

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



July 8, 2019

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-2019-02-PGE-78

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

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 May 28, 2019 for the findings identified during the General Order 112-F inspection of PG&E's Central South Transmission Area, which included the Kettleman District and the local transmission assets of the Fresno Division, between February 25 and March 8, 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 2018 GO 112-F Inspection of PG&E's South Central Transmission Area 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 McMillan at (916) 928-2271 or by email at 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
Vincent Tanguay, PG&E
Claudia Almengor, SED
Aimee Cauguiran, SED
Kenneth Bruno, SED

Post-Inspection Written Findings

Dates of Inspection: 02/25/2019 – 03/08/2019

Operator: PACIFIC GAS & ELECTRIC CO (PG&E)

Operator ID: 15007

Inspection Systems: Kettleman District, Kettleman Compressor, and Fresno Division Local Transmission

Assets (Unit IDs): Central South Transmission (86289 (78))

System Type: GT

Inspection Name: PG&E Central South Transmission

Lead Inspector: Jason R. McMillan

Operator Representative: Glen Allen

Unsatisfactory Results

Maintenance and Operations: Gas Pipeline Odorization (MO.GOODOR)

Question Text Do records indicate appropriate odorization of its combustible gases in accordance with its processes and conduct of the required testing to verify odorant levels met requirements?

References 192.709(c) (192.625(a), 192.625(b), 192.625(c), 192.625(d), 192.625(e), 192.625(f))

Assets Covered Central South Transmission (86289 (78))

Issue Summary PG&E Procedure TD-4570P-03 states that odor intensity readings must be taken each month, and the meter serial number must be recorded each month. On 05/01/2018 the odor intensity level at the Paramount Station was not recorded. Additionally, there has not been a meter serial number recorded in PG&E's inspection records since 05/01/2018 at the Paramount Farms odor test station (7 months missing; June-December 2018). Coincidentally, the odor tester which is usually used at this station (S# 2001430006) was out of calibration window between 9/11/18 and 12/27/18.

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

The response to this finding had previously been provided during the audit on 3/8/19 as part of the "Week 1 Closeout Concerns Response" e-mail and verbal presentation to the Inspectors. As noted in the response, a glitch in the Monthly Odorization Report Form, TD-4570P-03-F01, prevented the meter serial number to be recorded on the form. TD-4570P-03-F01 was revised prior to the audit closeout to allow electronic input into all required fields. Please see attachment 1 - "TD-4570P-03-F01 (Rev-1b) Monthly Odorization Report".

The odor intensity reading was not recorded on the form on 05/01/2018 due to an oversight by the employee performing the readings. A tailboard was held for the transmission Kettleman District on 2/27/2019 to recommunicate the requirement of recording odor intensity and meter serial number on form TD-4570P-03-F01. In addition, an email communication was sent to the Kettleman district for those who were unable to attend. Please see attachment 2 - "Kettleman Tailboard".

As clarification, there was not an issue with any testing equipment used being out of calibration. This was confirmed by the lead inspector to PG&E in an e-mail response dated 5/1/2019. Please see attachment 3 - "SED Lead Inspector E-mail 5-1-19".

SED Conclusion SED has reviewed the response and attachments from PG&E and has opted not to impose a fine or penalty at this time.

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

Question Text Do records indicate inspection and testing of pressure limiting, relief devices, and pressure regulating stations?

References 192.709(c) (192.739(a), 192.739(b))

Assets Covered Central South Transmission (86289 (78))

Issue Summary PG&E did not follow their procedure to exercise the inlet station valve at the Paramount Farms regulator station.

The inlet valve to the Paramount Farms Regulator Station is not controlled by PG&E; it is controlled by a gas storage operator, so PG&E was unable to exercise the inlet valve during station maintenance. CAP #112608953 was created on 02/17/2017 to address this issue. On 10/27/2017, a note added to the CAP stated that section 3.7 within the agreement between PG&E and the gas storage operator states "The parties shall cooperate in the day-to-day operation of their respective facilities to ensure efficient and coordinated operation(s) and maintenance". This should include the coordination for operation the upstream and downstream fire valves for maintenance of the station"

However, the 2018 and 2019 station maintenance records noted "No Inlet Fire Valve". There were no records to show that PG&E coordinated with the gas storage operator and that the inlet fire valve was operated and maintained.

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

The Inlet Fire Valve at Paramount Farms is owned and operated by Gill Ranch Storage Facility. PG&E coordinated with the Gill Ranch Storage Facility Supervisor on Friday, 3/1/2019 and agreed that both parties shall have access to operate the inlet fire valve to the Paramount Farms Regulator Station. PG&E will coordinate with Gill Ranch prior to operation of the valve. On 3/4/2019, PG&E completed the installation of the Pacific Gas and Electric lock on the inlet fire valve along with performing a full operation of the inlet fire valve. The maintenance record was reviewed and approved by the Supervisor on 5/6/2019. Please see attachment 4 - "Inlet Fire Valve Maintenance Record".

SED Conclusion SED has reviewed the response and attachments from PG&E and has opted not to impose a fine or penalty at this time.

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

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 Central South Transmission (86289 (78))

Issue Summary I. Nine (9) spans exceeded the span remediation period required by TD-4188S "Atmospheric Corrosion Control of Gas Facility" (Published on 01/01/2017), Section 4.1, which requires to remediate issues found during inspections in 3 years not to exceed 39

months.

- a. EQ # 41452045, L-300A MP 401.98; The inspection recorded on 5/21/15 noted "Coating worn off, surface rust present" and the technician created Work Order #213303. There was a similar comment recorded on the 5/17/18 inspection. PG&E responded that there is a corrective work notification (#114666767) in SAP, which is pending completion.
- b. EQ # 41452056, L-300A MP 402.05; The inspection recorded on 5/21/15 noted "Coating worn off, surface rust present" and created the technician created Work Order #213304. There was a similar comment recorded on the 5/17/18 inspection. PG&E responded that there is a corrective work notification (#114666956) in SAP, which is pending completion.
- c. EQ # 41452072, L-300A MP 402.08; The inspection recorded on 5/21/15 noted "Coating worn off, surface rust present" and created the technician created Work Order #213305. There was a similar comment recorded on 5/17/18 inspection. PG&E responded that there is a corrective work notification (#114666994) in SAP, which is pending completion.
- d. EQ # 41452136, L-300A MP 404.87; The inspection recorded on 5/21/15 noted "Air/soil trans, wrap disbonding, span coating flaking off, both sides" and the technician created Work Order #213310. There was a similar comment recorded on the 5/12/18 inspection. PG&E responded that there is a corrective work notification (#114670656) in SAP, which is pending completion.
- e. EQ # 41452143, L-300A MP 404.9; The inspection recorded on 5/21/15 noted "Air/soil trans, wrap disbonding, both sides" and created the technician created Work Order #213309. There was a similar comment recorded on the 5/12/18 inspection. PG&E responded that there is a corrective work notification (#114671149) in SAP, which is pending completion.
- f. L-300A MP 405.06; The inspection recorded on 5/21/15 noted "Air/soil trans, wrap disbonding, both sides" and the technician created Work Order #213311. PG&E responded that there is a corrective work notification (#114671203) in SAP, which is pending completion.
- g. EQ # 41452170, L-300A MP 405.2; The inspection recorded on 5/21/15 noted "Air/soil trans, wrap dis-bonding, bullet strike along span, both sides" and the technician created Work Order #213314. There was a similar comment recorded on the 5/12/18 inspection. PG&E responded that there is a corrective work notification (#114661496) in SAP, which is pending completion.
- h. EQ # 49931138 L-300B MP 405.22; The inspection recorded on 5/14/14 noted "span is being buried work request to dig out", and the technician created work order #207652. There was a similar comment, "span coating flaking off, surface rust," recorded on the 5/21/15 inspection, and WRs #213444 and 213445 were created. The span was again inspected on 5/12/18. PG&E responded that there is a corrective work notification (#114716176) in SAP, which is pending completion.
- i. EQ # 41455559 L-300A MP 396.45; The inspection recorded on 5/20/15 noted "BDV 396.45A Air/soil transition wrap dis-bonding/ surface rust present" and the technician created work order #213218. PG&E responded that there is a corrective work notification (#116637715) in SAP, which is pending completion. This equipment is a blowdown valve in the vicinity of a span.

II. Two spans were not inspected within the required inspection interval per 192.481(a)

- a. EQ 41452706 L-300A MP 353.54; The inspection performed on 4/11/15 noted that the "span needs to be dug out, Entire span" and the technician created work order (#212126), but there was no record of a full span inspection during 2015. PG&E responded that it was not inspected in 2015 due to the span being partially buried. The Span was previously inspected on 4/21/14. The span was uncovered in 2016. The span was next inspected on 4/25/18.
- b. EQ # 41476301 L-306 MP 68; The Inspection record dated 5/27/15

noted "Not accessible due to vegetation & pass OAK"; There was no record provided to SED for the 2015 inspection. PG&E responded that it was not inspected on 5/27/15 due to vegetation cover and poison oak. The span was again not inspected on 5/17/18 due to vegetation cover. Corrective work notification 110491644 was created in SAP and is pending completion.

PG&E Response

- I. "PG&E respectfully disagrees with this finding. The response to this finding had previously been provided by e-mail to the Lead Inspector on 3/20/19. Attached, please find attachment 5 - "Span Response to SED Inspector 3-20-19".

Attached, please find attachment 6 - "TD-4188S Rev 1, Atmospheric Corrosion Control of Gas Facilities", which became effective on 01/01/2017. Prior to this revision of the procedure, there was no timeline for mitigation of AOC's (Abnormal Operating Conditions) identified during inspections. Please see page 6 of 8, "Revision Notes" Section 4. The new section for mitigation was added to the current Rev. 1. In addition, please find attachment 7 - "TD-4188S Rev 0, Atmospheric Corrosion Control of Gas Facilities". Therefore, any inspections performed prior to 01/01/2017 did not have a required timeline for mitigation of AOC's. Please note that only AOC's and not minor issues fall under this requirement.

Corrective notifications in SAP were generated for all of the spans following their 2018 inspections. The timeline for mitigation, not to exceed 39 months per Section 4.1, begins from the date of the AOC identification, which would be the date of the 2018 inspection. Attached, please find attachment 8 - "8 spans 1 BDV Info" for a table of the 8 spans and 1 blow down valve indicating the date of the last inspections covered under Rev 1 of the procedure along with the corrective notifications and their status. All spans are on the Insulation and Coatings remediation list with a due date of 2021 based on the 2018 inspections.

In addition, an analysis was performed on the spans in 2017 by Corrosion Engineering. It was determined at this time that only one of these spans required remediation, which was completed in 2018. This analysis has been tabulated in column "I" of attachment 8.

II.

- a. EQ 41452706 L-300A MP 353.54: PG&E respectfully disagrees with this finding. The span inspection was performed on 4/11/15 and approved by the Supervisor on 5/4/15. Photographs were taken during the inspection and Work Request 212126 was created to uncover the span. Please see attachment 9 - "L-300A MP 353.54 2015 Inspection". The span was uncovered in 2016 and the next scheduled maintenance was performed on 4/25/18 and approved on 5/2/18 within the 3 year, not to exceed 39 month inspection requirement. Please see attachment 10 - "L-300A MP 353.54 2018 Inspection".
- b. EQ # 41476301 L-306 MP 68: This span was verified as "unintentional exposed" on 12/31/13. This asset has been redefined and is no longer considered a span. It is now included in PG&E's Shallow and Exposed Pipe Program. This program will oversee future maintenance and inspections of this asset in accordance with TD-4813P-01 - "Gas Transmission Pipeline Reduced Cover Evaluation". PG&E performed a confirmation of exposure and location last year along with an assessment of the erosion that likely exposed the pipe. That assessment led to PG&E scheduling a project for 2021 Engineering work and 2022 Construction work. In addition, order 43692026 has been created to address the vegetation issue."

SED Conclusion

- I. SED recognizes that PG&E has created the recent work tickets for the abovementioned nine spans, which under PG&E current procedure must be addressed within three years of an AOC being identified. However, SED believes that not performing remedial work on the initial work tickets that were generated for these spans in 2014 and 2015 is a violation of Title 49 CFR §192.481(c). PG&E was unable to provide documents showing that either remedial work was performed on these spans, or that an engineering analysis was performed near the time of the 2014 and 2015 inspections that would have justified not performing remedial actions.

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 and 2015 work tickets 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.

- II. Title 49 CFR §192.481(a) requires each operator to “inspect each pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion,” regardless of whether that section was designed to be exposed. Unless EQ #41476301 L-306 MP 68 (listed in finding II.b) was re-buried, PG&E is required to inspect it for atmospheric corrosion once every three years, not to exceed 39 months. PG&E did not inspect the exposed section of pipe at the proper intervals, and is in violation of Title 49 CFR §192.481(a).

Since the missed inspections of the identified exposed span 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 inspection records and the facility in the future to ensure PG&E is performing atmospheric corrosion inspections on all known exposed sections of pipe.

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 Central South Transmission (86289 (78))

Issue Summary There were no available records to show that cathodic protection monitoring point 41247439 was tested in calendar year 2018.

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

As noted in the finding, ETS 41247439 was not read in 2018. The yearly ETS had reads of -1339mV on 4/13/2017 and 1405mV on 4/5/2016. As previously provided to the SED Inspectors during the audit per Data Request #70, a read of -1350 mV was taken on 3/5/19. This ETS was originally listed as a Transmission asset, and was changed to distribution as of 01/09/2018, via CAP 7024032 and RW 114176264. When the equipment as converted to Distribution, one of the fields (object type) that was to be changed was not updated. Although it was placed into the correct maintenance plan for the correct month, it did not generate a notification. This has been corrected, and all Distribution and transmission ETS equipment has been verified to have the correct object type. All previous reads for this equipment as a Transmission asset have been confirmed, and completed.”

SED Conclusion SED has reviewed the response from PG&E and has opted not to impose a fine or penalty at this time.

Generic Questions: Generic Questions (GENERIC.GENERIC)

Question Text Generic question - please provide context in result notes.

References 192.13(c)

Assets Covered Central South Transmission (86289 (78))

Issue Summary Two valves within the intermediate pressure area of regulator station K-16 have a pressure rating below the inlet MAOP of that station. Although these valves are downstream of the primary regulators, those regulators do not have independent overpressure protection, and thus a single point of failure would cause the valves to experience a pressure higher than

their stated rating.

The configuration of this station does not comply with PG&E's Gas Design Standard H-14: "Gas Regulator Stations - Spring-loaded and Pilot Operated Systems," which states that all components of a regulator station up to and including the outlet valve downstream of the final regulator must be designed to withstand the inlet MAOP of the station.

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

HPR project (PM 31146808) will remove the lone customer being fed downstream of the Giffin Huron Regulation Station. This project is scheduled to execute by the 3rd quarter of 2019. Following completion of the project, PG&E plans on isolating and blowing the station down by the 4th quarter of 2019, pending a formal deactivation.

The order number for the deactivation of the Giffin Huron Regulation Station is 74025171. The lone customer will be fed from a new farm tap/HPR style regulation that will be tapped off of nearby transmission line DFM 1218-01."

SED Conclusion SED has reviewed the response from PG&E and has opted not to impose a fine or penalty at this time.

Concerns

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

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 Central South Transmission (86289 (78))

Issue Summary I. SED found several instances of disbonded coating at the air to soil transition, bare pipe with surface rust, and one span with two sections of pitting. SED's review of the PG&E's 2015 inspection records of these spans show the same issues noted by PG&E personnel.

- a. Span 49931138 on Line 300B MP 405.22 - The exposed section of this span has large sections with no coating and surface rust.
- b. Span on Line 300A MP 404.83 – The air to soil transition has severe coating disbonding with large sections of bare pipe. Two sections of bare pipe near the air to soil transition had pitting.
- c. Span 41452136 on Line 300A MP 404.87 – The air to soil transition has coating disbonding with sections of bare pipe and some surface rust.
- d. Span on Line 300A MP 404.90 – The air to soil transition has coating disbonding with sections of bare pipe and some surface rust.
- e. Span on Line 300A MP 405.06 - The span has a new wrap on the air to soil transition but there are sections of the old wrap that extend past the new one. The previous wrap had disbonded and there are sections of bare pipe with some surface rust.
- f. Span on Line 300A MP 405.16 – The air to soil transition has coating disbonding with sections of bare pipe and some surface rust.
- g. Span 41452170 Line 300 MP 405.20 – The air to soil transition has coating disbonding with sections of bare pipe and some surface rust. There are

also sections of the span that have no coating with surface rust.

II. SED found 2 spans that were in contact with the soil which prevents PG&E from properly inspecting the entire span for atmospheric corrosion. SED's review of the PG&E's 2015 inspection records of these spans show the same issues noted.

- a. Span 49931138 on Line 300B MP 405.22 - The bottom and on side of this span was covered in soil.
- b. Span on Line 300A MP 404.90 - The bottom of this span is in contact with soil.

III. SED found 1 span where the support was not touching the span as well as some surface rust on the bottom of the span where the support would rest.

- a. Span 41466413 on L-300B MP 241.71 - The support at this span was not in contact with the span and there was some surface rust at that location.

PG&E Response

I. "Corrective notifications were generated for all of the spans following their 2018 inspections. Attached, please find attachment 11 - " 7 spans Info" for a table of the 7 spans indicating the date of the last inspections along with the corrective notifications and their status. As stated previously, the timeline for mitigation of AOC's (Abnormal Operating Conditions) per TD-4188S Rev 1, "Atmospheric Corrosion Control of Gas Facilities" is not to exceed 39 months from the date of the AOC identification, which would be the date of the 2018 inspection. Any inspections performed prior to 01/01/2017 did not have a required timeline for mitigation of AOC's. All spans are on the Insulation and Coatings remediation list with a due date of 2021 based on the 2018 inspections. In addition, an analysis was performed on the spans in 2017 by Corrosion Engineering. It was determined at this time that two of these spans required remediation. One was completed in 2018 and the other is currently in progress. This analysis has been tabulated in column "I" of attachment 11.

II.

- a. Span 49931138 on Line 300B MP 405.22 was verified as "unintentional exposed" on 5/12/18. This asset has been redefined and is no longer considered a span. It is now included in PG&E's Shallow and Exposed Pipe Program. This program will oversee future maintenance and inspections of this asset in accordance with TD-4813P-01 - "Gas Transmission Pipeline Reduced Cover Evaluation". A reassessment of this unintentional exposed pipe is currently scheduled to be completed by Q3 2019. Following the reassessment, data collected will be analyzed with the intent of scoping a project in the future. The risk at this location is considered low. An additional corrective order 43765768 has been generated to remove the soil from the sides and bottom of the span.
- b. Span 41452143 on Line 300A MP 404.90 has a previously generated corrective notification 114671149 which was generated on 5/12/18 following the 2018 span inspection. An additional corrective order 43729769 has been generated to remove the soil from the bottom of the span.

III. Span 41466413 located on L-300B at MP 241.71 is unsupported for an estimated 100 feet. Given the pipe specifications, allowable bending stress, longitudinal stress and combined stress, this is acceptable per ASME B31.8 under current conditions. Although this is not an immediate safety concern, a project was created (CM21563) to re-evaluate the span support for either replacement or removal. This project will be scheduled based on available funding and prioritization. In addition, painting notification 114629204 was previously created to paint the portion of pipe under the support which was not previously painted."

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. SED may opt to inspect these facilities and records of repair in the future to ensure the implementation of corrective actions.

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 Central South Transmission (86289 (78))

Issue Summary I. SED's review of records found indication of casing/pipe contacts per the PG&E standard TD-4181P-601, which states that any casing found with a voltage of less than -800 mV indicates a contact short.

a. EQ # 41460058 L-300B MP 368.79; the 2018 CTS read recorded was -819mV

b. EQ # 41444726 L-300A MP 392.83; the 2016 and 2018 CTS reads recorded were -845mV and -877mV respectively.

Please provide status of corrective action to address the possible contacts.

PG&E Response "EQ # 41460058 L-300B MP 368.79 - PG&E is aware of this possible contact based on the testing results. Corrosion Engineering has performed additional testing to verify the contact. After reviewing the data, Corrosion Engineering has determined that remediation is needed and is initiating a new project to mitigate the contact.

EQ # 41444726 L-300A MP 392.83 - PG&E is aware of this possible contact based on the testing results. Corrosion Engineering tested the casing back in 2017 to investigate the 2016 readings. The results from that testing indicate the casing to be free of contact. Corrosion Engineering has performed additional testing based on the 2018 reading. After reviewing the data, Corrosion Engineering has determined the casing to be free of contact and remediation is not required."

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. SED may opt to inspect these facilities and records of repair in the future to ensure implementation of the corrective actions.