

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



March 2, 2020

Ms. Christine Cowser, Vice President  
Pacific Gas and Electric Company  
Gas Asset Management and System Operations  
6121 Bollinger Canyon Road  
San Ramon, CA 94583

GI-2019-10-PGE-78

SUBJECT: SED's Closure Letter for General Order 112-F Gas Inspection of PG&E's Southern Transmission

Dear Ms. Cowser:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission reviewed Pacific Gas & Electric Company's (PG&E) response letter dated January 10, 2020 for the findings identified during the General Order 112-F inspection of PG&E's Southern Transmission (District), which included the included a review of the District's records for the period of 2016 through 2018, as well as a representative field sample of the District's facilities, between October 21 and November 1, 2019.

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 2019 GO 112-F Inspection of PG&E's Southern Transmission 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 Dmitriy Lysak at (916) 327-6779 or by email at [dmitriy.lysak@cpuc.ca.gov](mailto:dmitriy.lysak@cpuc.ca.gov).

Sincerely,

A handwritten signature in blue ink that reads "Dennis Lee". The signature is fluid and cursive.

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

cc: Susie Richmond, PG&E  
Vincent Tanguay, PG&E  
Claudia Almengor, SED  
Terence Eng, SED

# Post-Inspection Written Preliminary Findings

**Dates of Inspection:** 10/22/2019-11/1/2019

**Operator:** PACIFIC GAS & ELECTRIC CO

**Operator ID:** 15007 (primary)

**Assets (Unit IDs):** Southern Transmission (88996)

**System Type:** GT

**Inspection Name:** PG&E Southern Transmission

**Lead Inspector:** Dmitriy Lysak

**Operator Representative:** Glen Allen

## Unsatisfactory Results

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

**Question Text** Do records adequately document cathodic protection monitoring tests have occurred as required?

**References** 192.491(c) (192.465(a))

**Assets Covered** Southern Transmission (88996 (99))

**Issue Summary** Title 49 CFR §192.465(a) states:

"Each pipeline that is under cathodic protection must be tested at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of §192.463."

a. SED found that ETS points 41409081, 41477200, 41477208, 41477221, 41477229, 41408422, 41408442 were not read in 2018.

SED requested records of the 2018 reads and PG&E confirmed in an email that no reads were taken. All of the points were on the same maintenance plan which was not called for 2018 due to a maintenance plan structure issue. PG&E has corrected this issue after this finding and is ensuring that the points will be read in 2019.

b. SED found that ETS station 41479066 was down between 11/6/17 and 6/20/18 leading to no reads in 2017 and 2018 being taken. PG&E created a troubleshoot notification in 2017 for a new ETS and a troubleshoot in 2018 for new wires at the test station. The corrective was generated on 5/30/19 and fixed shortly after that.

**PG&E Response** a. PG&E recognizes this finding and has taken the following actions:

As noted in the finding, these 7 Kern local transmission ETS's were not read in 2018. As previously provided to the SED Inspectors during the audit per Data Request #51, the equipment without 2018 reads were all on the same SAP maintenance plan. The plan failed to call in 2018 due to a maintenance plan structure issue. The asset strategist had removed one ETS from the maintenance plan which prevented the maintenance plan from calling in 2018. The issue has been identified and corrected in SAP so the plan will continue to call from now on. The scenario that led to this issue has been noted by the process manager and will be added to the internal review process.

On October 24 -25, 2019, all 7 Kern ETS's were read by the local corrosion group. This information was previously provided to the SED by email on 11/12/19.

b. PG&E recognizes this finding and has taken the following actions:

Reads taken on 11/08/2016 at ETS station 41479066 indicated a satisfactory P/S reading of -958 mv. On 11/06/2017 a "0" read was taken and TS notification 113789604 was automatically generated which noted on 11/27/2017 the need to rebuild the ETS or install a new ETS. On 12/03/2018 another "0" read was taken and TS notification 115442425 was automatically generated which noted on 12/20/2018 that the wires were missing. Other corrective work (OCW) notification 115586908 was generated on 12/21/2018 and completed on 5/30/2019 with the comment "OCW completed to have construction install a new ETS." Corrective Notification 117342835 was generated on 5/30/19 and repairs were completed per order 43804222 on 6/20/19, with a P/S read of -1149 BY C5CE.

A OCW should have been generated following the completion of the 11/27/2017 TS noting the need for a new ETS. However, a glitch in SAP prevented the OCW from being generated because the "City" field was missing. This issue is currently being addressed by the SAP team to allow the generation of notifications even if the "City" or "County" fields are left blank. Estimated completion in Q1 2020.

In addition, below are the reads of the two adjacent ETS's demonstrating adequate protection on this line.

2017 – "0" reads 41479066, L314 MILE POINT 5.06 due to broken wires  
o Up reads at 41478774, L314. MILE POINT 4.16 (P/S -1028)  
o Up reads at 41479077, L314. MILE POINT 6.13 (P/S -1066)

2018 – "0" reads 41479066, L314 MILE POINT 5.06 due to broken wires  
o Up reads at 41478774, L314. MILE POINT 4.16 (P/S -1081)  
o Up reads at 41479077, L314. MILE POINT 6.13 (P/S -1130)

**SED Conclusion** SED has reviewed the response from PG&E and determined that the corrective actions articulated by PG&E sufficiently address SED's concern.

## Time-Dependent Threats : External Corrosion - Cathodic Protection (TD.CP)

**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** Southern Transmission (88996 (99))

**Issue Summary** Title 49 CFR §192.605(a) states:

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

Additionally, PG&E Procedure TD-4181P-201 section 5.1 states, in part:

Corrosion field personnel monitor local transmission, backbone transmission, gathering, and storage pipeline cased crossings for electrical isolation once each calendar year with intervals not to exceed 15 months to the date.

SED identified two casings that were inspected in 2016 and 2017, but had no inspection in 2018:

41441527: Per CAP 115672991 the 2018 work ticket to take reads was canceled by mistake. On 1/16/19, the Self-Report team deemed this a 192.605 violation due to the missed casing monitoring. This was reported as a system wide issue including 36 casings in the 2019 Q1 IRSF.

41479743: Reads were taken on 11/09/2017. In 2018 an RW was created to remove casing because the mechanic could not find eq in field. Upon further investigation the eq was found and reads taken on 01/08/2019.

**PG&E Response** PG&E recognizes this finding and has taken the following actions:

Casing 41441527: A clerical mistake by the asset strategist led to the preventative maintenance notification (PR) for the 2018 reads to be cancelled. The PR was not reset and therefore did not generate a new PR in 2018. CAP 115672991 had previously been created to address the issue of casing maintenance plans not calling as required and reported to the SED in the 2019 Q1 IRSF. During the extent of condition review, 36 casings system wide were identified as not having their plans called in 2018. Each individual plan was reviewed by the responsible asset strategist and corrected to ensure that the maintenance plans called correctly in the future, if required.

Casing 41479743: The corrosion mechanic was not able to find the casing during performance of the preventative maintenance in 2018. A request for work notification (RW) was subsequently created by the asset strategist to remove the casing from the maintenance plan. Upon investigation by the senior corrosion mechanic with over 30 years of experience in the area, he determined the location of the casing and the RW was subsequently cancelled. The casing was read on 01/08/2019, eight days late of its required "calendar year" read requirement but did not exceed 15 months to the date of the last read.

**SED Conclusion** SED has reviewed the response from PG&E and determined that the corrective actions articulated by PG&E sufficiently address SED's concern.

## Concerns

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

**Question Text** Do field observations confirm that the cathodic protection system was designed and installed to comply with one or more of the applicable criteria contained in Appendix D of Part 192?

**References** 192.463(a) (192.143(b))

**Assets Covered** Southern Transmission (88996 (99))

**Issue Summary** On 10/29/2019, SED observed the ETS at equipment ID 43147484. A pipe-to-soil reading of -2650 mV was taken. This exceeds -2500 mV, indicating possible cathodic overprotection per TD-4181B-002. Per technicians, an off read is not possible at this location as the pipeline is bonded to another system. A ticket will be opened to take action to lower the pipe-to-soil read.

**PG&E Response** PG&E recognizes this finding and has taken the following actions:

As previously provided to the SED Inspectors during the audit by email on 11/1/2019, TS notification 118122786 and Other Corrective Work (OCW) order 44087146 were created for equipment ID 43147484 on 10/30/2019. On 1/9/2020 the technician adjusted the bond and lowered the current. A pipe-to-soil reading of -2408 mV was recorded.

**SED Conclusion** SED has reviewed the response from PG&E and determined that the corrective actions articulated by PG&E sufficiently address SED's concern.

**Question Text** Do field observations confirm that each pipeline was electrically isolated from metallic casings that are a part of the underground system?

**References** 192.467(c) (192.143(b))

**Assets Covered** Southern Transmission (88996 (99))

**Issue Summary** On 10/29/2019, SED observed a casing, equipment ID 41424021. No pipe lead was available, so an Interrupted Casing-to-Soil Test was performed per TD-4181P-601. The casing-to-soil on potential was -416 mV, and the off potential was -441. Since the shift exceeds 20 mV, additional investigation is required to determine whether the casing and carrier pipe are contacted.

PG&E to provide follow-up ticket for this reading.

**PG&E Response** PG&E recognizes this finding and has taken the following actions:

As previously provided to the SED Inspectors during the audit by email on 11/1/2019, TS notification 118127647 and Other Corrective Work (OCW) order 44087147 were created for equipment ID 41424021 on 10/31/2019. On 1/9/2020 the casing was retested and the technician recorded a casing-to-soil on potential of -435 mV and a off potential of -430 mV indicating no contact between the casing and carrier pipe.

**SED Conclusion** SED has reviewed the response from PG&E and determined that the corrective actions articulated by PG&E sufficiently address SED's concern.

## Maintenance and Operations : ROW Markers, Patrols, Leakage Survey and Monitoring (MO.RW)

**Question Text** Are line markers placed and maintained as required?

**References** 192.707(a) (192.707(b), 192.707(c), 192.707(d))

**Assets Covered** Southern Transmission (88996 (99))

**Issue Summary** Title 49 CFR §192.707(a) states:

"Buried pipelines. Except as provided in paragraph (b) of this section, a line marker must be placed and maintained as close as practical over each buried main and transmission line"

SED observed a pipeline marker that had fallen between mile points 101.30 and 103.72 on the ROW for lines 300A/B.

**PG&E Response** PG&E recognizes this finding and has taken the following actions:

The downed line marker was repaired on 10/25/19 per Notification 118095830. Confirmation of the repair, including photographs, were previously provided by email to the CPUC during the audit on 11/1/19.

**SED Conclusion** SED has reviewed the response from PG&E and determined that the corrective actions articulated by PG&E sufficiently address SED's concern.

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

**Question Text** Do records indicate the location of all items listed in 192.491(a)?

**References** 192.491(a)

**Assets Covered** Southern Transmission (88996 (99))

**Issue Summary** Title 49 CFR §192.491(c) states:

"Each operator shall maintain a record of each test, survey, or inspection required by this subpart in sufficient detail to demonstrate the adequacy of corrosion control measures or that a corrosive condition does not exist."

SED identified 7 instances from 2016 through 2018 where two casings inspected by the same technician had identical pipe-to-soil and casing-to-soil readings. SED requested additional information on ST#52. PG&E responded that the technicians often record readings on paper, which are then entered into SAP, and the duplicate reads are likely the result of inputting error by the maintenance assistants when they transfer the handwritten notes from the technicians into SAP. The original paper notes are no longer available to correct the SAP records.

For the duplicate instances in 2016 and 2017, subsequent readings are not duplicated and indicate no casing-to-pipe contact. However, SED finds it concerning that 7 duplicate entries were found over the past three years. SED recommends PG&E review this process to reduce the risk of data entry errors.

**PG&E Response** PG&E recognizes this finding and has taken the following actions:

After further research by Corrosion Engineering and the Work Management Solutions Department group, it was determined that 7 out of the 14 casings in question were completed by the technicians in the field using the mobile application Ventyx. The technicians are required to enter the read twice for it to process and be uploaded to SAP. These are considered accurate reads. The other seven casing reads were entered manually by the Maintenance Assistants from tech down (hand written) reads. The reads for two of these casings were located in Topock and it was confirmed that the duplication was a result of an inputting error by the Maintenance Assistant. The remaining 5 casing reads in Bakersfield may have been inputted incorrectly, however, the hand written notes from the technicians which are entered into SAP by the Maintenance Assistant, could not be located in order to make a definitive conclusion.

To prevent reoccurrence, a tailboard was held on 12/9/19 and 1/6/20 with the local Corrosion Department to emphasize the importance of accurate record keeping. All tech down reads will now be verified by the technicians prior to being entered into SAP by the Maintenance Assistant. Attached, please find attachment 1 - "Tailboard".

**SED Conclusion** SED has reviewed the response from PG&E and determined that the corrective actions articulated by PG&E sufficiently address SED's concern.