assembly areas. This QC involves manual review of available aerial and street view imagery, online land use information such as Google and Yelp, and field investigation as needed, with the goal of reviewing non-residential sites for change over time.

Actions taken since 2019:

1. PG&E-acquired land use data (“parcel data”) was queried during the 2020 annual HCA review for the term “Scout” in order to confirm no land was being used for the purpose of Girl/Boy Scout Camp activities near PG&E gas transmission pipelines. Previously, queries were limited to Land Use type, which in the case of the Lafayette Girl Scout Camp parcel was miscategorized in publicly available data as “Farm”. No additional identified sites were found near PG&E’s transmission pipeline system as a result of this query.
2. PG&E continues to work with state and local authorities to ensure accurate identified site designations. The annual process involves the acquisition and review of licensed care facility data. Since 2019, PG&E has worked with the Department of Social Services to better understand care facility data and expand how it is leveraged to comply with 192.905.

Actions planned for the future:

1. The transmission pipe associated with the Girl Scout Camp specific to line 191-1 will be integrity assessed in 2022.

**SED’s Evaluation:**

PG&E’s response is adequate and addresses this violation.

## Concerns

### Integrity Management : Preventive and Mitigative Measures (IM.PM)

Question 1. Does the process include requirements to identify additional measures to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a high consequence area?

References 192.935(a)

Assets Lafayette TIMP+ Additional Items (Lafayette TIMP)  
Covered

Issue **Concern:** Per the Summary of Findings Section of the Vertical Displacement Study, continue to collect Summary data to confirm the findings. SED believes PG&E should collect this data both for data within the study parameters (specific tree type, tree size range and range of pipeline depths of cover) and data outside the study parameters (i.e., larger trees, shallower depths of cover, etc.).

**Recommendation #1:** If PG&E has not already done so, PG&E should incorporate into its Right-of-Way (ROW) standard the recommendations for a modified vegetation encroachment management approach from the "PG&E Briones Pipe Span Addendum" report for the following locations:

- (1) The Buckeye Ranch Trail and Girl Scout Camp on Line 191-1
- (2) Other pipeline spans outside of the City of Lafayette in High Consequence Areas (HCAs) and non-HCAs within a high fire threat areas, having similar material characteristics (pipe material and coating), and other factors that PG&E deems appropriate.

**Recommendation #2:** Consider how PG&E can include fire threat risk as one factor to consider when prioritizing leaks for repair.

### **PG&E's Response:**

#### **Concern #1**

As identified in the "Pipeline Pathways Program Tree Cutting-Vertical Displacement Study", dated April 27, 2015, provided in week 2 audit data request #51, Index 14447-01, the removal of trees up to 64 inch DBH (Diameter at Breast Height) with no restrictions and trees over 64 inch DBH with sufficient depth of cover is not expected to adversely affect the integrity of an in-service pipeline. PG&E will continue to follow safe tree cutting practices as prescribed per the incremental (top down) tree removal approach to ensure pipeline integrity and public safety. This will serve to prevent any adverse impact to the integrity of an in-service pipeline. PG&E will evaluate SED's recommendation for continued collection of data related to the analysis.

#### **SED's Evaluation:**

PG&E's response is adequate. However, Gas Safety and Reliability Branch (GSRB) staff strongly encourages PG&E to continue to collect data on an opportunity basis.

#### **Recommendation #1:**

PG&E worked with Exponent to investigate and develop recommendations for modified vegetation encroachment management practices for exposed spans as referenced in the "PG&E Briones Pipe Span Addendum" report dated March 30, 2020. The investigations focused on the examples at the Buckeye Ranch Trail and Girl Scout Camp on Line 191-1. This analysis provided recommendations to be applied more broadly to the entire PG&E service territory. PG&E plans to include such findings and recommendations into the next revision of TD-4490S ROW standard as guidelines for consideration since there are limitations in land or property ownership rights where PG&E may not be able to enforce such management practices. The next revision of TD-4490S ROW standard is estimated to be completed in the first quarter of 2022.

#### **SED's Evaluation:**

PG&E's response is adequate and addresses this recommendation.

#### **Recommendation #2:**

PG&E has developed a Utility Procedure, TD-4911P-03, "Gas Transmission (GT) Wildfire Response" which provides guidance to gas operations personnel in the management of gas transmission (GT) assets impacted by wildfires. This utility procedure is based on lessons learned from previous wildfire efforts and is intended to be a best practice for future wildfire efforts. It is applicable to all GT assets, including pipes, valve lots, and gas gathering. This utility procedure is intended for use when a wildfire has the potential to impact GT assets, including activation of an operations emergency center (OEC) or gas emergency center (GEC). This procedure contains adequate details on managing and prioritizing potential leaks in areas impacted by wildfires. Please note that all hazardous leaks are prioritized on an emergent basis, system wide, irrespective of location.

### **SED's Evaluation:**

PG&E's response is adequate and addresses this recommendation.

### **Integrity Management : Risk Analysis (IM.RA)**

Question 3. Do records demonstrate that all potential threats to each covered pipeline segment have been identified and evaluated?

References 192.947(b) (192.917(a), 192.917(e), 192.913(b)(1))

Assets Covered Lafayette TIMP+ Additional Items (Lafayette TIMP)

#### **Issue Summary Concern:**

During SED's afternoon meeting with PG&E on 6-24-20, PG&E stated that during tree removal, stumps and/or roots were not removed from directly over the pipeline. PG&E defines directly over the pipeline as within 5 feet of the pipeline.

As discussed during the meeting, tree roots could potentially damage the pipe coating and cause shielding of the cathodic protection. Per Title 49, Code of Federal Regulations, Section 192.917(a), PG&E is required to ***"...identify and evaluate all potential threats to each covered pipeline segment. Potential threats that an operator must consider include, but are not limited to, the threats listed in ASME/ANSI B31.8S (incorporated by reference, see §192.7), section 2..."***

After the first week of the audit, PG&E provided SED staff with a report entitled: **"Index 14447-02\_Final Report PGE Tree Root Interference Assessment April 27, 2015."** This report concludes there is a high correlation of tree roots causing damage to pipe coatings (Summary of Findings, Section C.1, page iv), but *"The ability to cathodically protect buried pipe does not appear to be adversely affected by tree roots."* (Summary of Findings, Section C.1, page v) As a result, shielding of the pipeline does not appear to happen.

In addition, the report also concludes: *"There was insufficient data collected in this study to draw any conclusions as to whether the presence of dead tree roots in contact with the pipe has any impact on pipeline integrity."* (Summary of Findings, Section C.1, page v)

As pointed out in the report, the results and conclusions are based on a limited data set (53 trees). SED staff believes PG&E should develop a plan and continue to collect data to validate the results and conclusions of the report mentioned above.

#### **PG&E's Response:**

PG&E evaluates the threat for vegetation per Utility Procedure, TD-4490P-03 "Vegetation Encroachment Site-Specific Risk Analysis" for all pipeline segments on its transmission pipeline system in compliance with 192.917(a) and (b). The results from the analysis performed are incorporated into PG&E's data integration and risk assessment process per Utility Procedure, TD-4810P-01, Attachment 3 "Transmission Integrity Management Program Risk Algorithm for Steel Pipe" under the Weather Related and Outside Forces threat section 3.11.8.3.

PG&E developed TD-4490P-03 based off the evidence collected from the "Tree Root Interference Assessment" report, Volume 1, dated April 27, 2015, provided in week 2 audit data request #52, Index 14447-02. This report identified the following on numbered page 13: "the potential effect of tree roots on CP effectiveness has been evaluated specifically related

to CP shielding, CP effectiveness, and reliability of above ground surveys. Analysis of the available data suggests the following:

- No evidence of CP shielding was identified. Tree roots are conductive and thereby reduce the potential for CP shielding. Based upon the excavation results, there was no evidence that corrosion was any more significant at tree root contact points when compared to adjacent areas of coating damage and external corrosion.
- Above ground surveys are not significantly affected by the presence of tree roots. In most cases, above ground surveys correlated with excavation results where coating holidays were observed at sites identified by above ground surveys. Likewise, intact coating was observed at sites where above ground surveys did not produce an indication.
- The ability to cathodically protect and monitor buried pipe does not appear to be adversely affected by tree roots. Since the tree roots do not apparently shield CP, above ground surveys are capable of detecting coating holidays, and calcareous deposits were identified on the pipe, there was no evidence that tree roots adversely affect cathodic protection. However, it should be recognized that cathodic protection is designed to mitigate corrosion but is not always able to eliminate corrosion in cases where the external coating has failed.
- While CP effectiveness and CP monitoring are apparently not affected by the presence of tree roots, it is evident that tree roots damage the external coating such that CP is required to mitigate corrosion.”

PG&E performs data gathering, integration and risk assessment per Utility Standard, TD-4810S “Gas Transmission Integrity Management Program”, section 7 “Risk Assessment”. As part of the TIMP, all excavations performed document any findings identified during the direct examination process (which includes identification of issues from tree roots) on the H-Form (Form TD-4810P-18-F01, “Form H -Direct Examination Data Sheet”). This information is included as part of PG&E’s continual evaluation process documented in Utility procedure TD-4810P-17 “Continual Evaluation” and is integrated into the annual risk and threat assessment process as described in Utility Procedure TD-4810P-01 “Risk Management”. As PG&E performs inspections and integrity assessments, data is integrated into the risk assessment process as part of 192.917 (b) and (c).

**SED’s Evaluation:**

PG&E’s response is adequate. However, GSRB staff will be following up on data collection of trees adjacent to or directly over the pipeline during future TIMP audits.