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November 30, 2022

Mr. Terence Eng, P.E.,
Program Manager, Gas Safety and Reliability Branch,
Safety and Enforcement Division,
California Public Utilities Commission,
505 Van Ness Ave, 2nd Floor
San Francisco, CA 94102

Dear Mr. Eng:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission conducted a **General Order (G.O.)112-F Comprehensive Operation and Maintenance Inspection of Southern California Gas Company (SoCalGas)'s Southeast Mountain Pass Natural Gas Distribution Districts (Inspection Unit)**, starting September 19 through September 23 of 2022 for calendar years 2019 to 2021 and calendar years 2017 to 2018 for Fontana distribution district. SED used the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety's "Inspection Assistant Form" as a reference guide to conduct the inspection. SED reviewed records and conducted field inspections of SoCalGas pipeline facilities in the Beaumont, Fontana, Rim Forest, and San Bernardino distribution districts within the Inspection Unit. Also, SED's staff reviewed SoCalGas' Inspection Unit Operator Qualification program, which included field observations of randomly selected individuals performing covered tasks.

SED's staff identified zero (0) probable violations and identified two (2) areas of concern. Attached are SoCalGas' written responses for the requested two (2) areas of concern.

Please contact Alex Hughes at (949)697-2539 if you have any questions or need additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Alex Hughes", written over a light blue rectangular background.

Alex Hughes
Pipeline Safety and Risk Mitigation Manager

CC:

Gwen Marelli, SoCalGas
Randy Holter, SED/GSRB
Kan-Wai Tong, SED/GSRB
Mahmoud (Steve) Intably, SED/GSRB
Claudia Almengor, SED/GSRB

2022 SoCalGas Mountain Pass Audit Response

Concern(s)

Records: Operations and Maintenance (PRR.OM)

Question Title, ID Maintenance of Equipment Used in Joining of Plastic Pipe by Heat Fusion, MO.GM.EQUIPPLASTICJOINT.R

Question 36. Do records indicate equipment used in joining plastic pipe by heat fusion was maintained in accordance with the manufacturer's recommended practices or with written procedures that have been proven by test and experience to produce acceptable joints?

References 192.603(b) (192.756)

Assets Covered Southeast - Mountain Pass (87045 (62))

Issue Summary During Mountain Pass Area baseline records review, SoCalGas records did not indicate whether equipment used in joining plastic pipe by heat fusion was maintained in accordance with the manufacturer's recommended practices or with written procedures that have been proven by test and experience to produce acceptable joints. Specifically, there were no calibration records associated with Project Notification (PN) # 2041620932. SED stated its concern to SoCalGas, as 192.603(b) requires records of all procedures listed in 192.605 including 192.756. Per SoCalGas, there are no requirements for taking pictures or other methods of capturing and maintaining records of equipment used in joining plastic pipe by heat fusion. While SoCalGas and SED acknowledge that SoCalGas Gas Standard 184.0130 requires employees to use approved and calibrated IR thermometers, SED notes there is no method outlined in the written procedures to keep track of which IR thermometer was used for a given project. Without the ability to track IR thermometers used in each construction project, the IR thermometers' calibration records cannot be provided for review. Accordingly, IR thermometer calibration records were not provided for review during the inspection for projects such as PN # 2041620932. SED requested in data request DR-019 for SoCalGas to provide maintenance records of the equipment used in joining plastic pipe by heat fusion in accordance with the manufacturer's recommended practices for PN # 2041620932. SCG responded to SED DR-019, stating: "SoCalGas continues to explore both interim and longer- term solutions to capture information related to plastic joiners and type of joints. Identifying and selecting a viable solution includes many considerations. Some of which include technology reviews, training requirements, changes/impacts to current workforce procedures, overall risk analysis, deployment options and system sustainability with increased data entry/storage. Another key discussion topic revolves around data security/accuracy being that non-SoCalGas/SDG&E employees (contractors) who perform these tasks, will also be involved with this new solution. SoCalGas/SDG&E will continue our discovery and planning efforts and report back with a status update to SED by end of year (2022)".

SED recommends SoCalGas to develop and implement record keeping requirements to identify and record specific information (e.g., capital tool number,

calibration date) for calibrated equipment used in any given plastic pipe joining project, such as an additional or modified project form for matching said equipment to specific PN plastic pipe joining records or another set of PN records.

Response:

SoCalGas appreciates the opportunity to discuss this recommendation related to Title 49 CFR, Part 192.756 which states: “Each operator must maintain equipment used in joining plastic pipe in accordance with the manufacturer's recommended practices or with written procedures that have been proven by test and experience to produce acceptable joints.” SoCalGas requires qualified employees to inspect equipment used for joining plastic pipe per the company procedures specified for each plastic pipe joining method. SoCalGas’s written procedure, GS 184.0130, ***Polyethylene Heater - Temperature Measurement and Adjustment***, documents how it complies with Title 49 CFR, Part 192.756 along with the Company’s other fusion procedures. Infrared thermometers are tagged with a capital tool number and inspection date. Qualified Company employees and contractors are required to verify IR thermometers were calibrated within the last year (no longer than 14 months). Calibration of other instruments (such as pressure gauges on Butt fusion machines) are not required by the equipment manufacturer. Instead, manufacturers require inspection of equipment condition before use as the practice that has been proven by experience to produce acceptable joints, which are integrated into the written GS procedures.

Also, for consideration, when 192.756 was promulgated into regulation during the Plastic Pipe Rule in 2018, PHMSA provided operators guidance that it did not expect retention of records on daily calibration. The Analysis of Comments and Proposed PHMSA Response of the Plastic Pipe Rule section (8)(a)(b)(c), PHMSA stated, *"In consideration of the comments and the recommendations of the GPAC, PHMSA has removed the additional calibration and recordkeeping requirements in paragraphs (b) through (d). Therefore, the retention of records of daily equipment calibrations and adjustments suggested by Lael has not been implemented. Commenters suggested that the proposed requirements were overly prescriptive and burdensome. PHMSA may revisit this issue if problems are identified in the future. The final rule retains the requirement that operators must maintain joining equipment in accordance with the manufacturer's recommended practices or with written procedures that have been proven by test and experience to produce acceptable joints."*

SoCalGas considers that imposing further calibration record requirements is not necessary and would be overly prescriptive and burdensome. It should be noted that temperature measurement is not a highly critical variable, this conclusion is supported by industry studies, such as the 2015 study conducted by GTI for PHMSA titled, *Effects of Hydrocarbon Permeation on Plastic Pipe Strength and Fusion Performance*.*

* See K. Wiley, E. Lever, PHMSA, U.S. Department of Transportation Contract DTPH56-14-H-00001 Project 554. This study demonstrated that heater plate temperature was an insignificant variable (see Table 10 which presents the results of an ANOVA analysis on the relative power of fusion parameters). It demonstrates that heat saturation is the most significant variable, followed by interfacial pressure, material etc. The size of the F Value represents the relative power of each factor. This is supported by a probabilistic analysis of 198 fusion joints where the heater plate temperature was varied from 375°F to 525°F and there was no change in the fusion joint quality across the range of temperatures.

Link to report: <https://primis.phmsa.dot.gov/matrix/FilGet.rdm?fil=10327>

Pipeline Field Inspection: Pipeline Inspection (Field) (FR.FIELDPIPE)

Question Title, ID Atmospheric Corrosion Monitoring, TD.ATM.ATMCORRODEINSP.O

Question 27. Do field observations indicate that pipe exposed to atmospheric corrosion is properly coated?

References 192.481(b) (192.481(c), 192.479(a), 192.479(b), 192.479(c), 192.481(d))

Assets Covered Southeast - Mountain Pass (87045 (62))

Issue Summary During Fontana District pipeline span survey on September 23, 2022 @ South Mount Vernon Bridge 205, Colton, SED observed atmospheric corrosion at distance in various locations at pipe supports. The pipe supports appeared to be loose or not in contact with the pipe. SoCalGas field technician stated to SED that he inspected the span six months ago and submitted a Pipeline Condition Maintenance Report (PCMR) to initiate remediation work.

Title 49 CFR, Part 192, §192.481(c) states:

(b) During inspections the operator must give particular attention to pipe at soil-to-air interfaces, under thermal insulation, under dis-bonded coatings, at pipe supports, in splash zones, at deck penetrations, and in spans over water

(c) If atmospheric corrosion is found during an inspection, the operator must provide protection against the corrosion as required by § 192.479.

Title 49 CFR, Part 192, §192.479(a) states in part:

Each operator must clean and coat each pipeline or portion of pipeline that is exposed to the atmosphere,

Per SoCalGas Gas Standard (GS) 184.12 – Inspection of Aboveground Pipelines and Pipelines on Bridges and Spans, Section 1.2.1.1, Distribution pipeline spans, pipe supported on bridges, above ground (or jacketed) pipelines, and all other exposed pipeline (as installed) are inspected for atmospheric corrosion once every two (2) calendar years. Distribution Field Supervisors will review all inspection information when any condition is found by a “yes” answer on the “Bridge and Span Inspection Checklist” (Section 2.4.1.), generate and follow up any maintenance or repair work noted during the inspection, and ensure remedial action (Section 2.7) work orders and follow up orders as required. All orders for any remedial action must be issued within 30 days and completed within 90 days (Section 2.8).

SED requests SoCalGas provide a remediation plan to address work order anomalies identified in last two inspections of its pipelines on South Mount Vernon Bridge 205. Further, SED requests SoCalGas provide inspection checklists, repair orders for remedial action and completion documentation for South Mount Vernon bridge 205.

Response:

SoCalGas agrees with SED's observation and has been taking remedial actions noted below.

Corrective Action:

Bridge And Span SAP inspection order 520002863981 was created and completed on April 12, 2022, noting an abnormal operation condition (AOC) of corrosion and supports not insulated from the pipe. A follow up SAP order, 520003030381, was created for remediation of the AOC's on April 21, 2022 and references a planned replacement of the brackets.

There have been on-going conversations with the contractor about the cost and timing of remediation since the AOCs were found. Due to limited availability, the contractor initially could not obtain the necessary equipment to remediate the AOC until 2023. Currently, the contractor has been able to secure necessary equipment for AOC remediation for the 1st Quarter of 2023. District supervision is working on obtaining a permit with the city.

Bridge And Span SAP Order 520003158139 was created on September 21, 2022 for the CPUC Audit and is being used to document all AOC's until final repairs can be made. SED will be updated once the repairs have been completed.