

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

November 21, 2013

Ms. Jane Yura, Vice President
Pacific Gas and Electric Company
Gas Operations – Standards and Policies
6121 Bollinger Canyon Road, Office #4460A
San Ramon, CA 94583

GA2013-12

SUBJECT: General Order 112-E Gas Audit of Pacific Gas and Electric Company's De Anza Division

Dear Ms. Yura:

On behalf of the Safety and Enforcement Division (SED) of the California Public Utilities Commission, Terence Eng, Alula Gebremedhin, Fred Hanes, Sikandar Khatri, and Willard Lam conducted a General Order 112-E audit of Pacific Gas & Electric Company's (PG&E) De Anza Division (Division) from July 8-12, 2013. The audit included a review of the Division's operation and maintenance records for the years 2010 through 2012, as well as a representative field sample of the Division's facilities. SED's findings are noted in the Summary of Inspection Findings (Summary) which is enclosed with this letter. The Summary reflects only those particular records and pipeline facilities that SED inspected during the audit.

Within 30 days of your receipt of this letter, please provide a written response indicating the measures taken by PG&E to address the violations and observations noted in the Summary. Pursuant to Commission Resolution ALJ-274, SED staff has the authority to issue citations for each violation found during the audit. SED will notify PG&E of the enforcement action it plans to take after it reviews PG&E's audit response.

If you have any questions, please contact Terence Eng at (415) 703-5326 or by email at terence.eng@cpuc.ca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael Robertson".

Michael Robertson
Program Manager
Gas Safety and Reliability Branch
Safety and Enforcement Division

Enclosure: Summary of Inspection Findings

cc: Frances Yee, PG&E Gas Engineering and Operations
Larry Berg, PG&E Gas Regulatory Support
Larry Deniston, PG&E Gas Regulatory Support
Dennis Lee, SED
Aimee Cauguiran, SED
Terence Eng, SED

SUMMARY OF INSPECTION FINDINGS

A. PG&E's Internal Audit Findings

Prior to the start of the audit, PG&E provided SED its findings from the internal review it conducted of the De Anza Division (Division). Some of PG&E's internal review findings are violations of PG&E's operations and maintenance standards, and are therefore, violations of Title 49 Code of Federal Regulations (CFR), §192.13(c). Please provide an update on any items pending as of July 8. Table 1 lists all of the violations that PG&E found in its internal audit.

Table 1: Findings from PG&E's Internal Review

Topic	Code Violation	Finding(s)	Instances	Completed
Leak Survey Distribution	192.723(b)(2)	5-year map leak surveyed exceeded compliance due date by 8 months	1	Yes
	192.723(b)(2)	5-year services leak surveyed exceeded compliance due date due to CGI (can't get in)	22	Yes
	192.723(b)(2)	5-year maps leak surveyed after discovering the record of hard copy maps were missing making them 8 months out of compliance	2	Yes
Leak Repair	192.13(c)	No record of USA number when required	17	N/A
	192.13(c)	Leaks with late action	9	Yes
Regulator Stations	192.13(c)	Late B inspection	2	Yes
	192.739(a)	Late A inspection	1	Yes
	192.13(c)	Pressure (As found and As left) documentation issues	2	Yes
	192.13(c)	Missing pressure recorder sheet	2	Yes
	192.13(c)	Maintenance not completely documented on initial setting of new regulator	1	Yes
Valves	192.13(c)	Valves not properly maintained (lubricated)	2	Yes
Instrument Calibration	192.13(c)	Missing record of calibration for T&R instruments	10	Yes
	192.13(c)	Leak Survey maps missing a record of calibration for various dates	22	Yes

Table 1 (Continued): Findings from PG&E's Internal Review

Topic	Code Violation	Finding(s)	Instances	Completed
Corrosion Control	192.807	Corrosion reads taken by non-OQ employee	171	Yes
	192.807	10%er reads completed by non-OQ employee	72	Yes
	192.807	Resurveys completed by non-OQ employee	13	Yes
	192.13(c)	CPA not resurveyed within required timeframe	17	Yes
	192.465(a)	Bi-Monthly P/S Reads exceeded 2-1/2 Months	1	Yes
	192.13(c)	Missing pre/post restoration rectifier read	28	Yes
	192.467(d)	Casings not read (some due to missing vents/wires)	58	Yes
	192.467(c)	Contacted casings read	6	No, Pending
	192.13(c)	Action plans late, not completed or corrective actions not noted	25	Yes
	192.13(c)	Missed taking a read on a newly installed anode	1	Yes
	192.465(a)	Less than 10% of the total 10%er population monitored in one year	4	Yes
Atmospheric Corrosion on Exposed Spans	192.481(a)	Inspections of exposed pipe were missed or late	5	Yes

B. Audit Findings and Violations

1 Title 49 CFR §192.13(c) states:

“Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.”

1.1 PG&E’s Standard O-16, Corrosion Control of Gas Facilities, states in part:

1.1.1 Page 7: *“These yearly read locations do not have an “anniversary month,” but shall be read at least once during each calendar year.”*

A. The Division failed to take a reading at the following two yearly test locations in 2011.

1. Cathodic Protection Area (CPA) 3350-11: 421 Charles Street, Sunnyvale
2. CPA 3350-11: 408 Waverly Ave, Sunnyvale

B. The Division failed to take a reading at the following two yearly test locations in 2012.

1. CPA 3409-01: 27133 Adonna Ct., Los Altos
2. CPA 3350-11: 110 W. California, Sunnyvale

1.1.2 Page 7: *“A “Rectifier Test and Site Evaluation” form (Attachment A of Numbered Document O-11.1, Form FO-11.1-A) shall be completed to ensure that rectifiers are functioning correctly and that there are no safety violations.”*

The Division did not follow or complete Form FO-11.1-A as required in the following instances.

- A. CPA 3411-35, Rectifier #504 at 1458 Miller Ave., San Jose: In 2012, the Division did not verify that the rectifier enclosure was locked or if the PG&E equipment identification sticker was installed. In addition, the Division did not inspect the rectifier for any openings, exposed wires, or internal corrosion.
- B. CPA 3411-50, Rectifier #207 at Doyle Rd. in San Jose: In 2010, the Division recorded a ground resistance of 40 ohms but did not install a second ground rod as required when ground resistance is over 25 ohms.
- C. CPA 3411-50, Rectifier #207 at Doyle Rd. in San Jose: In 2011, the Division recorded a ground resistance of 52 but did not install a second ground rod.
- D. CPA 3411-50, Rectifier #207 at Doyle Rd. in San Jose: In 2012, the Division did not record the ground resistance.
- E. CPA 3348-01, Rectifier 542: For each year from 2009 through 2012, the Division did not record the AC line breaker or fuse size.

1.1.3 Page 11: *“If the CPA restoration work is (or is expected to be) over 30 days, the “CPA Follow-Up Action Plan” form (Attachment B) must be used and developed within 30 calendar days from the date the CPA is found below adequate levels of protection, as defined by the current 49 CFR 192, Subpart I. Please note that action plans shall also be established and maintained for short-term remedial actions that are in place for over 30 days. The action plan shall list and document the extenuating circumstance(s) to the extent known, the cause of the CPA problem (to the extent the cause is known), the desired solution(s), the actions needed to implement the solution, the estimated time to take those actions, and the employees who will perform those actions.”*

The Division did not use or develop a CPA Follow-Up Action Plan form within 30 days from the dates the following CPAs were found to provide inadequate levels of cathodic protection:

- A. CPA 3411-05, 503 North Cascade Terrace, Sunnyvale: The Division recorded a pipe-to-soil (P/S) read of -396 mV on 10/5/11. The Division did not create an action plan until 11/2/12, exceeding the maximum 30 day interval.
- B. CPA 3411-18, 19816 Beekman, Cupertino: The Division recorded a P/S read of -541mV on 10/5/12. The Division did not create an action plan as of the start of this audit, exceeding the maximum 30 day interval.
- C. CPA 3412-27: The Division recorded P/S reads of -774mV at 290 Dillon Ave. and -723 mV at 186 Dillon Ave. on 11/24/09. The Division created an action plan on 4/2/10, exceeding the maximum 30 day interval.

1.1.4 Page 11: *“The action plan shall be updated in intervals not exceeding 30 calendar days by an employee knowledgeable of the restoration work and reviewed by the operating supervisor, until the CPA restoration work is completed and the CPA shows adequate levels of protection.”*

The Division updated CPA Follow-Up Action Plan forms at intervals exceeding 30 calendar days in the following instances:

- A. CPA 3474-06, Oka Rd, Los Gatos (bi-monthly): The Division updated the action plan at intervals exceeding 30 days on multiple occasions as indicated in Table 2.

Table 2: CPA 3474-06 Late Action Plan Reviews

Date of Review	Date of Subsequent Review	Interval (calendar days)
10/17/2012	12/17/2012	61
12/17/2012	2/18/2013	63
2/18/2013	4/17/2013	58
4/17/2013	6/17/2013	61

B. CPA 3412-27, 186 and 290 Dillon Ave (annuals): The Division updated the action plan on 5/5/10 and subsequently on 6/11/10, 37 days later.

C. CPA 3473-14, Kitteridge and Quickert, Saratoga (yearly): The Division discovered a P/S reading of -618 mV on 11/5/09 and restored the area to -969 mV on 5/11/11. The Division did not update its action plan from 12/5/10 to 5/11/11, spanning an interval of 157 days.

1.2 PG&E's Work Procedure WP4133-02, Cathodic Protection Area Assessment/Resurvey Procedures for Gas Distribution, page 1 states in part:

"Review CPAs, as defined in this work procedure, at least once every 6 nominal years."

The Division reviewed the following CPAs at intervals exceeding 6 nominal years.

- A. The Division reviewed CPA 3348-01 in 2005 and subsequently in 2012.
- B. The Division reviewed CPA 3348-07 in 2005 and subsequently in 2012.
- C. The Division reviewed CPA 3348-10 in 2005 and subsequently in 2012.

1.3 PG&E's Form F4133-03-3 requires a check for the following during each CPA Resurvey:

1.3.1 *"Color-coded overall map with all closeout data, including the P/S locations, rectifier locations, and boundary points."*

The following CPA maps did not include one or more P/S locations.

- A. CPA 3473-12: The Division did not clearly identify 6 yearly P/S locations on the map.
- B. CPA 3473-14: The Division did not clearly identify a combination of two bi-monthly and nine yearly P/S locations on the map.
- C. CPA 3411-39: The Division did not clearly identify yearly P/S location at 12155 Natoma Court, Saratoga on the map.
- D. CPA 3411-40: The Division did not clearly identify bi-monthly P/S location at Prospect & Saraglen, Saratoga on the map.
- E. CPA 3411-02: The Division did not clearly identify yearly P/S location at 18930 Cyril Pl, Saratoga on the map.

1.3.2 *“The color-coded maps must contain a legend and the corrosion mechanic’s initials and date.”*

The map for CPA 3411-29 does not contain a legend.

1.4 PG&E’s Procedure TD-4412P-07, Patrolling Pipelines and Mains, page 5, states in part:

a. “As soon as practicable after the observation is made, the M&C supervisor EITHER:

• Dispatches ground patrol personnel to the location of the observation to evaluate the situation via a targeted ground patrol and to document the reported observation on the "Ground Patrol Report". (The process for conducting ground patrols is outlined in Section 4.3.)

OR

• Provides a copy of documentation to the PPPO, indicating that the observation does not require additional follow up. (The supervisor keeps the original documentation locally.)

b. If applicable, the M&C supervisor directs the appropriate follow-up action(s).”

The Division did not perform follow-up actions as required in the following instances.

A. During the 12/5/12 inspection of the exposed span at location (2) 10” DFM’s Grant Road over Permanente Flood, a surveyor discovered that a 6” x 3” section was missing wrap, and that a 5” x 5” rock was impaling and penetrating the wrap. After informing his/her supervisor, the Division did not direct follow-up action resulting from the patrol observations.

B. During the 12/18/12 patrol of Route V-8805-23, Permanente Line/Rancho San Antonio, a surveyor discovered dead vegetation within the right-of-way of the pipe. The Division did not direct follow-up action resulting from the patrol observations.

1.5 PG&E’s Utility Standard S4540, Gas Pressure Regulation Maintenance Requirements, Page 2, requires a Class A Inspection at least once each calendar year at intervals not to exceed 15 months to the date from the previous Class A or Class B inspection.

1.5.1 PG&E’s Utility Work Procedure WP4540-01, District Regulator Station Maintenance, page 4, states in part:

“Operational and diagnostic testing for a Class A Inspection must follow the instructions below....

Using an approved analog or digital differential pressure gauge, perform a filter differential pressure test and record the pressure reading.”

The Division failed to perform a filter differential pressure test and record the pressure reading at the following regulator stations during the indicated year.

- A. Regulator Station A-20, Year 2011
- B. Regulator Station A-26, Year 2011
- C. Regulator Station A-26, Year 2012
- D. Regulator Station A-28, Year 2012
- E. Regulator Station B-06, Year 2011
- F. Regulator Station B-04, Year 2013

1.5.2 PG&E's Utility Work Procedure WP4540-01, District Regulator Station Maintenance, page 5, states in part:

"Test the regulator for lock-up using the long/short line technique."

The Division failed to test for regulator lock-up at the following regulator stations during the indicated year.

- A. Regulator Station A-20, Year 2011
- B. Regulator Station A-26, Year 2011
- C. Regulator Station A-26, Year 2012
- D. Regulator Station A-28, Year 2012
- E. Regulator Station B-06, Year 2011

2 Title 49 CFR §192.481(a) states in part:

"Each operator must inspect each pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion, as follows. If the pipeline is located onshore, then the frequency of inspection is at least once every 3 calendar years, but with intervals not exceeding 39 months."

Location (2) 10" DFM's Grant Road over Permanente Flood Control was inspected for atmospheric corrosion on 6/16/06 and subsequently on 3/30/10, exceeding an interval of 3 calendar years.

3 General Order 112-E, Section 143.2 states:

"Valve Maintenance – Each valve, the use of which may be necessary for the safe operation of a distribution system, must be inspected, serviced, lubricated (where required) and partially operated at intervals not exceeding 15 months, but at least once each calendar year."

The Division did not partially operate critical main valve 3350-H3A in 2010.

C. Observations and Concerns

1. The plat map for CPA 3473-14 incorrectly indicated a section of main on Basin Way as isolated between sections of plastic.
2. Plat maps for CPAs do not clearly distinguish between bi-monthly ETS locations and Annual ETS locations (e.g. CPA 3411-31, CPA 3473-14).
3. SED discovered a transposing error between handwritten notes and PG&E's Systems Applications and Products (SAP) database. Handwritten notes dated 9/26/12 for casing DACP17110 indicated a -913 mV P/S potential, and -53 mV casing-to-soil potential. The SAP database incorrectly indicated a -913 mV casing-to-soil potential and 53 % LEL (lower explosive limit) for this casing.
4. On the Standard Cathodic Protection Maintenance Reports for CPA 3412-27, the Division incorrectly listed yearly location 479 Salmar Ave. as 479 Almar Ave.
5. The pipeline span at Bollinger Road over Calabazas Creek was cut-off and removed in 2007. During the audit, SED and PG&E visited the location and confirmed that no PG&E pipeline spans existed. Division records indicate that a mechanic patrolled the pipeline span on 12/7/10. The mechanic indicated no issues in pipe condition, including a check mark for 'OK' under tab "Pipeline marker or sticker in plain sight and in good condition." If the Division removed the pipe in 2007, what was the mechanic inspecting in 2010 that had a PG&E pipeline marker or sticker in plain sight?
6. The Division incorrectly documented several valve positions.
 - A. The Division incorrectly documented the 'as found' and 'as left' valve position of Valve 3411-E6C in 2010 and 2011 as Closed.
 - B. The Division incorrectly documented the 'as found' and 'as left' valve position of Valve 3411-E6G in 2010 and 2011 as Open.
 - C. The Division incorrectly documented the 'as found' and 'as left' valve position of Valve 3411-E6E in 2010 and 2011 as Open.

SED recommends listing the valve position during normal operations on the cover page of the maintenance data sheet when applicable.

7. The Division created the following work orders in Table 3, but had not completed the work as of the end of the audit. SED would like an update on the status of these work orders.

Table 3: Valves With Work Orders

Valve	Work Order #	Created	Status
V-3411-H7A	41669314	3/30/12	Open
V-3348-H7		5/21/12	Open
V-3349-I4G	41682113	2011	Plan to replace in 2014

8. Valve Maintenance Record Forms indicated that the following five January Cycle valves were critical main valves requiring annual maintenance: 3410-D3A, 3350-F3C, V0.82, V6.6, and V1. The Division claimed that they were not critical main valves requiring annual maintenance. Please provide an explanation for the discrepancy.

9. PG&E's Standard O-16, Corrosion Control of Gas Facilities, page 6 states in part:

“Gas distribution test locations selected for monitoring cathodic protection effectiveness shall be at locations where the level of protection is the lowest for that CPA or shall be at locations where the loss of effective CP in the CPA would be detected.”

In 2011, a mechanic designated a new test location in CPA 3349-19 approximately 0.5 miles away from an existing test location, effectively nulling the existing test location. It is unclear if the Division performed an analysis to ensure the new test location is where the level of protection is the lowest for that CPA or at a location where the loss of effective cathodic protection in the CPA would be detected.

10. During SED's field inspection, SED and PG&E discovered a yearly P/S potential reading that did not meet the -850 mV criteria (-683 mV) at 12155 Natoma Court, Saratoga. SED also discovered a gas leak (confirmed by a soap test) originating from the customer side piping just downstream of the customer meter. Please provide SED a status report on the action the Division performed to address the leak and restore the cathodic protection to an adequate level at this location.
11. During SED's field inspection, SED discovered atmospheric corrosion on the Division's facilities at 190 S Murphy Ave, Sunnyvale.
12. The Division recorded the presence of atmospheric corrosion at 14413 Big Basin Way, Saratoga during its patrol in 2012. During SED's field inspection at that location, SED discovered atmospheric corrosion not on PG&E facilities, but on the customer side piping.