

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



February 7, 2019

Mr. Melvin Christopher, Vice President  
Pacific Gas and Electric Company  
Gas Transmission and Distribution Operations  
6121 Bollinger Canyon Road  
San Ramon, CA 94583

GI-2018-09-PGE-06

SUBJECT: SED's Closure Letter for General Order 112-F Gas Inspection of PG&E's Central Coast Distribution Division

Dear Mr. Christopher:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission reviewed Pacific Gas & Electric Company's (PG&E) response letter dated December 19, 2018 for the findings identified during the General Order 112-F inspection of PG&E's Central Coast Distribution Division which was conducted on September 10-21, 2018.

A summary of the inspection findings documented by the SED, PG&E's response to our findings, and SED's evaluation of PG&E's response taken for each identified Violation and Area of Concern and Recommendation is attached.

This letter serves as the official closure of the 2018 GO 112-F Inspection of PG&E's Central Coast Distribution Division and any matters that are being recommended 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 Jason R. McMillan (916) 928-2271 or by email at [Jason.McMillan@cpuc.ca.gov](mailto:Jason.McMillan@cpuc.ca.gov).

Sincerely,

A handwritten signature in blue ink that reads "Dennis Lee".

Dennis Lee, P.E.  
Program and Project Supervisor  
Gas Safety and Reliability Branch  
Safety and Enforcement Division

cc: Susie Richmond, PG&E  
Bhavini Shah, PG&E  
Claudia Almengor, SED  
Aimee Caguiran, SED

# Post-Inspection Written Findings

Dates of Inspection: 09/10/2018 – 09/21/2018

Operator: PACIFIC GAS & ELECTRIC CO

Operator ID: 15007 (primary)

Inspection Systems: PG&E Central Coast Division

Assets (Unit IDs): PG&E Central Coast Division (#06)

System Type: GD

Inspection Name: PG&E Central Coast Division

Lead Inspector: Jason McMillan

Operator Representative: Jaime Hidalgo

## Unsatisfactory Results

### A. Records : Corrosion Control (PRR.CORROSION)

- |                  |                                                                                                                                                                                                                                                |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Question Text | Do records adequately document electrical isolation of each buried or submerged pipeline from other metallic structures unless they electrically interconnect and cathodically protect the pipeline and the other structures as a single unit? |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|            |                                                                         |
|------------|-------------------------------------------------------------------------|
| References | 192.491(c) (192.467(a), 192.467(b), 192.467(c), 192.467(d), 192.467(e)) |
|------------|-------------------------------------------------------------------------|

|                |                                             |
|----------------|---------------------------------------------|
| Assets Covered | PG&E Central Coast Division (Central Coast) |
|----------------|---------------------------------------------|

|               |                                        |
|---------------|----------------------------------------|
| Issue Summary | Title 49 CFR §192.491 states, in part: |
|---------------|----------------------------------------|

"(a) Each buried or submerged pipeline must be electrically isolated from other underground metallic structures, unless the pipeline and the other structures are electrically interconnected and cathodically protected as a single unit.

(b) One or more insulating devices must be installed where electrical isolation of a portion of a pipeline is necessary to facilitate the application of corrosion control.

(c) Except for unprotected copper inserted in ferrous pipe, each pipeline must be electrically isolated from metallic casings that are a part of the underground system. However, if isolation is not achieved because it is impractical, other measures must be taken to minimize corrosion of the pipeline inside the casing.

(d) Inspection and electrical tests must be made to assure that electrical isolation is adequate."

During the records review, within the response to data request CC-44, PG&E reported that the Central Coast Division has 181 casings on mains, and 31 casings on services. PG&E was unsure if these casings were electrically isolated from the carrier pipes, and these casings have not been monitored for electrical isolation. PG&E had previously self-reported this to the CPUC and is addressing the issue of electrical isolation system-wide as a part of their EDSP (Enhanced Distribution Survey Program), which is a multi-year program planned for 2017-2021.

PG&E Response: "PG&E respectfully disagrees with this finding and believes that the cathodic protection monitoring conducted by PG&E in the Central Coast Division in accordance with 192.465(a) demonstrates effective electrical isolation at each of the 181 casings on mains and 31 casings on services in accordance with USDOT Office of Pipeline Safety guidance.

PG&E currently evaluates the effectiveness of electrical isolation on its distribution systems through cathodic protection monitoring in accordance with a 1986 Interpretation issued to the Commonwealth of Kentucky Public Service Commission. The Kentucky PUC requested a clarification from the USDOT Office of Pipeline Safety following a comprehensive inspection of an intrastate natural gas distribution company (Columbia Gas) in which the KPUC inspector "discovered that Columbia does not have a specific program of inspecting and electrically testing carrier pipe at cased crossings or the casing to assure that it is not shorted or partially shorted." KPUC asked "should a distribution company have a specific program whereby the inspection and electric test of cased road crossings on cathodically protected lines would be conducted annually, or can compliance with the 192.467(c) and (d) be achieved by complying with 192.465(a), even though test stations are not always located at the cased crossings and the test of the bare casing is not taken?" Richard L. Bean, Associated Director of Pipeline Safety Regulation relied "When properly conducted the testing under 192.465(a) would also establish compliance with 192.467(c) and (d)."

The interpretation is attached (Interpretation.pdf). As part of PG&E's ongoing efforts to improve the safety and reliability of its gas distribution system, PG&E initiated a five year program in 2017 to transition from the use of cathodic protection reads to demonstrate effective electrical isolation to direct monitoring of each cased crossing. When implemented, this change will align PG&E's distribution and transmission practices for monitoring electrical isolation and is believed to be a more conservative approach to identify potential electrical contacts between the distribution pipeline and metallic casings. This program was presented to the PUC in the 2017 General Rate Case (applicable sections are attached) and is estimated to be complete by EOY 2021. PG&E has provided multiple updates to the CPUC on the status of this program enhancement (See attached 2017 and 2018 Corrosion.pdf's). To date, 181 casings on mains and 31 casings on services have been identified in Central Coast for direct monitoring and this work is scheduled to begin in 2019. PG&E has been transparent with the CPUC on the transition to a more conservative methodology for verification of electrical isolation and respectfully disagrees with the CPUC position that a potential violation has occurred. PG&E believes that its program to verify effective electrical isolation of distribution casings complies with USDOT guidance. PG&E has presented its rationale and timeline for transition to a more conservative methodology to evaluate electrical isolation of distribution casings and this program was authorized by the CPUC in the 2017 GRC. (See attached 2017 GRC Testimony.pdf) PG&E believes that the CPUC findings that PG&E is not compliant with a future state program for evaluating electrical isolation of distribution casings are unfair and penalize PG&E for improvements to its corrosion control program. In addition, the findings ignore that PG&E's program remains compliant with USDOT guidance for electrical isolation.

SED's Conclusion: SED has reviewed the data presented by PG&E during the inspection and within their response to the inspection letter. SED acknowledges that the PHMSA interpretation letter to the Kentucky Public Service Commission states that "[w]hen properly conducted the testing under 192.465(a) would also establish compliance with 192.467(c) and (d)." Further, the PHMSA interpretation states, "[t]he tests under §192.465(a) must be sufficient to determine whether the cathodic protection meets the requirements of §192.463 for the entire pipeline, including any cathodically protected segments inside casings" (emphasis added). The October 2018 update submitted to the CPUC shows that PG&E's newly instituted five-year program identified 179 shorted distribution casings. If the previous testing under §192.465(a) was properly conducted and sufficient to cover the entire pipeline as PG&E contends, then SED questions why the 179 shorted distribution casings were not identified sooner.

Further, SED clarifies that the finding presented in its inspection letter was a result of its review of records for the period of 2014-2017. SED did not conduct a review of PG&E's "future state program for evaluating electrical isolation of distribution casings" during its inspection of Central Coast Division to make a determination of compliance with the regulations. Nonetheless, SED acknowledges that PG&E is in the process of enhancing its corrosion program to improve their ability to monitor electrical isolation of pipelines.

SED has opted not to impose a fine or penalty at this time but will continue to monitor PG&E's progress through the program enhancement.

2. Question Text Do records document inspection of aboveground pipe for atmospheric corrosion?

References 192.491(c) (192.481(a), 192.481(b), 192.481(c))

Assets Covered PG&E Central Coast Division (Central Coast)

Issue Summary Title 49 CFR §192.481(c) states:

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

SED reviewed Central Coast Division's Atmospheric Corrosion Inspections Records (exposed piping and spans in Santa Cruz) and found two spans with major coating issues that had no documentation or evidence of any corrective work performed, as conditions observed and detailed description found in 2014 appear to be the same found in 2017.

1. 44463623 (D 04), date of inspection 12/20/14, and 11/16/17  
PG&E's 2014 inspection noted major coating issues, and that a corrective ticket had been generated, but no corrective ticket was found associated with either the 2014 or 2017 inspections. PM 43236387 was generated on 9/12/2018 under PR Notification 113708046.
2. 44463654 (D 15), date of inspection 12/30/14 and 11/17/17  
PG&E's 2014 inspection noted major coating issues, and that a corrective ticket had been generated, but no corrective ticket was found associated with either the 2014 or 2017 inspections. PM 43236388 was generated on 9/12/2018 under PR Notification 113708077.

PG&E Response: "PG&E respectfully disagrees with this finding.

1. Span D04, EQ 44463623 : An inspection was completed under PR Notification 113708046 on 11/16/17. Repair PM 43236387, NTF 113826591 was created on 11/17/2017 and recoating was completed on 12/7/2018. (See attached D-04 Paperwork\_CONF.pdf)

2. Span D15, EQ 44463654: Per attachment D-15 Paperwork\_CONF.pdf of 2014 inspection, only minor coating issues and light surface rust were identified. However, PM 42334759, NTF 110053285 was created on 2/17/2015 to address the 2014 inspection findings. The Span was recoated and repairs were completed on 5/1/2018. (See attached D-15 Paperwork\_CONF.pdf.)"

SED's Conclusion: After reviewing the records presented by PG&E, SED acknowledges that proper remedial work was performed on these exposed spans. However, SED believes that not performing work on the initial work tickets that were generated for the spans in 2014 is a violation of Title 49 CFR §192.481(c).

The remedial work on span D-04 was performed approximately four years after the abnormal operating condition was initially noted on an inspection. The remedial work on span D-15 was performed approximately three-and-a-half years after the abnormal operating condition was initially noted on an inspection. In both cases, an entire inspection cycle passed between when the coating deficiencies were initially identified and when they were corrected. Although Title 49 CFR §192.481(c) does not explicitly specify a timeframe to provide protection against corrosion once it is found, SED believes that not acting on the initial 2014 work tickets and allowing an entire inspection cycle to pass before the issues were addressed properly does not demonstrate that PG&E adequately protected against corrosion.

Since the identified corrosion on the exposed lines did not result in any harm to the public or to utility employees, SED has opted not to impose a fine or penalty but will be inspecting these spans at a future date to confirm completion of the remedial actions.

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

1. Question Text Are distribution line valves being installed as required of 192.181?

References 192.141 (192.181(a), 192.181(b), 192.181(c))

Assets Covered PG&E Central Coast Division (Central Coast)

Issue Summary SED observed many regulator stations and valve lots, each regulator station had an inlet fire valve. However the high pressure regulator station J-37 had an identified fire valve that was too close, within 20 feet of the station. This is not compliant with PG&E's "GAS DESIGN STANDARD H-10: HIGH-PRESSURE REGULATOR-TYPE STATIONS AND FARM TAP REGULATOR SETS," which requires inlet fire valves to be at least 20 feet away from stations of this type. There is another line valve that is more than 20 feet away that may be the correct fire valve. PG&E does have a corrective action for this issue, CAP# 11498384, and a work order, OCW #114987952, to either identify a different fire valve, or install one that is compliant with H-10.

Please provide a status update on the corrective action and completion of work order.

PG&E Response: "PG&E recognizes this finding and has taken the following corrective actions: CAP #114989384 and OCV# 114987952 were created to initiate relocation of the inlet fire valve on regulator station J-37. Remediation is due at the next capital project and has not yet been scheduled. PG&E will provide a status update to the SED when work is scheduled."

SED's Conclusion: SED has opted not to impose a fine or penalty at this time since PG&E created the necessary corrective action plan but may inspect the valve spacing at this regulator station during future inspections to ensure that the corrective actions were performed.

2. Question Text 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))

Assets Covered PG&E Central Coast Division (Central Coast)

Issue Summary During field observations, SED found three exposed spans whose coating was inadequate. The coating issues on these spans had been recorded previously as inadequate by PG&E, but it seems no corrective work has been performed. 49 CFR 192.481(c) states: If atmospheric corrosion is found during an inspection, the operator must provide protection against the corrosion as required by §192.479.

Please provide status on the remedial work on these spans:

|                        |               |              |                                             |
|------------------------|---------------|--------------|---------------------------------------------|
| WALL 3533 PLAT<br>OH07 | 11370804<br>6 | 4317335<br>6 | D04 EXPOSED PIPE IRWIN WAY S AND SAN LOR    |
| WALL 3675 PLAT<br>OE02 | 11370807<br>6 | 4317335<br>6 | D78 EXPOSED PIPE MUNICIPAL WHARF, SANTA     |
| WALL 3675 PLAT<br>OC03 | 11370807<br>7 | 4317335<br>6 | D15 EXPOSED PIPE WATER ST BRIDGE AND<br>BRA |

PG&E Response: "PG&E respectfully disagrees with this finding.

1. An inspection was completed under PR Notification 113708046 on 11/16/17. Repair PM 43236387, NTF 113826591 was created on 11/17/2017 and recoating was completed on 12/7/2018. (See attached D-04 Paperwork\_CONF.pdf) recoated and repair PM 43236387 was completed on 12/7/2018 before the compliance date. (See attached D-04 Paperwork\_CONF.pdf)

2. Span D15, EQ 44463654: Per attachment D-15.pdf of 2014 inspection, only minor coating issues and light surface rust were identified. However, PM 42334759, NTF 110053285 was created on 2/17/2015 to address the 2014 inspection findings. The Span was recoated and repairs were completed on 5/1/2018. (See attached D-15 Paperwork\_CONF.pdf.)

3. Span D78, EQ 44463653: 2015 and 2017 inspections were performed under NTF# 113708076 which identified major coating disbondment with light rust. As a note, inadequate coating on the body of a pipe with surface rust does not meet corrective creation criteria. However, PM 42334742 was created on 2/17/2015 to address the 2014 inspection findings in which recoating at both air-to-soil transitions were completed on 3/10/2017 by CXVC. (See attached D-78 Paperwork\_CONF.pdf)"

SED's Conclusion: SED has reviewed the documents PG&E provided with their response and has opted not to impose a fine or penalty at this time.

## Concerns

### A. Records : Corrosion Control (PRR.CORROSION)

1. Question Text Do records adequately document actions taken to correct any identified deficiencies in corrosion control?

References 192.491(c) (192.465(d))

Assets Covered PG&E Central Coast Division (Central Coast)

Issue Summary SED observed cathodic protection (CP) survey measurements that were lower than compliance levels during the review of maintenance records spanning 2015 to 2017. There were records showing remedial actions performed for the low CP levels. SED selected several test locations and performed field inspections, which confirmed that the CP measurements were still below compliance levels.

SED's field inspections on September 19 and 20, 2018 found low CP reads for the following test locations:

1. 115 Pearl St., King City: -0.833 V (records show -0.783 V measured on 12/3/15).
2. 10 Hitchcock Road, Salinas :-0.693 V (records show -0.562 V measured on 3/10/16)
3. 3056 #13 California, Marina, (Galvanic) -0.796 V
4. 124 Fountain Ave, Pacific Grove, 10%er -0.784 V
5. 120 Ocean view Blvd., Pacific Grove, -0.798 V
6. 1081 Hart St., Seaside, -0.754 V

Please provide status on remedial actions, and follow-up CP voltage measurements to confirm compliance.

**PG&E Response:** "PG&E recognizes this concern and has taken the following corrective actions:

1. 115 Pearl St., King City -0.833 V ( -0.783 V on 12/3/15):This location is part of rectified CPA 4218-36. Troubleshoot tag # 114945414 for this CPA was created on 9/6/2018. Issue identified and fixed in October, CPA was brought up and TS tag was closed 11/26/2018. The read at this location is -920 mV taken on 10/15/2018
2. 10 Hitchcock Road, Salinas -0.693 V (-0.562 V on 3/10/16):This location is part of annual CPA 3900-40. It was found down in April 2018. Corrective tag # 114492601 was created to install anode on the CPA. Anode installed on 10/12/2018. The read is -1201 mV
3. 3056 #13 California, Marina, (Galvanic) -0.796V:This is galvanic CPA 3836-98. P/S reading was -860 mV on 12/10/18. OCW Notification 115479967-PM 43612950 created to install anodes on the main.
4. 124 Fountain Ave, Pacific Grove, 10%er -0.784 V:On 12-11-18 OCW Notification 115480844 -PM 43613087 created to install anode on 10%er
5. 120 Ocean view Blvd., Pacific Grove, -0.798 V: This is part of rectified CPA 3896-50. Troubleshoot tag #114753676 was created to investigate the CPA. Contact cleared and the area was brought up. The read at the location is -1106 mV
6. 1081 Hart St., Seaside, -0.754 V:This is part of rectified CPA 3897-81. The soil is made of sand. In dry season (September) read is lower than wet season. The entire CPA was read earlier this month (PR notification # 115043359) and it was up. The read at this location was 935 mV"

**SED's Conclusion:** SED has reviewed PG&E's response and determined that remedial actions articulated by PG&E sufficiently address SED's concern. SED may inspect the cathodic protection on these services at a future date to confirm completion of work.