

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



October 12, 2023

GI-2023-06-PGE-29-09

Ms. Christine Cowsert
Senior Vice President
Gas Engineering
Pacific Gas and Electric Company
6121 Bollinger Canyon Road
San Ramon, CA 94583

SUBJECT: SED Closure Letter - General Order 112-F Gas Inspection of Pacific Gas & Electric Company's Distribution Integrity Management Program (DIMP) – Follow up and review of 2022 changes

Dear Ms. Cowsert:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission (Commission) reviewed Pacific Gas & Electric Company's (PG&E) response letter dated September 22, 2023 for the findings identified during the General Order 112-F inspection of Distribution Integrity Management Program (DIMP). The inspection took place between June 26-27, 2023.

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 identified violation is attached.

This letter serves as the official closure of the 2023 GO 112-F inspection of PG&E's Distribution Integrity Management Program (DIMP) and any matters that are being recommended for enforcement will be processed through the Commission's Citation Program or a formal proceeding.

If you have any questions, please contact Sikandar Khatri at (415) 703-2565 or by email at Sikandar.Khatri@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

cc: Kristina Castrence, PG&E
Frances Yee, PG&E
Susie Richmond, PG&E Gas Regulatory Compliance
Barbara Patterson, PG&E Gas Regulatory Compliance
Terence Eng, SED
Claudia Almengor, SED

Summary of Inspection Findings

Dates of Inspection: June 26-27, 2023

Operator: PACIFIC GAS & ELECTRIC CO

Operator ID: 15007 (primary)

Inspection Systems: Distribution

Assets (Unit IDs) with results in this report: Main Office (Specialized Inspections) (86283)

System Type: GD

Inspection Name: 2023 PG&E DIMP Inspection

Lead Inspector: Sikandar Khatri

Operator Representative: Barbara Patterson

Unsatisfactory Results

Gas Distribution Integrity Management : Knowledge of the System (GDIM.KN)

Question Title, ID System Knowledge - Gaps, GDIM.RA.GAPS.P

Question 2. Does the plan contain procedures to identify additional information that is needed to fill gaps due to missing, inaccurate, or incomplete records?

References 192.1007(a)(3)

Assets Covered Main Office (Specialized Inspections) (86283 (29))

Issue Summary PG&E's Utility Procedure TD-4850P-01 rev 4 section 4.3.2 states in part:

"DIMP personnel review each data source by assessing the following information: ...
"Completeness of data""

However, PG&E does not have a process describing how it determines that the "Completeness of data" is achieved and if not, the procedure used to identify missing, inaccurate or incomplete records.

PG&E's Utility Procedure TD-4850P-01 rev 4 section 4.5.1 defines "Missing Information" as:

"DIMP defines missing information as GD GIS main & service asset attributes that are needed for the risk assessment process (see Attachment H, Appendix B) but are recorded as unknown or missing in GD GIS (e.g., null values or a 01/01/1800 installation date)."

Attachment H "Threat Identification and Risk Evaluation", Appendix B Revision 10 consists of a table of the database structure of the "2022 RiskFinder Data Sources" & assigned Subject Matter Expert (SME) (effective date 7/29/2022), but does not include a methodology to confirm or cross-reference the integrity of the data & therefore can not determine if the data sets are complete. Per follow-up data request by SED, PG&E stated that the "2022 RiskFinder Data Sources" includes all the threat categories (i.e. natural forces, excavation, etc.).

PG&E's Utility Procedure TD-4850P-01 rev 4 section 4.5.1(a) states:

"Data from Leak repair, Inspection & Gas Quarterly Incident Report (A-Form) (Form TD-5100P-01-F01), which must be completed for leak repairs, or the Pipe Inspection Form (Form TD-5100P-01-F03), which must be completed when a section of buried pipeline is exposed for non-leak reasons, may be used in the risk model in place of missing main or service attributes."

PG&E's Utility Procedure TD-4850P-01 rev 4 section 4.5.1(a) identifies which forms must be completed & a method for substituting incomplete records for leak repairs in the risk model, but omits the other threat categories (i.e. Natural Forces, Excavation damage, Incorrect operations, etc.).

Title 49 Code of Federal Regulations (CFR) §192.1007(a)(3) states, "Identify **additional information** needed and provide a plan for gaining that information over time through normal activities conducted on the pipeline (for example, design, construction, operations or maintenance activities)." Furthermore, this **additional information** is needed to fill gaps due to missing, inaccurate, or incomplete records.

Therefore, PG&E is in violation of Title 49 CFR §192.1007(a)(3) for not having procedures to identify additional information that is needed to fill gaps due to missing, inaccurate, or incomplete records.

PG&E's Response:

For clarity, distinction of the three (3) separate items nested within the original "Issue Summary" were formatted with a letter representing the order listed. A response to each of the three items is provided below:

(A) PG&E respectfully disagrees that a method to identify missing or incomplete records is not in the plan. Per TD-4850P-01(Att-01), section 4.5.1, "DIMP defines missing information as GD GIS main and service asset attributes that are needed for the risk assessment process (see Attachment H, Appendix B) but are recorded as unknown or missing in GD GIS (e.g., null values or a 01/01/1800 installation date)."

Under Attachment H of the DIMP Manual (Att-02), PG&E's process for checking for missing, null, or invalid values in the attributes used in the DIMP risk model is performed using a QC script, which is an automated tool written using Python code. The specification for the checks performed are listed in Attachment H, Appendix B of the DIMP Manual (Att-03), tab "spec of input QC script RF2022" (Att-03 pp. 7-19). The script generates a report that shows the quantities of records that are missing, null, or invalid. Attachment H, section 3.8.4 specifies the documentation of the input data sources and fields used in the DIMP models and the data quality statistics of these fields.

PG&E plans to strengthen and further clarify its methodology for determining the completeness and quality of the fields used by its DIMP risk model in the next revision of Attachment H and TD-4850P-01

(B) Section 4.5.1(a) of TD-4850P-01 provides a method to fill in incomplete records, not for, but with data gathered on a given main or service during a leak repair. For example, field observed locations of bare steel pipeline are used to update the coating type of the steel main at that location, which was previously missing or unknown for certain steel segments in GD GIS.

PG&E respectfully disagrees threat categories are omitted and reiterates its response to SED's follow-up question regarding Data Request 38 on August 8, 2023, where PG&E

affirmed that all eight (8) threats are addressed during the completion of the Leak Repair A- form [i.e., TD-5100P-01-F01 (Att-04)].

Table 1 below lists the mapping of the reported leak causes on the TD-5100P-01-F01 to the eight (8) threat categories. Additional information on mapping of leak causes to sub threats and threats can be found in Attachments J (Att-05) and H (Att-03) of the DIMP Manual.

Table 1: Mapping of Reported Leak Cause to Threat Categories

Threat Category	Leak Cause
Corrosion	<ul style="list-style-type: none"> • Atmospheric Corrosion • External Corrosion • Internal Corrosion • Stress Corrosion Cracking
Excavation damage	<ul style="list-style-type: none"> • Dig-in/ Excavation • Previously Damaged (if below ground)
Material, Weld, or Joint Failure	<ul style="list-style-type: none"> • Cast Iron Fracture • Compression Coupling • Material Failure • Plastic crack failure • Plastic embrittlement • Weld failure
Incorrect Operation	<ul style="list-style-type: none"> • Incorrect Operation • Construction defect
Natural Forces	<ul style="list-style-type: none"> • Damage by Earth Movement • Damage by Heavy Rains/Flood • Earthquake • Lightning • Root damage • Other natural forces
Other Outside Forces	<ul style="list-style-type: none"> • Damage by Electrical Facility • Damage by Third Party • Vehicle • Deliberate Acts/vandalism • Rodent • Fire or Explosion in Company Facility • Fire or Explosion in Customer Facility • Previously damaged (if above ground)
Equipment Failure	<ul style="list-style-type: none"> • Equipment malfunction • No/Deteriorated Pipe Dope
Other	<ul style="list-style-type: none"> • Unknown (Replacing Facility) • Other

(C) PG&E has various means for collecting additional information to fill gaps due to missing, inaccurate, or incomplete records. This includes Operations and Maintenance (O&M) activities such as the use of leak repair and inspection data to supplement missing main and service attributes, as specified in TD-4850P-01, Section 4.5.1(a).

Other means for collecting additional information includes performing record reviews and performing field verification on aboveground assets or on belowground assets through targeted digs to identify or validate asset characteristics.

In the next revision of Utility Procedure TD-4850P-01, PG&E will strengthen guidance specifying the creation of reasonably feasible plans, based on the means described above, to gain information over time to address missing, inaccurate, or invalid attributes identified as necessary for the DIMP risk model.

SED's Response:

SED has reviewed the response. In the audit next year, SED will review and discuss the changes that PG&E has proposed in response 'C' that will be made to the procedure TD-4850P-01 and other documents. PG&E should explain in TD-4850P-01, the procedure (sources and methods used) and the process of addressing missing, inaccurate data or invalid attributes. Additionally, it is suggested that the 'DIMP Manual' include an introductory document with a brief description of the function of each attachment and a flow chart showing the sequence of their use in execution of the DIMP model.

Question Title, ID System Knowledge - Information Needed, GDIM.RA.INFONEEDS.P

Question 3. Do the procedures specify the means to collect the additional information needed to fill gaps due to missing, inaccurate, or incomplete records (e.g., O&M activities, field surveys, One-Call System, etc.)?

References 192.1007(a)(3)

Assets Covered Main Office (Specialized Inspections) (86283 (29))

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Therefore, PG&E is in violation of Title 49 CFR §192.1007(a)(3) for not having adequate procedures that specify the means to collect the additional information needed to fill gaps due to missing, inaccurate, or incomplete records (e.g., O&M activities, field surveys, One-Call System, etc.).

PG&E's Response:

Please see response to Unsatisfactory Result 1 above.

SED's Response:

Please see response to Unsatisfactory Result 1 above

Concerns

No Preliminary Concerns.