

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



May 5, 2023

GI-2023-01-SCG-49-01ABC

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 conducted a **General Order (G.O.)112-F Comprehensive Operation and Maintenance Inspection of Southern California Gas Company (SoCalGas)'s North Desert Transmission Area (Inspection Unit)** starting January 9 through January 20 of 2023 for calendar years 2019 through 2022. SED reviewed records and conducted field inspections of SoCalGas pipeline facilities in the Needles and Victorville districts within the Inspection Unit. SED's staff also reviewed the implementation of the Operator Qualification program, which included field observation of randomly selected individuals performing covered tasks. SED's staff used the Pipeline and Hazardous Materials Safety Administration's (PHMSA) Inspection Assistance (IA) as a reference guide to conduct this inspection.

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 official closure of the 2023 Comprehensive Operation and Maintenance Inspection of SoCalGas' North Desert Transmission 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 that reads "Mahmoud Intably".

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

Attachments: see Post-Inspection Written Response to Findings – Closure Items
cc: see next page.

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Post-Inspection Written Response to Findings – Closure Items

Concern(s)

Design and Construction: Design of Pipe Components (DC.DPC)

1. Question Title, ID Question Cathodic Protection Design - Protection Levels, DC.DPC.CCCATHPROTLEVEL.O
78. Do field observations confirm that the cathodic protection system was designed and installed so that the amount of cathodic protection would not damage the protective coating or the pipe?
References 192.143(b) (192.463(c))
Assets Covered T: North Desert (87057 (49))
Issue Summary On the January 12-13, 2023, Needles District Cathodic Protection Area (CPA) survey, SED observed SoCalGas personnel take Cathodic Protection (CP) monitoring readings per requirements of Part 192, Subpart I:

Line 235 Mile Post (MP) 10.87 (-3.681V) Line 235 MP11.41 (-2.599V)
Line 235 MP10.15 (-2.125V) Line 235 MP10.87 (-3.67V) Line 235 MP11.41 (-2.66V)
Line 3000 MP25.58 (-2.99V) Line 3000 MP25.58 (-2.99V) Line 3000 MP42.47 (-2.075V)

Title 49 Code of Federal Regulations (CFR) Part 192, §192.143(b) states:

“(b) The design and installation of pipeline components and facilities must meet applicable requirements for corrosion control found in subpart I of this part.”

SoCalGas Gas Standard 186.0035 Criteria for Cathodic Protection, Section 4.3. CRITERIA – LIMITATIONS, subsection 4.3.3 states:

*“To prevent possible coating damage to effectively coated piping, a polarization potential of -1.20 volts (Instant Off) should not be exceeded.
4.3.3.1. When P/S potentials are found to exceed -2.00 volts, a test should be made to verify the polarization potential level.*

- *Test for stray current interference.*
- *Test for the polarization potential level (Instant Off).*

4.3.3.2. If a polarization potential of 1.2 volts is exceeded, test with the copper-copper sulfate reference at the pipeline interference.

4.3.3.3. If the instant off exceeds 1.2 volts, after performing the test in Section 4.3.3.1 and 4.3.3.2, call Integrity Management - Cathodic Protection Remediation.”

SED requests SoCalGas to review the cathodic protection system at the mile posts inspected on Line 235 and Line 3000 to confirm the cathodic protection system is designed and installed appropriately. After review, please provide SED documentation from Integrity Management confirming that the amount of cathodic protection does not damage the protective coating or the pipe to ensure compliance with §192.143(b).

SoCalGas' response:

Per Gas Standard 186.0035 testing was conducted by interrupting all known current sources and the instant off potentials were measured. All instant off potentials were more electropositive than -1.2 VCSE and the respective values can be found in the table below. Per the results, Integrity Management – Corrosion has no expectation of coating damage related to excessive cathodic protection current.

SED Inspection				SoCalGas Follow Up			
Line	Milepost	On Read	Date Read	On Read	Instant Off	Date Read	Work Order
235	10.87	-3.681V	12/13/2022	Duplicate*	Duplicate*	Duplicate*	Duplicate*
235	11.41	-2.599V	12/13/2022	Duplicate*	Duplicate*	Duplicate*	Duplicate*
235	10.15	-2.125V	12/13/2022	-2.040	-1.119	1/17/23	8179297
235	10.87	-3.67V	12/13/2022	-3.640	-1.085	1/17/23	8179325
235	11.41	-2.66V	12/13/2022	-2.550	-1.190	1/17/23	8180423
3000	25.58	-2.99V	12/13/2022	Duplicate*	Duplicate*	Duplicate*	Duplicate*
3000	25.58	-2.99V	12/13/2022	-2.933	-0.845	1/17/23	8179322
3000	42.47	-2.075V	12/13/2022	-2.109	-0.836	1/17/23	8179320

*3 locations cited by SED were duplicate locations

All reads were taken utilizing a Copper Sulfate Electrode (Cu₂SO₄) half-cell.

SED's conclusion:

SED has reviewed SoCalGas' response and accepts their written and implemented corrective actions. Please be advised, SED may review SoCalGas' corrective action during future inspections.

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

2. Question Title, ID Valve Maintenance Transmission Lines, MO.GM.VALVEINSPECT.O

Question 11. Are field inspection and partial operation of transmission line valves adequate?

References 192.745(a) (192.745(b))

Assets Covered T: North Desert (87057 (49))

Issue Summary On January 19, during Victorville District field inspection, SED observed SoCalGas personnel inspecting and partially operating a transmission valve number 335-27.10-0 on the transmission valve map. SED found that the valve identification tag on the valve was 335-27.13-0, which was different from what was identified on the map.

Title 49 Code of Federal Regulations (CFR), Part 192, §192.605(a) stats in part:

“General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response.”

SoCalGas Gas Standard 223.0215 Valve Inspection and Maintenance – Transmission, Section 4.4 states in part:

“Valve identification tags shall be inspected for legibility and correct numbering; replace immediately if missing, illegible, or incorrect. Refer to GS 223.0230, Identification Numberings for Pipeline-transmission.”

SED recommends SoCalGas to verify the valve identification number and to ensure the correct valve identification tag is attached to the transmission valve.

SoCalGas' response:

On February 16, 2023, SoCalGas informed SED via an email that it has made the correction to match the tap and the map. SoCalGas stated that the correction valve ID for this valve is 335-27.13-0. SED accepts the corrective action taken by SoCalGas but may review and revisit with further inspection.

SED's conclusion:

SED has reviewed SoCalGas' response and accepts their written and implemented corrective actions. Please be advised, SED may review SoCalGas' corrective action during future inspections.

Maintenance and Operations: Gas Pipeline Operations (MO.GO)

3. Question Title, ID Continuing Surveillance, MO.GO.CONTSURVEILLANCE.O
Question 3. Are unsatisfactory conditions being captured and addressed by continuing surveillance of facilities and the pipeline as required by 192.613?
References 192.613(a) (192.613(b), 192.703(a), 192.703(b), 192.703(c))
Issue Summary On the January 12-13, 2023, Needles District Cathodic Protection Area (CPA) survey, SED observed SoCalGas personnel take Cathodic Protection (CP) monitoring readings per requirements of Part 192, Subpart I:

- Line 235 Mile Post (MP) 10.87: -3.681 volts
- Line 235 MP11.41: - 2.599 volts
- Line 235 MP10.15: - 2.125volts
- Line 235 MP10.87: - 3.67 volts
- Line 235 MP11.41: - 2.66volts
- Line 3000 MP25.58: - 2.99 volts
- Line 3000 MP25.58: - 2.99 volts
- Line 3000 MP42.47: - 2.075 volts

Title 49 Code of Federal Regulations (CFR) Part 192, §192.613 states, in part:

“(a) Each operator shall have a procedure for continuing surveillance of its facilities to determine and take appropriate action concerning..., corrosion, substantial changes in cathodic protection requirements, and other unusual operating and maintenance conditions.”

SED requests SoCalGas provide its Gas Standard(s) for continuing surveillance of its pipeline system, to continually assess its pipeline system, and explain how applying the standard(s) address this concern. Additionally, SED requests SoCalGas provide what actions will be taken to address these unusual operating conditions to prevent failures, releases, or other events that may endanger public safety per §192.613. SED requests that SoCalGas follow up with these locations and ensure that unusual operating and maintenance conditions are being documented and addressed.

SoCalGas' response & actions:

Surveillance is completed under Gas Standard 186.0135 Operation and Maintenance of Cathodic Protection Facilities Section 4.3. The surveillance activities were completed by technicians trained and Operator Qualified as outlined in Section 6 of Gas Standard 186.0135.

SED's conclusion:

SED has reviewed SoCalGas' response and accepts their written corrective actions. Please provide SED SoCalGas' follow up

results with these locations, documented by August 4, 2023, ensuring that unusual operating and maintenance conditions are being addressed for this Inspection Unit. Please be advised, SED may review SoCalGas' corrective action during future inspections.

Maintenance and Operations: Gas Pipeline Overpressure Protection (MO.GMOPP)

- 4. Question Title, ID Pressure Limiting and Regulating Stations Inspection and Testing, MO.GMOPP.PRESSREGTEST.O

Question 7. Are field or bench tests or inspections of regulating stations, pressure limiting stations or relief devices adequate?

References 192.739(a) (192.739(b), 192.743)

Assets Covered T: North Desert (87057 (49))

Issue Summary On January 19, during SoCalGas Line 6905 Kramer Receiving Station inspection, SED observed SoCalGas personnel evaluate the Relief Valve (RV) KJ-NG-01 using Nitrogen gas. The RV KJ-NG-01 is on line 6905, which has MAOP of 1200 psig. Set pressure for RV KJ-NG-01 is 1200 psig and it was open at 1204 psig, which is within the allowable limit. However, the valve did not re-seat to provide a positive shut off after relief.

Title 49 Code of Federal Regulations (CFR), Part 192, §192.605(a) stats in part:

“General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response.”

SoCalGas Gas Standard 223.0345 Pressure Relief/Pressure Limiting Devices, Testing/Inspection, Section Pressure Relieving, Signaling Devices, Subsection 4.4.2.2 states:

“When inspections and tests disclose positive shut off or reseal does not occur within 90% of Set Pressure, take steps without delay to field adjust, repair/clean, replace, or install additional devices as appropriate. Retest, as necessary.”

RV KJ-NG-01 did not shut off at 90% of Set Pressure, which is 1080 psig, but kept dropping below the specified limit of 1080 psig.

SED recommends SoCalGas to take immediate action and provide SED its remedial plan or corrective action.

SoCalGas' response:

On January 23, 2023, SoCalGas informed SED via an email that it has created a follow up work order. On February 23, 2023, SoCalGas provided SED a copy of work order. The work order stated that SoCalGas crew retested the RV and found no further issue. SED accepts the corrective action taken by SoCalGas but may revisit during further inspections.

SED's conclusion:

SED has reviewed SoCalGas' response and accepts their written and implemented corrective actions. Please be advised, SED may review SoCalGas' corrective action during future inspections.

Time-Dependent Threats: Atmospheric Corrosion (TD.ATM)

- 5. Question Title, ID Atmospheric Corrosion Monitoring, TD.ATM.ATMCORRODEINSP.O
 - Question 5. Is pipe that is exposed to atmospheric corrosion protected?
 - References 192.481(b) (192.481(c), 192.479(a), 192.479(b), 192.479(c), 192.481(d))
 - Assets Covered T: North Desert (87057 (49))

Issue Summary On January 12-13, 2023, during Needles Transmission District pipeline span survey at L3000 MP .20, SED observed exterior pipe protective coating disbondment, atmospheric paint chipping and protective paint coating cracking at pipe-to-soil locations. The nearby span support footing is buried by a mound of roadway dirt and therefore, would be unable to be inspected for corrosion and structural review. The opposite span support leg is exposed and has corrosion at the base and the coating is flaking off.

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 1.1.1.1, Onshore: At least once every three calendar years, but with intervals not exceeding 39 months. Transmission Field Supervisors will review all inspection information when any condition is found by a “yes” answer on the “Bridge and Span Inspection Checklist” (Section 2.4.2.), 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 2.9).

SED requests SoCalGas provide a remediation plan to address work order anomalies identified in inspection at L3000 MP.20. Further, SED requests SoCalGas provide

inspection checklists, repair orders for remedial action and completion documentation for L3000 MP.20.

SoCalGas' response & actions:

After making initial repairs, SoCalGas created a new follow up work order (8234945) for all the repairs that could not be completed. SoCalGas was unable to repair the pipe wrap that was dis-bonded and the leg support in contact with the soil. A project request was submitted to make the final repairs on the span. A span inspection check list was created to document the repairs and the additional repairs to be completed.

SED's conclusion:

SED has reviewed SoCalGas' response and accepts their written and implemented corrective actions. Please be advised, SED may review SoCalGas' corrective action during future inspections.

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

6. Question Title, ID	Cathodic Protection Criteria, TD.CPMONITOR.MONITORCRITERIA.O
Question	3. Are methods used for taking CP monitoring readings that allow for the application of appropriate CP monitoring criteria?
References	192.465(a) (192.463(a), 192.463(b), 192.463(c), Part 192, Appendix D)
Assets Covered	T: North Desert (87057 (49))
Issue Summary	On the January 12-13, 2023, Needles District Cathodic Protection Area (CPA) survey, SED observed SoCalGas personnel take Cathodic Protection (CP) monitoring readings per requirements of Part 192, Subpart I:

The following CP pipe-to-soil potentials (CP reads) exceed -2.00 volts (V):

Line 235 Mile Post (MP) 10.87 ($-3.681V$)
Line 235 MP11.41 ($-2.599V$)
Line 235 MP10.15 ($-2.125V$)
Line 235 MP10.87 ($-3.67V$)
Line 235 MP11.41 ($-2.66V$)
Line 3000 MP25.58 ($-2.99V$)
Line 3000 MP25.58 ($-2.99V$)
Line 3000 MP42.47 ($-2.075V$)

Title 49 CFR Part 192, §192.463 (c) states,

“The amount of cathodic protection must be controlled so as not to damage the protective coating or the pipe.”

Per SoCalGas Gas Standard 186.0035, Section 4.3. CRITERIA - LIMITATIONS subsections:

4.3.3. To prevent possible coating damage to effectively coated piping, a polarization potential of -1.20 volts (Instant Off) should not be exceeded.

4.3.3.1. When P/S potentials are found to exceed -2.00 volts, a test should be made to verify the polarization potential level.

· Test for stray current interference.

· Test for the polarization potential level (Instant Off).

SED requests that SoCalGas verify the polarization potential levels for stray current interference and for the polarization potential level (Instant Off) per SoCalGas Gas Standard 186.0035, Section 4.3 and take the appropriate corrective actions to ensure that methods used for taking CP monitoring readings allow for the application of appropriate CP monitoring criteria for compliance with §192.463(c).

SoCalGas’ response & actions:

Per Gas Standard 186.0035 testing was conducted by interrupting all known current sources and the instant off potentials were measured. All instant off potentials were more electropositive than -1.2 VCSE and the respective values can be found in the table below. Per the results, Integrity Management – Corrosion has no expectation of coating damage related to excessive cathodic protection current.

SED Inspection				SoCalGas Follow Up			
Line	Milepost	On Read	Date Read	On Read	Instant Off	Date Read	Work Order
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*3 locations cited by SED were duplicate locations

All reads were taken utilizing a Copper Sulfate Electrode (Cu₂SO₄) half-cell.

SED’s conclusion:

SED has reviewed SoCalGas’ response and accepts their written and implemented corrective actions. Please be advised, SED may review SoCalGas’ corrective action during future inspections.