PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

March 18, 2024

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-2023-08-PGE-29-20

SUBJECT: General Order (G.O.) 112-F Compliance Inspection of Pacific Gas and Electric's Pipeline Construction and Material Traceability Audit.

Dear Ms. Cowsert:

The Safety Enforcement Division (SED) of the California Public Utilities Commission conducted a G.O. 112-F inspection of Pacific Gas and Electric Company's (PG&E) Pipeline Construction and Material Traceability records on August 21 through 25 and August 28 through September 1, 2023. SED staff reviewed PG&E's written construction procedures and documentation of completed construction projects in pursuant to G.O. 112-F, Reference Title 49, Code of Federal Regulations (CFR), Part 192. SED reviewed PG&E's construction project records from 2019 to 2022.

SED's staff noted one probable violation and five concerns which are described in the enclosed "Summary of Inspection Findings". Within 30 days of your receipt of this letter, please provide a written response indicating the measures PG&E took to address the probable violation and concerns noted.

If you have any questions, please contact Yi (Rocky) Yang at (415) 940-8639 or by email at yi.yang@cpuc.ca.gov.

Sincerely,

Terence Eng

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

Enclosure: Post-Inspection Written Preliminary Findings
cc: Susie Richmond, PG&E Gas Regulatory Compliance
Paul Camarena, PG&E Gas Regulatory Compliance
Matthewson Epuna, SED
Claudia Almengor, SED

# Summary of Inspection Findings

## Unsatisfactory

1. G.O. 112-F Reference Title 49 CFR, Part 192 Section 192.205 states in part:

   §192.205(a) states, in part:

   "*For steel transmission pipelines installed after July 1, 2020, an operator must collect or make, and retain for the life of the pipeline, records documenting the manufacturing standard and pressure rating to which* ***each valve*** *(emphasis added) was manufactured and tested in accordance with this subpart…"*

SED reviewed PG&E's construction documentation for project S-1137 and determined that the 2-inch regulators (2'' X 1" Mooney Flow Grid) V-6 and V-8 noted on the as-built drawing were not in the Component Receiving Log or Valve Receiving Log that PG&E provided to SED during the audit. SED requested PG&E to provide the receiving log for those regulators, but PG&E was unable to provide a Component Receiving Log that showed the regulator valves V-6 and V-8.

PG&E's representative explained that the regulator valves were not included in the PG&E's Material Traceability Scope log because components that are 2 inches or less were not required to be documented. PG&E stated that its material traceability scope outlined in Standard TD-4030S covered only components greater than 2 inches with yield strength grades of 42,000 psi or greater. Also, PG&E stated that it did not classify the regulators as valves, hence, PG&E does not have to record the regulators in the component receiving log. However, PG&E Standard TD-4030S requires material traceability record for valves of all diameters, and the specification sheet from the manufacturer of the 2'' X 1'' Mooney Flow-Grid regulator describe it as a "Pilot Operated Valve". The As-Built Drawing did not match the Bill of Materials (BOM).

SED consulted PHMSA's subject matter expert on whether a Pilot Operated Regulator is a Valve and falls under the Valve category for material traceability. PHMSA's response was "Yes, the 2" x 1" Mooney Flow Grid regulator is used to control flow and pressure and hence it is a valve."

PHMSA indicated that the Mooney Flow Grid regulator is a valve. Therefore, PG&E is in probable violation of G.O. 112-F Reference Title 49 CFR, Part 192 Section 192.205(a) for not documenting each valve in its Component Receiving Log as part of the as built records.

## Concerns

**1)** PG&E's Pipeline Material Management Standard TD-4030S Table 1. Material Traceability Record Requirements, the applicable range for Flanges, fittings, branch connections, extruded outlets, anchor forgings, and other components (third category) specified Outer Diameter (OD) greater than 2 inches with material yield strength grades of 42,000 psi (X42) or greater.

49 CFR Part 192, §192.205(a) states: "*Flanges, fittings, branch connections, extruded outlets, anchor forgings, and other components with material yield strength grades of 42,000 psi (X42) or greater and with* ***nominal diameters*** *of greater than 2 inches must have records documenting the manufacturing specification in effect at the time of manufacture, including yield strength, ultimate tensile strength, and chemical composition of materials*."(emphasis added)

The applicable diameter range of components in the third category in Table 1 of PG&E standard TD-4030S should be Nominal Diameter (ND) greater than 2 inches instead of Outer Diameter (OD) pursuant to Part 192 Section 192.205(a). PG&E should make the correction in Table 1 of the TD-4030S. Furthermore, SED suggests PG&E document the regulator manufacturing standard and pressure rating on the weld map.

**2)** In PG&E's Material Verification Procedure TD-4125P-11 Sections 1.4, 2.1, 3.1.1, 4.2.1 and 5.1.1, PG&E used "OD" to represent "nominal outside diameter" as in Part 192 Section 192.607(f)(2)(i).

49 CFR Part 192, Sections 192.205(a) and (b) related to material traceability refers to "nominal diameters" for covered pipe components, but Part 192 Section 192.607(f)(2)(i) related to material verification refers to "nominal outside diameter" for covered pipe components.

SED consulted PHMSA for clarification on the differences between the two terms "nominal diameters" and "nominal outside diameter" as used in Section 192.205 and Section 192.607, respectively. PHMSA's response was that "Nominal Diameter greater than 2 inches and Nominal Outside Diameter larger than 2 inches mean pipes greater than 2.375-inches Outside Diameter pipe". SED concluded that the "Nominal Outside Diameter" written in Section 192.607 is synonymous with "Nominal Diameters" written in Section 192.205 and should be referenced as "ND". PG&E should replace references to "OD" in TD-4125P-11 to read "ND".

**3).** SED observed inconsistency of save-a-valve (SAV) documentation on PG&E weld maps. Some specifications were filled out in the Description and others were not.

- In its documentation for Project R-965, PG&E did not assign any component numbers to six 2-inch SAVs on the final tie-in map, one at each of the following at joints: TI-104, TI-105, TI-67, TI-68, W-95 and TI-111. Instead, PG&E marked them as "FXXX". PG&E filled out the specifications in the Description.
- In its documentation for Project R-445, PG&E recorded three SAVs in the final tie-in map at joints TI-10, TI-11 and TI-7 with assigned component numbers F-11, F-12, and F-8, respectively. However, PG&E did not record the material specifications in the Description.

The job aid Weld Map example in PG&E's TD-4030P-03-JA02 has the SAV with complete component number F-6 and its specifications recorded in the Description.

SED is concerned that the inconsistency in PG&E's documentation of SAVs' specifications may cause some attributes that are currently flagged as "not known", may require material verification actions in the future because the "not known" attributes may be required to comply with Part 192, Section 192.607(f)(3) requirements.

SED recommends PG&E apply a consistent documentation practice that includes the ANSI rating or pressure rating for SAVs that are 2 inches or less and update the weld map instructions.

**4).** On the Project –R445 weld map, PG&E indicated the description of the save-a-valve F11 to be @ the 2:30 location. However, the as-built drawing description showed that the location of F11 was @10:30.

SED recommends PG&E verify the location of the save-a-valve F11 and make the final tie-in weld map description consistent with the as-built drawing.

**5).** Incomplete Component naming/description on a hydrotest weld map of R-445.

a. PG&E incorrectly described the location of the Save-a-valve F-25 as 0.5 feet from TW-122, instead of TW-121.
b. PG&E incorrectly recorded the save-a-valve installed on pipe P-111A as F- without a component number.
c. PG&E labelled pipe component P-100B twice in the hydrotest weld map (26.52' at STA 0+46.54 and 1.00' at STA 47+29.08). There was another section of 5.54 feet pipe incorrectly labelled P-100 instead of P-100E that was used for the hydrotest tie-in. In SED's data request (DR) #24, PG&E clarified that the 26.52 feet of P-100B should have been listed as P-100D. P-100 was cut out and used for fit-up at the tie-in location and became P-100C. P-100A, P-100B, and P-100D were cut out after the hydrotest and removed from the permanent pipe section and were not put into service.
d. Pipe section P-55 (28.17' at STA 46+12.28) was incorrectly labelled as P-55A.

PG&E's hydrotest weld map R-445 was completed on 10/17/2019. PG&E did not have guidelines for labeling of pipe components prior to the material labeling standard in TD-4030P-03, that went into effect on 10/19/2019. Those pipe sections/components on the hydrotest weld head that were not permanently installed on the pipeline, should be documented accurately with the component numbers and description of the pipe segments/sections.