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November 17, 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 SE Inland South Distribution Area (Inspection Unit)** on June 13 through June 17, 2022. 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. The inspection included a review of SoCalGas' records from calendar years 2018 to 2021 and field inspections of pipeline facilities in the Murrieta and Ramona Distribution Districts. SED's staff also reviewed the implementation of the Operator Qualification program, which included field observation of randomly selected individuals performing covered tasks.

SED staff identified two (2) probable violations and three (3) areas of concern. Attached are SoCalGas' written responses for the requested one (1) probable violation and one (1) 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 grid background.

Alex Hughes  
Pipeline Safety and Risk Mitigation Manager

CC:

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

## **2022 SoCalGas Inland South Audit Response**

### **Violation(s)**

#### **1. Time-Dependent Threats: External Corrosion - CP Monitoring (TD.CPMONITOR)**

Question: 4. Do records adequately document cathodic protection monitoring tests have occurred as required?

References: 192.491(c) (192.465(a))

Assets Covered: Southeast - Inland South (87046 (63))

Issue Summary: During record reviews, SED identified several separately protected short sections of mains or services (CP10) assets where SoCalGas did not monitor in a timely manner: (i) GD.INL.RMN.SH.00280425, (ii) GD.INL.RMN.SH.00280426, (iii) GD.INL.RMN.SH.00094115, (iv) GD.INL.RMN.SH.00094127.

1. SoCalGas took monitoring readings from CP10 assets (i)(ii) in 2005 and migrated to a different Atlas sheet. SoCalGas took monitoring readings in 2018.

2. SoCalGas never read CP10 (iii)(iv) prior to 2021;

Though services (i)(ii) and (iv) are currently abandoned, SoCalGas failed to conduct cathodic protection monitoring on the forementioned assets in a timely manner such that their entire systems were tested in each 10-year period. Therefore, SED finds SoCalGas to be in violation of G.O. 112-F, Title 49 CFR, Reference Part 192, §192.465(a).

#### **SoCalGas's Response:**

SoCalGas puts public and employee safety as its top priority and is dedicated to continual improvement of its business processes. SoCalGas acknowledges that it did not complete inspection of the four services per 192.465(a).

#### **Corrective Action:**

To address these specific assets, three of the four services are abandoned, and the remaining service is now on an inspection cycle.

To address inspection cycle integrity for monitoring isolated steel services, SoCalGas is prioritizing an SAP Service History enhancement that will provide a validation step when updating a map grid (historically known as atlas sheet) is performed. The validation will warn users that the proposed change will affect the inspection cycle of an affected isolated steel service and updates to the inspection schedule is required. SAP Service History enhancement is in progress.

## Monitoring Efforts

Several reports are used to monitor the integrity of service history data. As noted during the audit, a clerk was investigating irregularities reported by the integrity reports and found the two services documented as GD.INL.RMN.SH.00094115 and GD.INL.RMN.SH.00094127. Once discovered he initiated corrective actions which ultimately resulted in abandonment of the services. The missed inspection of the isolated services was relayed to SED during the Mountain Pass audit and were being readied for notification as part of the exception reporting process.

SoCalGas utilizes these quality reports to alert the Company of changes in the system that might affect the CP status. SoCalGas will continue to monitor for irregularities in service history data to avoid similar instances.

We appreciate SED diligence in reviewing our records.

## Concern(s)

### 1. Maintenance and Operations: Gas Pipeline Maintenance (MO.GM)

Question: 16. 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 - Inland South (87046 (63))

Issue Summary: SoCalGas was unable to provide specific calibration records for equipment used in joining plastic pipe by heat fusion for Work Order #2041732202. SoCalGas personnel only assumed its crew used adequate equipment to perform the heat fusion joints but could not provide any records to show what equipment was used for any joints. Therefore, SED recommends SoCalGas to add a section in each work order to record the heat fusion equipment and their maintenance/calibration history where applicable.

### **SoCalGas's 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' 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 are 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>