

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



May 11, 2020

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

GI-2020-03-PGE-29-11

SUBJECT: SED's Closure Letter for General Order (GO) 112-F Gas Inspection of PG&E's Welding and Joining Program, Procedures and Records

Dear Ms. Cowsert:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission reviewed Pacific Gas & Electric Company's (PG&E) response letter dated April 30, 2020 for the findings identified during the General Order 112-F inspection of PG&E's Welding and Joining Program, Procedures and Records from March 2 to March 13, 2020.

A summary of the inspection findings documented by the SED, PG&E's response to SED's findings, and SED's evaluation of PG&E's response taken for each identified finding is attached. This letter serves as the official closure of the 2020 GO 112-F Inspection of PG&E's Welding and Joining Program, Procedures and Records.

Thank you for your cooperation in this inspection. If you have any questions, please contact James Zhang at (916) 928-2106 or by email at James.Zhang@cpuc.ca.gov.

Sincerely,

A handwritten signature in blue ink, which appears to read "Terence Eng".

Terence Eng, P.E.
Program Manager
Gas Safety and Reliability Branch
Safety and Enforcement Division

cc: Susie Richmond, PG&E
Vincent Tanguay, PG&E
Claudia Almengor, SED
Dennis Lee, SED

Post-Inspection Written Findings

Dates of Inspection: 03/02/20 – 03/13/20

Operator: PACIFIC GAS & ELECTRIC CO

Operator ID: 15007 (primary)

Inspection Systems: PG&E Welding and Joining Transmission

Assets (Unit IDs): PG&E Welding and Joining (Specialized Inspection (86283)

System Type: GT

Inspection Name: PG&E Welding and Joining - Transmission

Lead Inspector: James Zhang

Operator Representative: Alberta Ekuinam

Unsatisfactory Results

No Preliminary Findings.

Concerns

Design and Construction: Construction Weld Inspection (DC.WELDINSP)

1. Question Does the process require welds that are unacceptable to be removed and/or repaired as Text specified by 192.245?

References 192.245 (192.303)

Assets Covered PG&E Main Office Welding and Joining (Specialized Inspection (PG&E Welding & Joining -)

Issue Summary During procedure review, SED found Utility Procedure TD-4160P-20 references the obsolete procedure TD-4100P-05 "Selection of Steel Gas Pipeline Repair Methods" which has been replaced by TD-4820P-05. PG&E stated that the next planned review is April 2020. Please review the Utility Procedures for this reference and provide SED with an update when the revision(s) are complete.

PG&E's Response PG&E recognizes this concern and has taken the following action:

The reference to Utility Procedure TD-4100P-05 is no longer needed in Utility Procedure TD-4160P-20. A revision is presently being processed to remove the reference and will be complete prior to October 2020.

SED's Conclusion SED has reviewed PG&E's response and accepts the corrective actions that it has articulated and implemented. However, SED may review the records of the corrective action during future inspections.

Design and Construction: Construction Welding Procedures (DC.WELDPROCEDURE)

2. Question Does the operator have written specifications requiring qualified welding procedures in Text accordance with 192.225?

References 192.225

Assets Covered PG&E Main Office Welding and Joining (Specialized Inspection (PG&E Welding & Joining -)

Issue Summary SED reviewed Welding Procedure Specifications for butt welds, such as 232Sc-G, and found they typically include text similar to, "Clamp Type: External when required: Remove after 25% of Root Pass under low-stress conditions; Remove after 50% of Root Pass under moderate-stress conditions. Internal when required: Remove after 100% of Root Pass completed."

SED recognizes that the WPS is available on site during welding, and welders are trained to follow the WPS, however, the WPS does not actually state when lineup clamps are required. TD-4160P-20, section 8.13, states, "Lineup clamps must be used when joining pipe 3 inches in nominal diameter and above." However, copies of TD-4160P-20 were not present during the welding practice that SED observed.

SED recommends modifying WPS documents to state when lineup clamps are required, or to refer the welder to the appropriate section of TD-4160P-20.

PG&E's response PG&E recognizes this concern and has taken the following action:

Utility Procedure TD-4160P-20 and other related welding procedures are reviewed in detail during the classroom portion of apprentice welder training courses at the Winters Training Academy. During this training, attendees learn requirements for use of line-up clamps while making production welds in the field. Copies of TD-4160P-20 and the welding procedures are available for reference by all trainees via i-Pads provided to each student throughout the duration of their training. However, based on this recommendation a printed copy of applicable welding standards and welding procedures has been made available in the weld shop for reference by trainees.

Additionally, the WPS documents will be revised as recommended to state when line-up clamps are required prior to December 2020.

SED's Conclusion SED has reviewed PG&E's response and accepts the corrective actions that it has articulated and implemented. However, SED may review the records of the corrective action during future inspections.

Generic Questions: Generic Questions (GENERIC.GENERIC)

3. Question Generic question - please provide context in result notes.

Text

References N/A

Assets Covered PG&E Main Office Welding and Joining (Specialized Inspection (PG&E Welding & Joining -)

Issue Summary SED reviewed the Welding Procedure Specification Table of several welding projects and found that the "Joint Design Detail" column did not specify the procedure(s) from which the Appendix originated. In two of the projects provided from "115 GT Projects (weld repair)", the Welding Procedure Specification Tables listed references to Appendixes & Figures as follows:

PM 84008945 (from: *84008945_Procedure-Welding_0402-01.pdf*) reference numbers 1-4 that are not included in the document:

Appendix 3, Fig. 4

Appendix 1, Fig. 1

Appendix 2, Fig. 5

Appendix 3, Fig. 4

PM 84010100 (from: *84010100_Procedure-Welding_X6460.pdf*) reference numbers 1 & 2 that are not included in the document:

Appendix 1, Fig. 1

Appendix 3, Fig. 4

SED recommends modifying the "Joint Design Detail" column on the Welding Procedure Specification Table to refer the welder to Appendixes & Figures of the appropriate procedure(s).

PG&E's response PG&E recognizes this concern and has taken the following action:

The Welding Procedure Specification Table has been revised to include references to Utilities Procedures TD-4160P-20 and TD-4160P-26 in the "Joint Design Detail" column as recommended which can be seen the attached file: "*Att 1 - WPS Table_Rev-6.pdf*"

SED's Conclusion SED has reviewed PG&E's response and accepts the corrective actions that it has articulated and implemented. However, SED may review the records of the corrective action during future inspections.

Post-Inspection Written Findings

Dates of Inspection: 03/02/20 – 03/13/20

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Operator ID: 15007 (primary)

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System Type: GD

Inspection Name: PG&E Welding and Joining - Distribution

Lead Inspector: James Zhang

Operator Representative: Alberta Ekukinam

Unsatisfactory Results

No Preliminary Findings.

Concerns

No Preliminary Concerns.