

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



December 21, 2022

GI-2022-09-SCG-62-02ABC

Mr. Rodger Schwecke
Senior Vice President and Chief Infrastructure Officer
Southern California Gas Company
555 West 5th Street, GT21C3
Los Angeles, CA 90013

Dear Mr. Schwecke:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission (CPUC) reviewed Southern California Gas Company's (SoCalGas) response letter, dated November 30, 2022, that addressed two (2) areas of concern identified during the **General Order (G.O.)112-F Comprehensive Operation and Maintenance Inspection of Southern California Gas Company (SoCalGas)'s Southeast Mountain Pass Natural Gas Distribution Area (Inspection Unit)**, conducted on September 19 through September 23 of 2022.

Attached is a summary of SED's inspection findings, SoCalGas' responses to SED's findings, and SED's evaluation of SoCalGas' responses to the findings.

This letter serves as an official closure of SED's 2022 Comprehensive Operation and Maintenance Inspection of SoCalGas' Southeast Mountain Pass Natural Gas Distribution Area. Any matters that are being considered for enforcement will be processed through the Commission's Citation Program or a formal proceeding.

Thank you for your cooperation in this inspection. If you have any questions, please contact Randy Holter, Senior Utilities Engineer (Specialist), at (213) 576-7153 or by email at randy.holter@cpuc.ca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mahmoud Intably".

Mahmoud (Steve) Intably, PE
Program and Project Supervisor
Gas Safety and Reliability Branch
Safety and Enforcement Division

Attachments: see Post-Inspection Written Response to Findings
cc: see next page

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Post-Inspection Written Preliminary Findings

Date of Transmittal: 10/31/2022

Dates of Inspection: September 19 - 23, 2022

Operator: SOUTHERN CALIFORNIA GAS CO

Operator ID: 18484 (primary)

Inspection Systems: SoCalGas Distribution **Area:** Southeast - Mountain Pass - Operations and Maintenance records review, and Beaumont, Fontana, Rimforest and San Bernardino field procedures observations.

Assets (Unit IDs) with results in this report: D: Southeast - Mountain Pass (87045)

System Type: GT

Inspection Name: SoCalGas Distribution: SE - Mountain Pass - 2022

Lead Inspector: Randy Holter PE

Operator Representative: Edwin Baires, Frank Santa Cruz

Unsatisfactory Results

No Preliminary Findings.

Concerns

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.

SoCalGas 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.

SoCalGas' Response and Remedial Action:

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>

SED's Conclusion:

SED has reviewed SoCalGas' response on this concern item. SoCalGas' written procedure Gas Standard (GS) 184.0130 Polyethylene Heater - Temperature Measurement and Adjustment (published on 1/1/22) describes the plan on how to

complies with Title 49 Code of Federal Regulations (CFR), Part 192, §192.756. GS 184.0130, Section 4.2.1.12 states:

“Infrared thermometers must be calibrated by comparison with another infrared thermometer which has been calibrated by comparison to a reference standard, such as National Institute of Standards & Technology (NIST) Standard Reference Material (SRM) once per year.”

GS 184.0130, Section 4.14 – Maintenance/Inspection, subsection 4.14.2 & 4.14.3 states:

4.14.2 – *“Fusers verify each day that the IR thermometer inspection tags are within the required 12 to 14 months of the inspection date. IR thermometers that are getting closer to the inspection date tag on the tool are sent to F&TRS for inspections. Fusers are responsible for checking out an IR thermometer from storerooms prior to returning thermometers for inspection and performing any fusion work.”*

4.14.3 – *“Inspection dates tagged on IR thermometers are valid for 12 to 14 months from the tag date.”*

G.O. 12-F, Reference Title 49 CFR, Part 192.603(b) states:

“Each operator shall keep records necessary to administer the procedures established under § 192.605.”

Per SoCalGas’ GS 184.0130, SoCalGas believes the temperature of the joining surfaces is critical in joining plastic materials. As such, SoCalGas has developed a procedure to ensure its employees verify the proper temperature is reached while performing heat fusion on Polyethylene (PE) plastic pipe. However, SoCalGas has failed to demonstrate where and how it would keep its infrared thermometers annual inspection/calibration records, so that SED can review the results and verify/ensure SoCalGas’ compliance of G.O.112-F, Reference Title 49 CFR, §§192.603(b) and 192.756. Therefore, SoCalGas must clarify and/or provide more details in its procedure to describe its recordkeeping process. SED will continue to monitor SoCalGas’ improvement in this area during future inspections.

Therefore, SED maintains its previously presented inspection findings.

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.

SoCalGas’ Response and Remedial Action:

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

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.

SED's Conclusion:

SED has reviewed SoCalGas' response and accepts the corrective actions that it has stated and implemented and looks forward to SoCalGas' updates on this matter. Additionally, SED may review the records of the corrective actions and observe SoCalGas' final repairs during future inspections.